

InaHEA

Proceedings of the 4th Annual Meeting of the
Indonesian Health Economics Association

Surabaya, Indonesia / September 13-15, 2017

Editors:

Iman Harymawan
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ABOUT INAHEA

Indonesian Health Economics Association (InaHEA) established in 11th January 2014 in Jakarta. The vision of InaHEA is to be a nationally and internationally recognized international healthcare professional. To achieve this vision, InaHEA encourage improvement and development of health economics profession in order to achieve universal health coverage.

Our objectives:

1. Improve and develop the professionalism quality of health economic actors.
2. Increase understanding and awareness about health economics.
3. Promote, develop and implement health economics in Indonesia professionally.
4. Participate in increasing the role of health economics in development.

Our activities:

1. Examinations and granting professions in the field of Health Economics and other related fields.
2. Cooperation with professional organizations and associations in the field of health economics, both at Indonesia and abroad.
3. Development of InaHEA members, especially in enhancing knowledge and skills by upholding the Code of Professional Ethics.
4. Publishing Jurnal Ekonomi Kesehatan Indonesia (JEKI), professional media, scientific works and other information.
5. Other activities deemed necessary as long as they do not conflict with the purpose of InaHEA.

For further information please visit www.inahea.org

ABOUT UNIVERSITAS AIRLANGGA

Universitas Airlangga (UNAIR or UA) is the second-oldest university in Indonesia. Located in Surabaya, East Java, it was established in 1948 as a distant branch of the University of Indonesia, with roots dating back to 1913. It started with a medical school and school of dentistry. Now Universitas Airlangga hosts 15 faculties with more than 25,000 students (during the 2009–2010 academic year) and 1,570 faculty members.

Consistently ranked highly in major world university rankings, Universitas Airlangga have long been considered as one of the "Big 5" university in Indonesia, along with University of Indonesia, Bandung Institute of Technology, Bogor Agricultural University, and Gadjah Mada University. Universitas Airlangga has international partnerships worldwide, including with University of Bonn, Seoul National University, and University of Adelaide.

The QS Asian University Ranking 2014 have placed Universitas Airlangga as the best university in "Citations per paper" category. In 2010, Universitas Airlangga was ranked 466th worldwide according to the Top 500 QS World University Rankings 2010, as well as ranked 86th in the Top 200 QS Asian University Rankings 2011 (third in Indonesia after University of Indonesia and Gadjah Mada University). In the Webometrics Ranking of World Universities 2011, Universitas Airlangga was placed fourth in Indonesia and 22nd in the Southeast Asia region.

Universitas Airlangga has two internationally standardized quality management certificates for its management quality. For this reason, Universitas Airlangga has been the destination of foreign students who studies in Indonesia, particularly from Malaysia, Japan, Timor Leste, China, Thailand and some other European and African countries.

For further information please visit <http://www.unair.ac.id/>

FOREWORD

Foreword from Chair of Organizing Committee

Welcome to 4th InaHEA Annual Scientific Meeting & International Seminar on Health Economic!

It is great pleasure welcoming you in Surabaya. This year event is hosted by InaHEA in collaboration with Department of Health Policy and Administration Faculty of Public Health Universitas Airlangga and Center for Health Economics and Policy Studies (CHEPS) Faculty of Public Health Universitas Indonesia.

With the spirit to succeed the Universal Health Coverage in Indonesia, the topic of this year annual meeting is “The 4th years Implementation of National Health Insurance in Indonesia”. In these 3 days, the program will discuss all aspects of National Health Insurance implementation in Indonesia. This conference is the premier platform not only for the presentation of new science related to health economic, but also for unique networking opportunities. With delegates worldwide, it provides the ideal forum to discuss the latest findings in health economic that would bring breakthrough in universal health coverage agenda.

As the chairman of the organizing committee, I would express our gratitude to InaHEA which already trusted Department of Health Policy and Administration Faculty of Public Health Universitas Airlangga to organize this event. My appreciation also addressed to Center for Health Economics and Policy Studies (CHEPS) Faculty of Public Health Universitas Indonesia as the compatriot in managing all of detailed business related to this events. We also delivered our big gratitude for supports that given by Minister of Health, East Java Governor, Surabaya Mayor, Rector of Universitas Airlangga, and Dean of Faculty of Public Health Universitas Airlangga. We also thankful all of sponsors that already contribute in this conference. Last but not least thank you for all of the speakers, moderators, and participants for choosing our conference for disseminate their research.

We hope you will get great experiences through this event. Have an enjoyable seminar.

Dr. Djazuly Chalidyanto, S.KM., MARS
Chair of Committee

Foreword from Chair of InaHEA

Your Excellency Minister of Health, Prof Dr Nila F Moeloek, SpM (K)
Your Excellency Minister of Finance, Sri Muljani Indrawati, SE, PhD
Your Excellency Governor of East Java Province, Dr. H. Soekarwo, S.H, M.Hum.
Your Excellency Mayor of Surabaya City, Dr.(H.C.) Ir. Tri Rismaharini, M.T.
Distinguished Speakers from Abroad
Distinguished health economists and participants of the 4th Ina-HEA Annual Scientific Meeting

Assalamualaikum warohmatullahi wabarakaatuh and Good Evening. May God the Almighty blesses us and allow us to successfully share our knowledge and skills to benefit human kind on Earth.

Ladies and Gentlemen, This year, the Indonesian National Health Insurance (NHI) Scheme (Jaminan Kesehatan Nasional or JKN) is on progressing the 4th year and covers more than 180 million (about 70%) of the total population of the country. The JKN uses social health insurance mechanism in pooling fund and sharing risks across broad Indonesian archipelago. Ten years ago, many people doubt that Indonesia could established such NHI in the country spreading more than 5,000 kilometres and scattered across more than 17,000 islands. Differences in social, cultures, economy, and supplies of health care facilities were thought to be big barriers for developing a single payer health insurance system. However, I have been always optimistic that with current advance in communication and computer technology, Indonesia could achieve universal coverage in about 55 years from the start of the implementation of social health insurance in 1968.

Many people in Indonesia are skeptical to achieve Universal Health Coverage (UHC) by 2019 as written in the Road Map of JKN. They argued that Germany took more than 100 years to reach UHC. I argued that we did not start in 2014, we started in 1968 when all civil servants were mandated to contribute 5% of their salary to protect themselves from financial catastrophe when they suffer from a serious illness. The year of 2014, was just the integration of previously fragmented health care financing scheme. At the beginning of 2014, we already covered 121 million people under SHI and social assistance schemes. Indonesia chooses a SHI mechanism because until now, the number of income tax payers is relatively small. Only about 12 million income earners are paying income tax regularly. Our tax ratios in the last 10 years have been only around 12% of GDP. By having such low income tax revenues, it is very difficult to adopt the National Health Service (NHS) model.

With so many practical problems and big variations on the understanding of the detail implementation of JKN, we are progressing well, especially in term of population coverage. The population coverage and comprehensiveness of the scope of services are the first priority of the WHO Cube of UHC in Indonesia. We are aware that service quality remains far away from our expectations. Practically, the JKN is the largest NHI under a single payer, single data base, on Earth. However, in the real protection, there have been a lot of practical issues that may hinder the financial protection of those who are members of JKN. We are aware that a significant portion of the members of middle class and above (including government officials) who are paying contribution regularly are not using the benefits they entitle to because of perceived poor quality of health services, long waiting in contracted hospitals, or perceived poor quality of drugs being provided. Since they have disposable income to pay health care out of their pocket or through commercial health insurance; we have to accept the current conditions.

Ladies and Gentlemen, This afternoon the Minster of Health chaired the discussion on reviewing big research on evaluation of the processes, outputs, and outcome of JKN. Evidences show that the equities have improved significantly in rural and among low income people who benefit the most. Yet, complaints about poor services, limited quote of services for JKN members, too low payments of capitation and CBG, and completeness of drugs being provided are prevalent. Even with such low payments to, especially private health care providers, the BPJS has been suffering from deficit in four consecutive years. To reduce deficit, the BPJS issues some regulations that are not consistent with the main principles of JKN. We have to con-

fess, without defensive arguments, that JKN still suffering from serious “malnourished” or underfunded. In 2016, BPJS paid close to IDR 70 Trillion for all claim of about 170 million people. The National Health Account data of 2014 showed that the total health expenditure already reached IDR 379 Trillion. So; in the first four years, the JKN funds contribute only between 14-18% of the total health expenditure. On the other hand, the population coverage reaches about 70% of the population. Certainly, the share of JKN funds and the share of population coverage do not match. Rumors then were spread that BPJS will go bankrupt. This rumor will undermine JKN.

Low payments threat development of private health care providers. No increase in capitation rate for 4 (four years) and uniform capitation rate across country clearly indication of serious problem of JKN. Many private hospitals, even public hospitals, set quota or limit the number of JKN patients because they cannot meet the required costs. Yes, some public and private hospitals reported surpluses, but certainly they are minority. Provisions of drugs are also reported to have many problems. Unhealthy competition using cost-minimization may lead to stagnancy of the development of private health care providers and pharmaceutical industries. Certainly, the JKN should not prevent development of health services and improving quality and productivity of human resources in Indonesia.

Our health care has been suffering from severe shortage of health financing. To dates, our total health expenditures has never reach 3.7% of Gross Domestic Products, the lowest among lower middle income countries. Accordingly, our health status and competitiveness remain low. Many government officials and policy makers still view health services as costs to the country. There has been minimal views adopted by high level officials, both the governments and the Parliament that spending on health is in investment of human resources. The very high prevalence of stunting, reaching 37% of children and poor competitiveness of our SEA Games, Asian Games, and Olympic may be a clear indication that our investments in health sector have inadequate.

There has been a lot of argument about our limited fiscal capacity. I myself do not accept such argument. A lot of studies are needed to find out our real fiscal situation, fiscal policies, source of fiscal expansions, and political battles to ensure sustained JKN and sustained public health programs. In our health law; the Ministry of Health, Provincial health offices, city, and district health offices are responsible for funding and administering of public health programs, to promote health lives and to prevent increasing incidences of communicable and non-communicable diseases. We need to conduct many research on the harmonization of the roles of National and regional governments with the roles of BPJS and the National Social Security Council (DJSN). By working in harmony, of all stakeholders, we will achieve optimum health outcomes.

Ladies and Gentlemen The roads to a strong, sustained, and quality of UHC are still bumpy. The Big Vehicle carrying passengers to reach the UHC has started the journey. There is no way to retreat. If the JKN fails, we all will be suffering. Malaysia and Sri Lanka long time ago have achieved UHC when their economy was much poorer than our current economy. If they can do, we certainly can do. Let’s work together in synergy and harmony to achieve our goals, to build strong future generations, and strong welfare states of Indonesia.

Have a successful share of knowledge and experiences for our brighter future.

Wassalamualaikum warohmatullahi wabarookatuh.
Surabaya, September 13, 2017

Hasbullah Thabrany
Chair of InaHEA

Foreword from Rector of Universitas Airlangga

Assalamu'alaikum wa-rahmatullahi wa-barakatuh. May the peace, mercy and blessings of Allah be upon you.

It is a pleasure for me being in 4th InaHEA Annual Scientific Meeting International Seminar on Health Economic. The seminar has its significance as it is greatly related to science development and effort to healthcare quality improvement.

First, from the science view, in its development, economics is closely related to all aspects of life including health. Therefore, Health Economic Science is needed. Indeed, we still have to improve and develop Health Economics. Health always affects the economy and vice versa. Health Economics which has many study or research focus is a special scientific field. It is important for the development of healthcare, especially in this era of National Health Insurance. Second, from the aspect of community healthcare improvement, any efforts made towards that aspect are compulsory. Therefore, we must constantly make efforts to give quality healthcare service to all communities without exceptions.

I really appreciate the theme of this seminar as it is greatly relevant and there is a sense of urgency about it. All the past experience in the application of National Health Insurance in the last few years can give us invaluable lessons and feedbacks so improvement programs can be developed. Let us try our best to contribute in this healthcare development. We should do it with our best intention to devote our energy and time to achieve the best community health level. Keep making efforts to achieve quality health insurance is a noble thing to do. So with this international seminar, hopefully we get significant results. Having the experts shared knowledge in this event is itself a pleasure.

Therefore, I would like to express my sincere gratitude to all the attending guests and especially to the officials, keynote speakers, experts in Health Economics and Public Health and also some practitioners who have come all the way here from the other part of the world. Finally, may all our efforts to improve the health quality receive His blessing. *Aamiin*. Have a great seminar.

Wassalamu'alaikum wa-rahmatullahi wa-barakatuh.

Prof. Dr. Moh. Nasih, SE., MT., Ak., CMA.
Rector of Universitas Airlangga

Foreword from Mayor of Surabaya

Assalamu'alaikum Wr.Wb.

We always pray all thanks, in the presence of God Almighty, who has bestowed His grace and blessings on us all, so this book of *The 4th Indonesian Health Economics Association (InaHEA) Annual Scientific Meeting International Seminar on Health Economic* is published. Hopefully it can create innovation, meet the demands on the development of science, technology and social especially in the health sector. Health economics issue is one of the issue that need to be concerned, especially related to health financing system. Through this activity, participants are expected to be able to discuss, share experiences, and provide innovation for the development of health financing policies and implementation in Indonesia so that the community able to fulfill the health need as the basic needs of life, especially for the lower class community. Health care services are the right to a healthy life for all community without exception. This is the hope and desire of the entire community to be have the health protection by covered in the health insurance.

Thus several words from me, hopefully all the participants able to realize the implementation of sustainable and quality health care services for the wider community. On behalf of the Surabaya City Government, I would like to thank all those who participate and support this conference. May Allah SWT always protect and bless all of us.

Thank you.

Wassalamu'alaikum Wr.Wb.

Tri Rismaharini

The Mayor of Surabaya

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PAPERS

FULL PAPERS

Analysing the Healthy Public Policy's Impact on the School Health Program: *Usaha Kesehatan Sekolah (UKS)*

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Keywords: Healthy public policy, Health promotion, School health program, UKS.

Abstract: According to WHO document, health is clearly connected to educational accomplishment, quality of life and economic productivity. Research conducted in both developing and developed countries shows that school health programs in each nation can concurrently decrease common health problems, increase the efficiency of the education system, advance public health and improve education to do with social and economic developments. Since 1950, WHO has long been an important task in promoting the health of children through schools. In Indonesia, *Usaha Kesehatan Sekolah (UKS)* is one of the school health programs coordinated by the four Ministries. Many studies showed that there has been no optimal implementation yet of *UKS*. The healthy public policy concept could be a tool to analyse the possible policy shifting and strive to incorporate the concept of health promotion in *UKS*. This paper describes the possible policy changes on *UKS* program to be a health promoting school. Those changes needed healthy public policy to succeed.

1 INTRODUCTION

health problem. That is because the school age group has a bigger quantity percentage than any other age group. Most of Indonesia's children aged 5 to 19 years of old go to school. 99.09% of children aged 7 to 12 years of old go to elementary school. Meanwhile 94.72% of teenagers aged 13 to 15 years old participate in junior high school. 70.61% of adolescents aged 16 to 18 years old go to senior high school (Education Officer of East Java, 2016; Statistical Board of East Java, 2016). According to the Health Promotion Board, of the Ministry of Health (2011), the target range of the health promotion program at school could be fourfold minimally, because of the children's ability to reach their family population with the information.

Globally, school health programs have been developed with a comprehensive approach to health education and health promotion programs in school by WHO (1997) since 1950. The approach has to be suppressed based on the reason that school health programs can't be reached independently. It needs

Usaha Kesehatan Sekolah is Indonesia's school health promotion program, which has the potential to overcome the public health problem through an organised movement with a comprehensive and holistic approach, alternatively called *Health Promoting School*.

Health Promoting Schools (*HPS*) has been adopted as a health promotion program documented by the Ministry of Health (Ministry of Health, 2011). There are six elements of *HPS*, as a healthy school indicator, developed by WHO-SEARO (2003) used by the Indonesia Health Promotion Board. Methodologically, *HPS* is very strategic, because there is *Usaha Kesehatan Sekolah (UKS)* acting as the board that will be implementing it.

The implementation of the six elements of *HPS* will be smooth if *UKS* adopts the element as well. Unfortunately, *UKS* has only implemented three elements out of the six, called *TRIAS UKS*, to run their program. Table 1 shows the elements that should be implemented in each of the school's health program documents.

Table 1: The description of the elements in each of the documents for Health Promoting School

| Element | WHO-SEARO (2003) Health Promoting School document | Ministry of Health, RI (2011) Health promotion at school document | Ministry of Education, RI (2012) <i>UKS</i> document |
|---------|--|--|--|
| 1 | Engages health and education officials, students, teachers & representative organizations, parents, and community leaders in efforts to promote health | Engages health and education officials, students, teachers & representative organizations, parents, and community leaders in efforts to promote health | Not clearly mentioned |
| 2 | Strives to provide a safe, healthy environment | Strives to provide a safe, healthy environment | Fostering a healthy school environment |
| 3 | Provides school health education | Provides school health education | Organization of health education |
| 4 | Provides access to health services | Provides access to health services | Provision of health services |
| 5 | Implements health-promoting policies and practices | Implements health-promoting policies and practices | Not clearly mentioned |
| 6 | Strives to improve the health of the community | Strives to improve the health of the community | Not clearly mentioned |

Table 1 show that *UKS* document just mentioned three elements out of six should be implemented to be Health Promoting School. The other three elements that are not implemented are element 1, element 5 and element 6. All of them seem about networking among sectors involved in *UKS*.

Health promotion programs in schools and *UKS* should have the same goals, i.e. to increase the student’s health status involved the whole school community. The optimisation and effective coordination between the two sectors will increase the achievement of the school health program goals. Sulistyowati and Megatsari (2015) have shown that the Steering Committee, as a coordinator of the school health program, do not understand about *UKS* including *TRIAS UKS*. Other research conducted in Indonesia also has shown the minimisation of the *UKS* programs achievements’ (Sulistyowati and Megatsari, 2015; Ministry of Education, 2012; Permatasari, 2010; Maghfiroh, 2011; Mukminin, 2012; Mursyal, 2013; WHO, 1998).

The less optimal implementation of the *UKS* program can be enhanced by implementing the other three elements of HPS. These are all about networking. The networking optimisation can be reached through a public policy approach. **Healthy public policy** is a strategy of health promotion that can be used to make sure the shifting policy changes on implementing Health Promoting School are from *UKS*’s terms.

This paper aimed to analyse the possible policy changes to do with the *UKS* program with a healthy public policy concept analysis.

2 METHODS

This was a review paper with the intention of describing the possible policy changes in the *UKS* program in order to become a Health Promoting School, using a healthy public policy concept analysis. The analysis was taken from a few studies on *UKS* in Indonesia and few HPS research studies. Moreover, WHO documents were also used.

3 RESULT AND DISCUSSION

3.1 Usaha Kesehatan Sekolah (*UKS*)

UKS is a health promotion program in the school-lead sector ran by the Ministry of Education (Ministry of Educational, 2012). *UKS* has been developed in Indonesia since 1980, consolidated by the formation of a Steering Committee at all government levels in 1984. Joint Decree 4 (Ministry of Health, Ministry of Education, Ministry of Home Affairs, and Ministry of Religious Affairs) established in 1984, updated in 2003 and 2014, regulating the guidance and development of the *UKS* rules in pre-school, elementary school and junior school up until senior high school. These rules strengthen the implementation of *UKS*. *UKS* is a mandatory program that should be implemented by each school, according the Act of the Ministry of Education no 39, 2008, reinforced by the Act of Health no 36, 2009. The rules assert that the legal basis of *UKS* implementation is tough.

3.2 Public Policy

Policy is a plan of action for tackling political issues, according to Webster's dictionary. It is a "line of argument rationalising the course of action of governments". Many experts state the definition of policy, in which the outline covers: 1) there is a goal that should be achieved, 2) there are processes in place to obtain that goal, 3) the actions proposed could be from individuals or groups, inside or outside the government and 4) it needs input to apply the strategy.

Public policy defined by Thomas Dye (2012) is what the "government choose to do or not to do". This definition has been confirmed by George C. Edwards III, and is a government action for goal achievement. *UKS* as a program is a product of public policy and is a form of public service.

Regional governments, presented by the four Ministers involved in developing *UKS*, should be responsible for its successful implementation. It means that the success of *UKS* in becoming a Health Promoting School needs coordination and contributions from other sectors, not just the health sector. The role, level of responsibility and contributions from the four sectors minimally is expected to make *UKS* become a Health Promoting School with optimal achievements in the six listed elements.

3.3 Health Promotion

As a fundamental human right, all people should have access to basic resources for health (WHO, 1998). Health is defined by WHO (1998) not merely the absence of disease or infirmity, but a complete state of physical, social and mental wellbeing. *UKS* as a school health program is compulsory in order to achieve a whole state of wellbeing in the school community. It is based on the WHO's global school health initiative which emphasizes school capacity as a healthy place to live, learn and work (WHO, 1998).

Meanwhile, health promotion is determined by the WHO (1998) as the process of enabling people to increase their control over, and to improve, their health. Health promotion represents a comprehensive social and political process. It is not only comprised of actions directed at strengthening the skills and capabilities of the individuals, but also action directed towards changing the social, environmental and economic conditions, so as to ease their impact on public and individual health (WHO, 1998).

As a health promotion program in a school, the implementation of *UKS* should have a positive impact on the school community. Based on the health promotion concept, *UKS* should be implemented by coordinating all related sectors and between other programs.

The Ottawa Charter identified three basic strategies for health promotion. Number 1) is advocacy (*advocate*) for health to increase the essential conditions for health; the next 2) is enabling (*enable*) all people to achieve their full health potential; and 3) is mediating (*mediate*) between the different interests in society in the pursuit of health. Those strategies are supported by five health promotion action means: 1) building *healthy public policies*; 2) creating supportive environments for health, 3) strengthening community actions for health, 4) developing personal skills and 5) re-orienting health services. *UKS*, with the implementation of TRIAS *UKS*, has not yet fully executed the aforementioned health promotion strategies.

3.4 Healthy Public Policy

As one of the health promotion actions, the WHO (1998) has highlighted the fact that healthy public policy goes beyond the health care sector. It emphasises that health should be on the policy agenda in all sectors, and at all levels of government. One important element in building healthy public policy is the notion of accountability for health.

Governments are ultimately accountable to their people for the health consequences of their policies, or lack of policies. Health promotion policy requires the identification of obstacles to the adoption of healthy public policies in non-health sectors, and the ways of removing them. The aim must be to make the healthier choice the easier choice for policy makers as well as for the public (WHO, 1998).

3.5 Healthy Public Policy Analysis on UKS

The concept of health promoting schools has its roots in Healthy public policy (HPP) that places emphasis on participation (including inter-sector networks), equity, and empowerment (the school community and surrounding). Based on that concept, HPS must fulfil the HPP criteria. It is about making inter-sector networks and developing policies to implement HPS (WHO, 1998). These two things are not yet optimally implemented in *UKS* as a health promotion program in schools.

Table 2: The analysis of strategy with HPP approach to implement the full six elements of HPS

| No. | HPS Element | Strategy to implement | Possible Stakeholder involved |
|-----|--|---|--|
| 1 | Engages health and education officials, students, teachers & representative organizations, parents, and community leaders in efforts to promote health | - Advocacy - Networking & collaboration - Capacity building | - government - school - parents - community surrounding |
| 2 | Strives to provide a safe, healthy environment | - Networking & collaboration - Resources mobilization & allocation - <i>Capacity building</i> | - government - school - community surrounding - private sector |
| 3 | Provides school health education | - Networking & collaboration - Resources mobilization & allocation - <i>Capacity building</i> | - government - school - private sector |
| 4 | Provides access to health services | - Networking & collaboration - Resources mobilization & allocation | - government - school - private sector |
| 5 | Implements health-promoting policies and practices | - Advocacy - Networking & collaboration - <i>Capacity building</i> - Evaluation | - government - school - community surrounding - parents - private sector |
| 6 | Strives to improve the health of the community | - vision building and strategic planning - <i>Capacity building</i> - Evaluation | - government - school - community surrounding - parents - private sector |

The WHO (1997) has stated strategies to strengthen HPS implementation at local, national, and regional/international levels. They are 1) vision building and strategic planning, 2) advocacy, 3) networking and collaboration, 4) resource mobilization and allocation, 5) capacity building for both of individual and institutions and 6) evaluation with operational research (WHO, 1997). The previous six strategies should be used to implement the six elements of HPS as well. The strategies are health promotion strategies that underline the healthy public policy approach. Table 2 shows the analysis of the possible strategies used to gain HPS elements, with the potential stakeholder involved.

Table 2 reveals that the government becomes the potential stakeholder involved in the achievement of all HPS elements, besides school as well. The government, including schools, must be a leader in the context of healthy school achievements. That is the point of the policy concept as a tool for programs to succeed. The second most important stakeholder is the community surroundings, including other interconnected sectors. The role of the government, school and community asserts that healthy schools should be the primary policy agenda in those sectors. They must identify all hindrances to applying

healthy school programs so that they can provide healthier choices for school community.

4 CONCLUSIONS

Usaha Kesehatan Sekolah, as one of the health promotion programs in schools, needs a reinforcing factor to shift in to becoming health promoting school, which is a comprehensive healthy school. The government, through the implementation of healthy public policies, will shift the *UKS* in to becoming HPS, by involving schools and community surroundings. The school committee which is the parent's representative should be involved in-depth, including community's key person as well.

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Indonesian National Health Insurance: Gaps in Communication with Health-Care Providers

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Keywords: National health insurance, BPJS, Health-care providers, Corporate communication.

Abstract: The perspective of health-care provider on the implementation of the Indonesian national health insurance scheme managed by *Badan Penyelenggara Jaminan Sosial (BPJS)* in 2014 has not been reported much. This study aims to explore the gaps in communication between health-care providers and BPJS. Quantitative data was collected prior to an Indonesian health insurance workshop held in Jakarta in November 2015. Fifty health-care providers in Jakarta responded to a questionnaire. Two months later, a random sample of 20 providers who responded to the initial questionnaire agreed to a follow-up phone interview. Most of the respondents came to the workshop for more information on BPJS (69.6%) and 21.4% came to share their experience and to give feedback to BPJS. 72.7% of the respondents did not find the BPJS operational manual to be helpful for their need of information. 41.2% of respondents wanted more information on INA-CBG and tariff regulation, BPJS operational regulation (41.2%), and the verification system and reasoning (11.8%). The respondents did not have any feedback from BPJS nor did they see any changes in BPJS two months after the workshop. In conclusion: debates between health-care providers and BPJS have continued, indicating the need and willingness for both sides to communicate but the gaps of information persist. BPJS needs more innovation in relation to their communication system.

1 INTRODUCTION

Indonesian Law No 40/2014 established the national social insurance scheme to ensure basic life needs covering from health, work accident, pension, and life insurance. Indonesia started implementing the national health insurance scheme or *Jaminan Kesehatan Nasional (JKN)* in 2014 and has aimed for universal coverage by 2019 (Mboi, 2015). In Indonesia, JKN was mandated by law to be managed by *Badan Penyelenggara Jaminan Sosial (BPJS)*. Concerns about JKN implementation, the people's perception of JKN implementation and the financing system has been frequently assessed (Suprianto & Mutiarin, 2017; Utami & Mutiarin, 2017). Concerns about JKN implementation from the health-care providers' perspective, however, has not been reported often. Issues such as the costs and the

payments received by the doctors and providers has been only anecdotally reported. Studies on the gaps of communication between the two institutions in Indonesia are scarce.

It has been previously reported that 83% of health-care providers in Jakarta found that the JKN system was not beneficial for health-care providers. The reasons mostly mentioned were unrealistic costing in Indonesia Case Based Groups (INA-CBGs), a suboptimal payment system and complicated management (Sebayang et al., 2016). It is also known that there is distrust between health-care providers and insurers (Revive Health, 2017; Xu, 2017). However, there may also be gaps in the communication between BPJS and health-care providers that can potentially be bridged in order to improve the trust between BPJS and health-care providers. This study, thus, aims to explore the gaps

in communication between health-care providers and BPJS in Jakarta, Indonesia. The study was funded by the Alumni Grants Scheme No AG 1400075 of Australia Awards, Indonesia.

2 METHODS

The data was collected using quantitative and qualitative methods in a descriptive study from the participants of a one-day JKN workshop held in Jakarta in November 2015. This workshop provided an open discussion between JKN, represented by BPJS, the Ministry of Health, and health-care providers from public and private sectors including clinicians and management officers. The health-care providers who attended the workshop were represented by clinicians and managers from the public and private health sectors.

Prior to the workshop, all 103 attendants of the workshop, including health-care providers, were offered to respond to a pre-workshop questionnaire. The questionnaire obtained information on the participant's reason for attending, the information that they expected to get by attending the workshop, and their opinion on what part of BPJS implementation they found useful and what part made their work more difficult. Two months after the workshop, a random sample of 33 health-care providers who responded to the original questionnaire were contacted for a follow-up phone interview with open-ended questions to obtain information on their perception of the updates from BPJS.

The quantitative data was analysed using STATA 14. Common themes were obtained from the qualitative data from the phone interview.

3 RESULT

Sixty eight out of the 103 respondents returned the pre-workshop questionnaire, 50 of which were health-care providers. All health-care respondents worked in hospitals, 66% were female and 78% represented hospitals that were already BPJS providers). Of the 33 health-care providers randomly contacted two months later, 20 health-care providers agreed to take a follow-up phone interview. The pre-workshop questionnaire showed that most health-care providers attended the workshop to get new information about JKN or BPJS (69.6%) and one fifth (21.7%) of the providers wanted to share their experience and to provide

suggestions for the better implementation of the insurance scheme (Table 1).

Table 1: Health-care providers' motivation for attending the workshop (N=46)

| Motivation for Attending | N | % |
|------------------------------|----|------|
| Invited | 4 | 8.7 |
| To get new information | 32 | 69.6 |
| To share and give suggestion | 10 | 21.7 |

For the question about whether or not the participants found that the BPJS operational guideline were helpful, 44 providers answered but only 34 participants provided details of what information they needed more. Out of the 44 providers who answered, 72.7% reported that they did not find the BPJS operational guideline to be helpful. Most providers wanted more information on the INA-CBGs and tariff policy (41.2%) and updates on the operational regulations including the primary update (41.2%). Some providers also wanted more information on the BPJS verification system (11.8%). A smaller number of providers wanted information on the health service (disease prevention policy, service coverage, quality and patient safety) after JKN implementation, membership (how to be a BPJS provider, what membership information is to be given to patients) and other information (BPJS implication on medical audits and sharing of the patients' medical record, BPJS success stories and government expectations of private hospitals regarding BPJS) (Table 2).

Table 2: New information needed by health-care providers (N=34)

| Information Needed by Providers | N | % |
|----------------------------------|----|------|
| INA-CBGs and tariff policy | 14 | 41.2 |
| Update on operational regulation | 14 | 41.2 |
| Verification System | 4 | 11.8 |
| Health Service | 3 | 8.8 |
| Membership | 2 | 5.9 |
| Other | 3 | 8.8 |

Only 37 providers reported what they found to be useful from BPJS implementation and what they thought made their work more difficult. Health-care providers found that the unrealistic INA-CBGs (24.3%) made their work more difficult. Interestingly, the referral system and the coding system were perceived as being both positive and negative. The verifiers not having a medical degree was reported to be a drawback (13.5%) and was perceived as 'trespassing doctor's authority', followed by limited medical knowledge and a lack of socialisation. Other drawbacks reported included a lack of hemodialysis service, piles of paperwork,

and limited allowable diagnostic checks. Approximately 15% of providers did not find any positive side of BPJS implementation that was useful for their work. They reported other positive aspects, albeit which was small in proportion, including the availability of complete patient information, the emergency unit service, BPJS centres, and providers perceived by the community as having good intentions. A provider also perceived the BPJS verification system as positive (Table 3).

Table 3: Providers' answers on their perception of JKN and it's implementation

| Perception | n | % |
|------------------------------|---|------|
| Perceived as negative (N=37) | | |
| Unrealistic INA-CBGS | 9 | 24.3 |
| Referral System | 9 | 24.3 |
| Coding System | 8 | 21.6 |
| Verificators are not doctors | 5 | 13.5 |
| Limited Medicine | 4 | 10.8 |
| Lack of Socialization | 3 | 8.1 |
| Other | 5 | 13.5 |
| Perceived as positive (N=37) | | |
| JKN is a Pro-poor Policy | 7 | 26.9 |
| Coding System | 5 | 19.2 |
| Referral System | 5 | 19.2 |
| Nothing positive | 4 | 15.4 |
| Other | 5 | 19.2 |

In the follow up interview, the health-care providers reported that they had not received any more updates from BPJS since the workshop and most providers reported not seeing any improvement in the BPJS system (85%). Fifteen percent of the providers reported that they were starting to become BPJS providers after the workshop.

4 DISCUSSION

The study found gaps in the communication between BPJS as JKN implementers and health-care providers. Most of the providers found that the information provided in the BPJS operational manual was unsatisfactory and they needed to come to the workshop to get more information and clarification. In addition, the providers came to the workshop to share their experiences to give suggestions for the better implementation of BPJS, indicating a willingness to open up communication.

Although literatures on communication between patients and health-care providers are abundant (Anderson, Wescom, & Carlos, 2016; Kee, Khoo, Lim, & Koh, 2017; Sandu, Caras, & Nica,

2013), there is a lack of reports on communication between health care providers and insurance company, not only in Indonesia, but globally. However, our finding was in-line with a review study of publication on JKN reporting that socialization of technical aspects of BPJS to both hospitals and community health centres were limited (Irwandy, 2016; Marlinae, Rahman, Saputra, & Anhar, 2016).

The study previously reported that 83% of health-care providers found that BPJS was not beneficial to providers due to the unrealistic costing in relation to INA-CBGS, the suboptimal payment system and complicated management (Sebayang et al., 2016). The current study has shown that health-care providers found some positive sides to BPJS although clarifications are urgently needed to close the gaps in communication. The clarifications mostly needed by the providers were for the INA-CBGS and tariff policy and for updates on the new regulations. The finding is in line with a study that reported health care provider dissatisfaction on the tariffs (Irwandy, 2016).

Participants during the workshop claimed that the regulations changed too often and sometimes the changes in the regulations were made effective retrospectively, affecting past cases that consequently brought more administrative burden to the providers. Referrals and the coding system have the potential for easy clarification as they were perceived as being both positive and negative by the participants. Having an effective referral and back-referral system as well as case coding system will help the providers in managing their workload. Clarification on the verification system was also needed. Providers, mostly having a medical background, felt that having verifiers without a medical background made their work harder. Although not opposing verification per-se, the workshop discussion revealed that the participants perceived the verifiers as not understanding the cases properly and trespassing doctor's authority. The opposition against non-medical personnel doing the verification of a doctor's work is a source of distrust between BPJS and the health-care providers. Another remaining important challenge for BPJS was that 15% of the participants did not find any benefits of BPJS. BPJS may need to design a comprehensive communication strategy specifically for providers.

Like other companies, BPJS will benefit from a more active stance of corporate communication, such as increase in market, long term reputational risk management and better management (Eccles &

Vollbracht, 2006). As BPJS relies heavily on health-care providers and their quality of care, good communication between BPJS and providers will build trust and benefit BPJS in long term collaboration with health-care providers in providing health access to all.

5 CONCLUSION

There are gaps in the communication between BPJS and the health-care providers. Debates between health-care providers and BPJS have continued, indicating the need and willingness for both sides to communicate but the gaps of information persist. BPJS needs more innovation in their communication system to bridge the gap with health-care providers by providing the information that they need and ensuring updates and socialisation immediately after any changes in the regulations. Common understanding needs to be reached for a better accepted verification system.

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The Changing Nature of Campus Health Insurance: Testing Portability Issues of National Health Insurance

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Keywords: Migrant students, Campus, Health insurance, National health insurance.

Abstract: Before National Health Insurance was implemented, the majority of leading universities in Indonesia already covered their students with a health insurance scheme. They managed their own campus health insurance independently. Both National Health Insurance in 2014 and single tuition policy in 2015 brought huge change to campus health insurance. This study aims to analyse students' needs in health insurance after implementation of these policies. This is an exploratory study with cross-sectional design. The sample was taken by voluntary sample through online questionnaire. There were 83 students across different academic degree participated in this study. Most of the students (65.1%) came from various districts outside the campus district and chose to reside in boarder houses around the campus. There were only 52.9% of the students already listed as National Health Insurance participants. Out-of-pocket risk belongs to 35.5% students who were not covered by health insurance at all. Almost all of the students who already participated in National Health Insurance (93.3%) were registered in the primary healthcare in their hometown. The students are already paying for single tuition which does not accommodate health insurance. A real changing need of migrant students for health insurance coverage exists in the National Health Insurance era.

1 INTRODUCTION

Universal Health Coverage swept many countries in the last decade, including Indonesia. Even though Indonesia is the biggest archipelago country with a widely dispersed territory, National Health Insurance is chosen as the health insurance mechanism rather than region-based insurance. This decision has consequences in the portability challenges of the preferred health insurance scheme. Previous region-based health insurance mechanisms already implemented by local government should be merged into a national scheme. It should enable not only raising the pooling level in local government, but also maintaining the cross-regional participation transfer (Pan et al., 2016).

Previously, the majority of universities in Indonesia had institutionally managed health services for their students before the enactment of the National Health Insurance. The provision of this health service is funded through a student health insurance scheme that is managed independently by the university and which is limited only for students in the university. Student health insurance is regulated through the policy of each rector.

Generally, this fund pooling is collected through a semi-annual contribution in addition to the tuition fee. These funds are managed to finance the health of students during their education. However, in accordance with the mandate of the Ministry of Education, universities are not permitted to collect additional fees outside the national rate. However, the calculation of this national rate does not accommodate student healthcare insurance. The National Health Insurance that was launched one year previously also makes this situation more complicated. The availability of parental health insurance can have significant effects on the probability that a young individual enrolls as a full-time student in university (Jung et al., 2013). Unfortunately, there is no individual student membership in National Health Insurance. To be able to be covered by National Health Insurance, students should be registered with all of their family members.

The huge variations of health insurance mechanisms bring many obstacles to the citizens who wish to temporarily move to another region for some years. In Indonesia, young adults from rural regions who have just graduated from senior high

school compete to be able to enrol in the best universities, which are mostly located in urban regions. According to Callahan (2007), young adults are twice as likely to be uninsured as children or older adults. This specific group is a form of a mobile population with a disproportionate number of unemployed or irregularly employed members who must weigh the financial and time costs of their study and living costs.

Moreover, Pan et al. (2016) explained that a migrant population which is already covered by health insurance is commonly restricted from claiming benefits in the destination region. On the other hand, these migrants consistently underuse services in both their communities of origin and their destination cities. The probability for students to voluntarily register into health insurance is also possibly small. Undergraduate students appear to have formed perceptions on health insurance which is similar to adult including their family (Price PhD, MPH et al. 2010). The unclear identity of civilization is worsen their willingness to participate in a national health insurance program. Study by Ybarra et al. (2017) addressed a gap in the literature on access and use of health insurance and routine medical and dental care among children by including the legal statuses of both parents and children, there are limitations.

Based on those background, this study examines how the portability issue of National Health Insurance in Indonesia has impacted the students' need of health insurance after implementation of the policies.

2 METHOD

This is an exploratory study analysing the implications of National Health Insurance policies affecting a university providing a healthcare service for its students during college. The data were collected by cross-sectional survey in the second year of implementation of National Health Insurance. The sample was taken by voluntary sample through online questionnaire. The questionnaires were broadcast to various student groups on the official social media of the university. At the end of a week of data collection period, there were 83 students across different academic degrees and universities who participated in this study.

The survey captures the student characteristics related to National Health Insurance membership requirement and student utilisation of healthcare service during college. The need of college students

for health insurance after implementation of National Health Insurance was analysed by comparing the gap between both sections.

3 RESULT & DISCUSSION

The majority of respondents (65.1%) are migrant students whose home is not in the same city as the campus location. Most of the students choose to live near the campus by moving to the city in which campus is located. Many of the students who participated in this study are of undergraduate level. This means that most of the students are of young adult age. This age group is dominantly dependent on their parents for all their living costs. Based on the membership conditions in the National Health Insurance policy, this age group is still able to be covered by parental health insurance by showing that they are still not financially independent. The possibility of parental health insurance is high due to fact that more than half of the parent population are wage earners. The National Health Insurance policy officially regulates that the wage earners must be registered by their employers in National Health Insurance. The majority of migrant students (52.9%), who are basically at some distance from their parents' authorisation during college, are already protected through the National Health Insurance mechanism. Unfortunately, the rest of the migrant students are barely covered by any health insurance during college. Moreover, there are still 30.1% of students who are not covered by health insurance at all.

Table 1: Student characteristics

| | n | % |
|-----------------------------------|----|------|
| Student origin | | |
| Not migrant student | 29 | 34.9 |
| Migrant student | 54 | 65.1 |
| Home base while study | | |
| Move to campus location | 73 | 88.0 |
| Stay in hometown | 10 | 12.0 |
| Education level | | |
| Diploma | 1 | 1.2 |
| Undergraduate student (extension) | 11 | 13.3 |
| Undergraduate student (regular) | 57 | 68.7 |
| Post Graduate | 14 | 16.9 |
| Parents' job | | |
| Civil servants | 25 | 30.1 |
| Unemployment | 20 | 24.1 |
| Informal workers | 15 | 18.1 |
| Private company employee | 14 | 16.9 |

| | n | % |
|-----------------------------|----|------|
| Pensioner | 9 | 10.8 |
| Health Insurance | | |
| National Health Insurance | 44 | 53.0 |
| Commercial Health Insurance | 10 | 12.0 |
| Both | 4 | 4.8 |
| None | 25 | 30.1 |

Those characteristics impact the health insurance utilisation. Migrant students who are not covered by health insurance should be able to set aside their living cost for healthcare purposes when sick. In this case, a university health insurance scheme is very much needed to ensure accessible healthcare service during college. In 2019, when the National Health Insurance is targeted to reach universal health coverage, the university health insurance scheme should be considered as another option to crawling the niche market of students that are left behind by the implementation of National Health Insurance.

A second alignment that should also be considered is the existence of students who are already registered as National Health Insurance participants, but still choose primary healthcare in their hometown. Based on the National Health Insurance regulations, participants should choose one primary healthcare to be the patient’s first contact in using the healthcare facilities. By choosing the primary healthcare facility, participants can only be treated by that chosen primary healthcare. Participants are not be allowed to access other primary healthcare, except for the emergency room. The portability issue has become the main problem in this case.

3.1 The Chosen Primary Healthcare: A Matter of Portability Issues

In the term of National Health Insurance implementation, participants cannot directly utilise the referral hospital without appropriate medical indications. There is a strict referral mechanism which has been created to ensure that there will be no unnecessary treatment which potentially disembogues high treatment cost.

National Health Insurance participants should choose only one primary healthcare facility. This primary healthcare facility is responsible for treating the registered participants. This will be paid for by a capitation mechanism based on the number of National Health Insurance participants registered in the primary healthcare facility. Participants do not need to pay anything to the primary healthcare facility when accessing the services. Vice versa, the primary healthcare facility is prohibited to take a fee

for its service to the participants. Unfortunately, participants cannot access the other primary healthcare facilities freely. If participants want to access a different one, they must change their primary healthcare facility. Table 2 shows that most of the students who already registered as National Health Insurance participants are varied according to the primary healthcare facility type chosen.

Table 2 The chosen primary healthcare facility by students

| | n | % |
|---------------------------|----|------|
| Location | | |
| Hometown | 40 | 90.9 |
| City of present campus | 4 | 9.1 |
| Type | | |
| General practitioner | 13 | 29.5 |
| 24-hour clinic | 4 | 9.1 |
| Company-affiliated clinic | 2 | 4.5 |
| Public health centre | 25 | 56.8 |

Most of the primary healthcare facilities chosen by students are located in the student’s hometown. Even though these students realise the long period of study in college, they have decided to not change their primary healthcare facility to a primary healthcare facility located near their present college. This means that this group of students will be face difficulties when assessing a primary healthcare facility using the National Health Insurance. Students either need to return to their hometown to access primary healthcare without charge or pay to get treatment in their current city.

What if there is an emergency situation? National Health Insurance accommodates emergency situations, but with specific medical indications for each disease or accident. Students with National Health Insurance can use emergency treatment only in the emergency room of a hospital without consideration of where their primary healthcare facility is situated. Even though students can access it without any fee, incidence of emergency situations is commonly rare. Most of the illnesses among students are not considered as emergency cases. As such, primary healthcare still becomes the first need of students.

In spite of decentralization which promises to bring health equity among citizens, the implications of decentralised governance of health systems on health- related equity are varied and depend on pre-existing socio-economic and organisational context (Costa-Font & Moscone 2008). It also argued that decentralization results in ambiguous consequences on efficiency; equity consequences are controversial and address the relevance of redistribution

mechanisms (Alves et al. 2013). Whereas decentralization is pointed to responsible financing the mobile citizens across the district area.

3.2 Students' Need of Healthcare during College

Normally, undergraduate students spend 3-4 years of their life struggling to graduate from college. During this period, there are many possibilities of students getting sick or having accidents. Table 3 shows how students deal with these conditions during college.

Table 3: Health-seeking behaviour of students during college

| Health-seeking behaviour | n | % |
|---|----|------|
| Self-treatment | 24 | 28.9 |
| Utilise private healthcare (OOP) | 18 | 21.7 |
| Utilise health facility with commercial insurance | 2 | 2.4 |
| Utilise campus clinic | 32 | 38.6 |
| Return to hometown | 7 | 8.4 |

Most of the students choose to utilise the healthcare facility that is provided by their university. This shows that the most accessible healthcare treatment for students during college is the campus clinic. Students also tend to cure their sickness by self-treatment. Self-treatment is commonly found in Indonesia due to the ease of obtaining over-the-counter (OTC) medicine. As educated people, students are confident in guessing what their illness is and what kind of medicine they should buy.

Surprisingly, none of students who participated in this study utilised a healthcare facility using the National Health Insurance scheme in the college location. Students who were registered as National Health Insurance participants chose to return to their hometown to get treatment. This indicates that portability issues still exist in the implementation of National Health Insurance among migrant members. Private health providers, including private healthcare facilities and commercial health insurance providers, could take advantage through this situation. There are 21.7% of students who prefer to utilise the private healthcare facility. Most of the students spent Rp150,000 (\$11) each time in utilising this private healthcare. They pay this through an out-of-pocket (OOP) mechanism.

Experience of how China finances its health insurance system shows that the behaviour management and purchasing mechanisms of

National Health Insurance perform poorly (Liu et al., 2014). National Health Insurance participation has a weak negative or even no significant association with the OOP of hospitalised patients. National Health Insurance seems to fail to reduce people's OOP. This also happens in our study. The trend of students using OOP is high even though National Health Insurance is already implemented.

There are emerging healthcare needs of migrant students considering the location of the primary healthcare facility they choose. The majority of migrant students (93.3%) registered as National Health Insurance participants still belong to the primary healthcare facility in their hometown. Vietnam's experience clearly suggests that health insurance strongly increases the access and reduces the financial burden in healthcare utilisation (Sepuhri et al., 2009). In the case of migrant students in Indonesia, rural-to-urban migrants should be given increased portability. Pan et al. (2016) suggest that the government should think about raising the level of pooling or develop specific policies on cross-regional transfer of entitlements. Our findings show that National Health Insurance simply cannot promote the students' ability to access healthcare in the campus location if the portability issue still exists.

3.3 Inefficiency of Healthcare Service among Students

This study provides evidence that portability is something that should be rethought in providing insurance for college students. Different from other levels of education, students in college are commonly separated from their parents during study. They must take care of their health by themselves. Rising et al. (2007) explained that even though health insurance facilitates access to care, enrolment alone is not enough to ensure the receipt of preventive health care. Study by Jung et al. (2013) revealed that the availability of parental health insurance can have significant effects on the probability that a young individual enrolls as a full-time student. College enrolment policy is the first screening effort to capture the ability of each student in protecting their life during college. A study about the health need of college students also shows that they learn to manage their own health, gain their health knowledge and begin to start health habits during study period (Nguyen et al. 2016). These findings imply that campus student health centres should be better evaluate and facilitate health education.

Before National Health Insurance implementation, the college enrolment system in Indonesia never prescribed that such students should be covered by health insurance. By 2019, Indonesia is targeted to achieve Universal Health Coverage. Considering this roadmap, since 2017, the National Health Insurance provider has cooperated with universities to ensure that all new students are already registered. Unfortunately, a university cannot push their students to change their primary healthcare facility to the campus clinic. This potentially causes inefficiency in campus clinic management. Universities should finance their clinics in providing healthcare service for students. On the other hand, students still have to pay the National Health Insurance dues.

Moreover, most students in university in Indonesia are regular undergraduate students who have used the single tuition system for college payment. In the single tuition system, the university only permitted to collect funds from students once in one education year. The amount of this fund is determined by the Ministry of High Education. A university should be able to manage this fund for all education processes. Unfortunately, in the single tuition fee policy, the amount of funds for students' healthcare during college is unclear. University clinics have difficulty in managing the health portion that is embedded in the single tuition fee. The benefit package received by students at the university clinic is highly dependent on the university's ability in financing the campus clinic.

4 CONCLUSION

Indonesia faces big challenges regarding its portability issues. The wide area of Indonesia brings consequences in the application of National Health Insurance across different primary healthcare facilities across the country. Migrant college students are one of the vulnerable groups of population that have high risk in this case. The portability issue regarding health insurance for college students not only disadvantage them, but also induces inefficiency in the campus clinic management. The campus enrolment system should be designed to accommodate this portability issue in order to guarantee that all students will be able to access a qualified healthcare service during study.

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Moving the Needle for Private Sector Engagement in MNH in Indonesia

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Keywords: Maternal and neonatal care, Private sector, Universal health coverage, Indonesia.

Abstract: A comprehensive assessment for Private sector engagement in Maternal and Neonatal Health care (MNH care) was done in 9 Indonesia provinces in 2016. The objective of the assessment is to map all existing and those private sectors who would like to engage in the MNH care after the introduction of Universal Health Coverage, called as *Jaminan Kesehatan Nasional (JKN)*, in Indonesia. This is important as Indonesia is still challenged by high maternal and neonatal mortalities as compared to peer countries with similar economic development. While the private sector is growing in recent years, information on their characteristics and behaviours toward MNH care is limited. This assessment provides a comprehensive analysis of the existing private sector, their behaviour toward JKN, what the private investors' willingness and challenges to invest in the MNH care, and what type of services that they are going to enter in the near future. This study also recommend to the Ministry of Health and other sector in how to provide good regulatory environment and to incentivize their present to help the country to meet the people demand due to JKN expansion, in particular in the MNH care.

1 INTRODUCTION

Indonesia is a country undergoing growth in a multitude of sectors. The country's middle-income population is on the rise, its democracy continues to become more open, and its economy continues to grow, making Indonesia the largest economy in Southeast Asia with a gross domestic product (GDP) over US\$861.9 billion (World Bank, 2015). Despite these positive developments in the country's economic landscape, it has yet to take a similar lead on many health issues.

One area of health that performs poorly on major indicators is maternal and newborn health. The maternal mortality ratio has been estimated at 359 deaths per 100,000 live births, much higher than both the Millennium Development Goal 4 target ratio of 110 and the ratio in regionally or economically comparable countries (Statistics Indonesia, 2013). The decline in child deaths (Millennium Development Goal 5 target) remains stalled—primarily due to the lack of reduction in neonatal mortality, which has remained around 19 deaths per 1,000 live births over the last two decades.

The government of Indonesia has not traditionally put high levels of funding into healthcare, until the inauguration of *Jaminan Kesehatan Nasional (JKN)*. This national health insurance scheme scheduled to reach national coverage by 2019, has signalled a change in priorities. As of April 2016, 164 million Indonesians were covered under JKN (Jong and Parlina, 2016).

In 2015, Social Security Management Agency for the Health Sector, or BPJS-K received US\$3.7 billion in premiums (Jong and Parlina, 2016). This included US\$2.1 billion (57% of the total) from participants and another US\$1.6 billion (43%) from the state budget for covering the poor and vulnerable, civil servants, and members of the military (Ernst and Young, 2015). Current public sector health infrastructure cannot keep up with the growing number of people gaining financial access to care. Partnership with the bustling private sector would allow the government of Indonesia to meet its universal health coverage goal, and the Indonesian market is primed for such an opportunity.

The growth of Indonesia's economy has led to growing interest from investors, which, importantly, also includes investment interest in health markets.

The establishment of JKN has signalled to the market that the government is committed to financing healthcare and increasing access for its citizens. At the same time, the middle class is growing, estimated to reach 135 million people by 2030, and utilization of private facilities and pharmaceuticals is expected to increase as more people acquire additional resources (Oberman et al., 2012).

The need for improved maternal and newborn health, paired with the now drastically increased market for healthcare in Indonesia, offers a prime opportunity for others to get involved in ensuring that health services are high-quality, equitable, efficient, and effective. Under JKN, reimbursements related to reproductive and newborn health services will total at least US\$720 million per year in additional revenue for healthcare providers. The private sector must all play important roles if maternal and newborn mortality is to be lowered.

While greater investment in the maternal and newborn health arena could be a winning situation for businesses, civil society, and (especially) mothers, it is important to keep in mind the many challenges of operating in Indonesia. Indonesia is home to more than 257.5 million people, a population that continues to grow (World Bank, 2015). While GDP is on the rise, more than 40 percent of the population (100 million people) is considered poor or vulnerable (i.e., living on US\$2 a day or less) (World Bank, 2012). Indonesia's 34 provinces have widely diverse cultures, religions, and natural resources. From the bustling metropolis of Jakarta to the ocean-dependent islands of the Maluku and the indigenous peoples of Papua—each province has its own context and unique considerations when it comes to economic and social development, and thus its own distinct set of opportunities.

2 METHODS

For this landscape analysis, the USAID funded Health Policy Plus team interviewed representatives from 128 private sector entities, including banks, private equity firms, private hospitals, midwives, startup incubators, and transportation and consumer goods firms in the provinces of Jakarta, West Java, Central Java, East Java, North Sumatera, Maluku, North Maluku, Papua and West Papua. The assessment focused on key health system drivers that affect access to, and the quality of, maternal and

newborn health services; it then identified opportunities for private intervention.

3 RESULT AND DISCUSSION

The growing space in the health sector offers opportunities for investment from many sectors. Greater financial access to health services will increase the number of patients seeking care from health facilities and offers the prospect of expanding infrastructure. In addition to guaranteed health services under JKN, a multitude of support services will be needed for public and private providers. This will offer opportunities for innovation from start-up companies, technology companies, and others looking to enter the market. The entry points are manifold depending on the level of innovation that a company can bring to the table and what issues within the system that they want to improve.

The health market in Indonesia is considered highly regulated by the government and technical complex, making it a risky—or higher-cost—space for entry in which funding from development finance institutions, or governments can help to lower risk and catalyse investment. The team identified five themes that provide concrete examples that could be exciting from a profit standpoint, while also offering real solutions to Indonesia's high maternal and newborn mortality ratios.

3.1 Scale Successful Private Facilities to Improve Access

Indonesia's 70 million women of reproductive age are increasingly looking to private providers for reproductive health services (United Nations Department of Economic and Social Affairs, 2015). Only 36 percent of deliveries took place in a private facility in 2007, but this number had risen to 46 percent by 2012, well surpassing the 18 percent who deliver at a public facility. As the number of women accessing health services increases—particularly due to JKN financial coverage—there is increased demand for high-quality facilities that are geographically accessible. This opportunity presents itself in two ways:

1. **Invest in high-quality midwife clinics.** 75 percent of Indonesian women receive antenatal care at midwifery clinics and 62 percent give birth with a midwife (Statistics Indonesia, 2013). A number of midwives were interested in

opening new clinics, expanding existing clinics, or simply investing in improved infrastructure and increased quality for their existing clinics. Investing in these midwives' success holds the potential for both profit and improved health outcomes. However, many loan products on the market are currently seen as unfavourable.

2. **Expand the scope and reach of established health service companies.** Siloam is the largest private hospital chain in Indonesia and is currently working to roll out an "Express" model. This model is intended to function as a primary satellite facility that people can access to receive basic care or seek a referral to a Siloam hospital. "Express" clinics—which have cost structures that differ from Siloam parent hospitals—can function profitably at BPJS reimbursement rates given high use, while also increasing brand recognition. There is plenty of opportunity for other hospitals to establish similar satellite models, or for a new company interested in franchising clinics or moving access outside of urban centres to partner with hospitals for referral purposes.

3.2 Technology Solutions to Improve Communication for Service Delivery

Technology solutions to improve communication for service delivery are potentials for Indonesia rapid growing in internet and mobile phone access. Only 40 percent of the population is currently online and just 15 percent of mobile users use smart phones, projections show that 133.5 million people will be online by 2019. Much of the incubated start-up culture in Indonesia is centred on technology and its application to Indonesian needs. Increasingly, tech deals are included in Indonesian investors' portfolios (Freischlad, 2015). Technology can be focused and used in important ways to help decrease maternal and newborn mortality rates:

1. Increase access to information and improve knowledge sharing for e.g. online training classes could play an important future role in Indonesian health. Leveraging phone and internet platforms to improve knowledge and foster communication between providers and referral systems will also be extremely important. On the other side of the service, the provision of key health information to patients about risky behaviours, disease symptoms, or their rights under JKN is also needed.
2. Expand the reach of providers through applications that allow patients to communicate

with doctors, even when they cannot travel to a clinic, could be an additional solution. *Klikdokter*, *Alodokter* and *TanyaDokter* are some of the models though none have a large market share yet.

3. **Improve the collection and distribution of available data,** from the current government of Indonesia, and private sector actors about the characteristics of the 70 million women of reproductive age in Indonesia, could be effectively aggregated into a rich database. New technology introduced to the health sector in the future can help collect data in a more systematic way and offer a better sense of the gaps that must be filled.

3.3 Transportation Solutions

Transportation solutions could fill gaps of limited public service transportation in many areas, addressing current serious barrier to access care. Road conditions often prevent women from attending check-ups at their local clinic; at other times, ambulances are not procured by local facilities for emergency situations. Furthermore, there is no national emergency dispatch service in Indonesia. With the growing culture of ride-share applications in Indonesia, there is an opening to use existing networks to provide scheduled and emergency transportation.

Midwives have noted the growing demand for transportation services by women who prefer to pre-schedule transport for upcoming deliveries rather than procuring a ride in the moment of need, but there is also a need for emergency transportation. Leveraging the spread of mobile infrastructure, a business operating an innovative technology platform to connect local resources could increase access to health services, and could save the lives of women in emergency obstetric situations.

3.4 Improve Quality of Midwifery Care Through Private Sector Training Institutions

At present, demand for midwifery training is high and schools are saturated with students. Additionally, midwives must be relicensed every five years, a process that involves continuing education. Major opportunities in this area include the following:

1. Expand education institutions outside of the urban market into peri-urban areas. Most midwives are educated through private

institutions, most of which are located in urban areas. Only graduates from schools rated A or B under national system are hired by the civil service to work in public facilities. This has led to a saturation of A and B schools in urban areas. The private institutions take in as many students as they can for the sake of profits, which may compromise teaching quality, and students often graduate without ever performing a delivery because not enough deliveries occurred to accommodate each student. The shift of private institutions out of urban areas will move students to a wider area, increase access to smaller classes, and offer greater opportunities for hands-on study.

2. Grow access points for continued medical education. Midwives require 25 credits of continuing medical education to renew their license every five years. These credits can be achieved through a number of avenues, including writing journal articles or attending seminars. The study team's interviews found that a number of midwives are very interested in attending continuing education seminars on topics like infection prevention, but that these courses are sporadically delivered and not readily accessible, making it costly to attend. These problems offer two solution areas. First, private training institutions can leverage their network of trainers across the country to offer consistently high-demand courses through a low-cost, high-volume model. Second, financiers investing in the expansion of private hospitals and clinics into peri-urban and rural areas could also invest in developing e-learning courses to ensure that staff can maintain their skills and knowledge. The courses could be made available for a fee to providers outside of their network to generate revenue. In many areas, the growth of internet access is also providing this opportunity for the first time.

3.5 Tailor Financial Products for Maternal and Newborn Health

Tailor financial products for maternal and newborn health could expand the reach of Indonesia's banking system to currently only 21.9 percent of the poorest two quintiles (poorest 40%) of the population holds savings in a financial institution. The study team suggests banks to increase their market share while helping mother and newborn care:

1. Offer specialized loans for healthcare providers. Microfinance institutions could provide capital for successful private midwives hoping to scale their businesses. Specialized loans for midwives, with a consistent stream of patients, could be quite profitable, as midwives have historically been preferred providers for reproductive health services. Additional benefits to the loan product (like managerial technical assistance) could entice more businesses to take out loans.
2. Introduce banking products tailored to improving access to healthcare for women. Although BPJS reimburses medical costs, women often endure significant transportation costs or lost income associated with maternity leave. Maternity savings accounts can bring women into banking and help them save for costs associated with pregnancy that are not reimbursed by BPJS. Loyalty incentives such as free ultrasounds, check-ups, etc. for banking clients could entice more women to open accounts, while also improving the quality of antenatal clinic visits.
3. Offer supplemental insurance for maternal health. Private health insurance companies can offer private insurance packages that bundle services associated with maternal and newborn health costs filling the gaps of JKN reimbursement and pulling more clients into the market.

4 CONCLUSIONS

As JKN is rolled out, Indonesia's health system will grow, demand for services will increase, and more money will flow into the health sector. These changes provide an opportunity for actors outside of government to get involved in improving access to, and quality of, maternal and newborn health services. There are many opportunities for the private sector to finance and develop new or growing ideas. These opportunities hold the promise of profit and market expansion, but also the potential to save lives and lower maternal and newborn mortality ratios.

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Need and Demand of Primary Health Care on Public Health's Undergraduate Students, Airlangga University, Surabaya

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Keywords: Primary Health Care, Need, Demand, Undergraduate student, Public health.

Abstract: Health is important to everyone. Health is needed for doing daily activities. Everyone would like to be healthy through various ways such as investment or in consuming goods and health services. Therefore, everyone wants to go to health services. Need and demand depend on need and ability to fulfill their needs. Public Health's undergraduate students should know the importance of primary healthcare. The aim of this research is to analyze the need and demand for primary healthcare in public health undergraduate students and the gap between need and demand. This research uses primary data from questionnaire on the need and demand for primary health care for public health undergraduate students. This research emphasizes the gap in the analysis of need and demand in primary healthcare. Population of this research is 924 students of public health. Meanwhile, the sample of population is 276 students. The result from this research is that a gap between need and demands of primary healthcare still exists. According to respondents, the need for primary healthcare has not yet been fulfilled with the demand of primary healthcare. This problem can be solved by improving the quality of primary healthcare with considering the needs of customers.

1 INTRODUCTION

Primary healthcare is the first health service of the basic needs of the community when they have health problems or accidents. Primary healthcare is given by Puskesmas (*Pusat Kesehatan Masyarakat*) or community health services, health centers and clinics. Primary healthcare is *Fasilitas Kesehatan Tingkat Pertama* (FKTP), which relates directly to the public. Thus, access to primary healthcare services needs to be considered. Access here can be at a reasonable distance and at an affordable price. This is supported by the implementation of the Jaminan Kesehatan Nasional (JKN) system as the National Health Insurance in Indonesia. In the era of JKN, patients in need of healthcare should go to Fasilitas Kesehatan Tingkat Pertama (FKTP) in advance, except in emergency conditions. FKTP destination is faskes who have cooperated with BPJS (Badan Pengelola Jaminan Sosial).

The JKN program owned by the government depends on the supply and demand of health services. The need and demand for health services could be used as a tool for the evaluation of the JKN program, particularly in *Fasilitas Kesehatan Tingkat*

Pertama (FKTP). Demand for health services is the realization of the use of health services by consumers or patients. Demand consists of need and want. Need is the best goods or services by healthcare providers. Meanwhile, want is the goods or services desired by the patient. In the Strategic Plan 2015-2019, the Health Department revealed the data did not meet the need for health services by 7%. The data indicate the problematic need for health services in Indonesia.

Students of public health should have more knowledge about health, especially the health service in Indonesia. Need and demand of their preferences could be drawn as the situation in the population. The demand of primary health care could be used as a tool to evaluate insurance's utilization in Airlangga University and primary health care on Airlangga University. The aim of this research is to analyze the need and demand of primary health care in public health undergraduate students and the gap between the need and demand. From some of the above explanation, the researcher adopted the issue of the need and demand for primary healthcare on public health undergraduate students. The results of this study can

be used as a recommendation to primary healthcare to meet the needs of customers or patients

2 METHODS

This research uses descriptive analysis to analyze the need and demand of primary healthcare in public health undergraduate students from primary data. The instrument of this research is using online questionnaire regarding the need and demand of primary healthcare. The questionnaire was held on September 3rd – 4th, 2017. Respondents of this research are public health undergraduate students for the academic years of 2017/2018, which include the years of 2014, 2015, 2016 and 2017. The method for determining the sample of this research is simple random sampling. Population of this research is 924 undergraduate students of public health in Airlangga University. Meanwhile, the sample for this research is 276 students.

3 RESULT

The sampling method uses simple random sampling, which is a sampling design in which n distinct units are selected from the N units in the population in such a way that every possible combination of n units is equally likely to be the sample selected. (2)

The results of this research compare the need and demand of primary healthcare. Need and demand of primary healthcare can be seen by the number of expectancy and realization seeking health services for treatment.

Characteristic respondents of this research are dominated by females. In the population of public health undergraduate students, the number of female students is greater than male students. Respondents of this research are divided into four categories of academic years, 2014, 2015, 2016 and 2017. The distribution by academic years can be seen from Table 2, which is dominated by students of the 2014 academic year. The student's allowance per month is dominated by students with IDR 750.000 – 1.000.000, and the result is that 31.9% students choose that.

Table 1: Number of respondents by gender

| Gender | Total | Percentage |
|--------|-------|------------|
| Male | 34 | 12.3% |
| Female | 242 | 87.7% |
| Total | 276 | 100% |

Table 2: Number of respondents by academic year

| Years | Total | Percentage |
|-------|-------|------------|
| 2014 | 102 | 37.0% |
| 2015 | 65 | 23.6% |
| 2016 | 57 | 20.7% |
| 2017 | 52 | 18.8% |
| Total | 276 | 100.0% |

Table 3: Number of respondents by allowance per month

| Allowance (IDR) | Total | Percentage |
|---------------------|-------|------------|
| <500.000 | 52 | 18.8% |
| 500.000 – 750.000 | 74 | 26.8% |
| 750.000 – 1.000.000 | 88 | 31.9% |
| > Rp 1.000.000 | 62 | 22.5% |
| Total | 276 | 100.0% |

Most of the respondents have health insurance. The result is 84.8% of all respondents or 234 students have health insurance. The type of health insurance that they have is dominated by social insurance from governance, such as JKN (*Jaminan Kesehatan Nasional*), KIS (*Kartu Indonesia Sehat*), ASKES (*Asuransi Kesehatan*), etc. A total of 214 students have social insurance while the others have private insurance. From this condition, public health students can be seen to be aware of their health condition.

Table 4: Number of respondents by having health insurance

| Have Health insurance | Total | Percentage |
|-----------------------|-------|------------|
| Yes | 234 | 84.8% |
| No | 42 | 15.2% |
| Total | 276 | 100.0% |

Table 5: Number of respondents by type of health insurance.

| Type of Health Insurance | Total | Percentage |
|--------------------------|-------|------------|
| Social Insurance | 214 | 91.5% |
| Private Insurance | 20 | 8.5% |
| Total | 234 | 100.0% |

Table 6: Number of respondents who have been sick the last six months.

| Sick | Total | Percentage |
|-------|-------|------------|
| Yes | 181 | 65.6% |
| No | 95 | 34.4% |
| Total | 276 | 100.0% |

The type of health services that respondents want to visit when they are sick is dominated by

Puskesmas (Pusat Kesehatan Masyarakat) or clinics. 35,1% of respondents want to go to a Puskesmas or clinic when they feel sick. The finding is that when respondents feel sick, 27. 8% of respondents choose Puskesmas or clinics. From the data, we can know that need and demand has not yet been met. This can be caused by various reasons.

From this research, the unmet demand of primary healthcare can be caused by a misperception between health providers and customers (patients). Respondents think that distance, facility and quality of health providers and health services can boost primary healthcare visits. Health services that are accessible is also important according to respondents. Respondents will choose health services that are accessible in terms of distance and cost.

Table 7: Health Services that respondents want to visit

| Type of Health Services | Total | Percentage |
|--|-------|------------|
| Governance Hospital | 37 | 13.4% |
| Private hospital | 46 | 16.7% |
| Medical Specialist | 19 | 6.9% |
| Doctor/Midwife | 69 | 25.0% |
| <i>Puskesmas/Clinic</i> | 97 | 35.1% |
| <i>PLK (Pusat Layanan Kesehatan) UNAIR</i> | 8 | 2.9% |
| Total | 276 | 100.0% |

Table 8: Respondents go to health services when they are sick

| Respondents are sick and go to health services | Total | Percentage |
|--|-------|------------|
| Yes | 144 | 52.2% |
| No | 132 | 47.8% |
| Total | 276 | 100,0% |

Table 9: Type of health services that are chosen

| Type of Health Services | Total | Percentage |
|--|-------|------------|
| Governance Hospital | 26 | 18.1% |
| Private hospital | 30 | 20.8% |
| Medical Specialist | 6 | 4.2% |
| Doctor/Midwife | 28 | 19.4% |
| <i>Puskesmas/Clinic</i> | 40 | 27.8% |
| <i>PLK (Pusat Layanan Kesehatan) UNAIR</i> | 14 | 9.7% |
| Total | 144 | 100.0% |

From the result, most of respondents want to go to Puskesmas when they were sick. They have chosen to go to puskesmas or clinic when they are sick. But the number has not met yet. So, the need and demand of primary health care has not met yet.

4 DISCUSSION

Health system financing in Indonesia these days is through JKN (Jaminan Kesehatan Nasional). According to Peraturan Menteri Kesehatan RI Nomor 71 Tahun 2013 Tentang Pelayanan Kesehatan Pada Jaminan Kesehatan Nasional, JKN is a health insurance system in Indonesia which protect participants' health, so that they will get the benefit of healthcare and protection to fulfill their basic health needs. The participants will get the benefit of health insurance when they have paid the premium or have been paid by the governance.

JKN depends on the supply and demand of health services. The need and demand of health services can be used as a tool to evaluate this program, especially for primary healthcare or FKTP (Fasilitas Kesehatan Tingkat Pertama). Demand of health services is defined as the realization of using health services by consumers or patients. Demand consists of need and want. Need is the best goods or services according to health providers, while want is goods or services that patients wish to buy.

Need is generally defined as the number of medical services, which, in the opinion of medical professionals, should be consumed by members of a community if they are to become or remain as healthy as possible given existing medical knowledge.

Demand refers to the number of medical services community members want to consume at certain prices as reflected by their tastes and preferences for all goods and services available to them.

Most of the respondents already have national health insurance, JKN, which is required by the governance. As public health students, they are already aware of health issues, especially about health system financing in Indonesia. From the result of this research, the need and demand of primary healthcare in public health undergraduate students shows some difference. The degree of need of primary healthcare is higher than its demand. Besides the primary healthcare, respondents also choose doctor and hospital as health services that they use when they feel sick. From the data, the students will also go to a private hospital aside from primary healthcare such as puskesmas or clinics.

Unmet need can be caused by various reasons according to respondents. Most said that accessibility will determine the choice of health services. Accessible means health services that can be reached by public transportation and at affordable prices. Another reason that supports health services is the quality of health services. The quality of

health services can be determined by qualified health providers and complete facility.

There are some intervention to reduce demand barriers, information on health care, education, costs, household preferences, community and cultural preferences, attitude, norms, price and availability. (Ensor & Cooper, 2004)

A demand curve can be used in evaluating the program with need and demand analysis. However, in this research a demand curve cannot be created because of the time limitation. The researcher cannot measure the change of quantity and prices in order to form a demand curve

5 CONCLUSION

The conclusion of the need and demand analysis of primary healthcare in public health undergraduate students is that there is a gap between the need and demand of primary healthcare. There is unmet need in primary healthcare because of the quality of health providers and access to health services.

Future research can be carried out over a longer period, so that there will be change of prices and quantity and, from those variables, a demand curve can be drawn. The demand curve can then be used as a tool to evaluate the JKN (Jaminan Kesehatan Nasional) Program.

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Overview: The Sustainability of District Health Account in Contributing to the Strengthening Health System in Sampang

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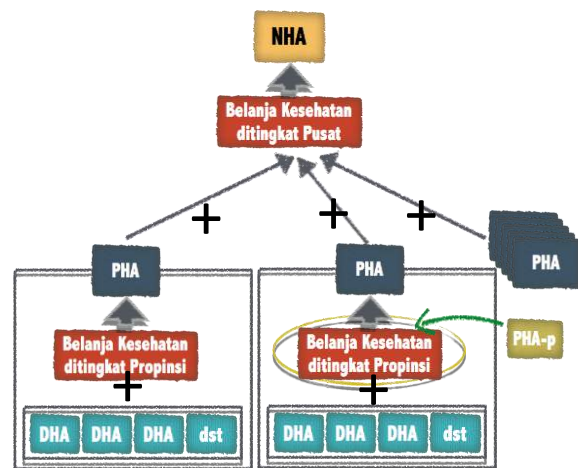
Abstract: In 2000, the flow of national funds in Indonesia became increasingly complex, and so the nation needed to develop a tool (account) to make the measurements of the health expenditures easier. However, DHA development is often unsustainable, because there's no government decision or term from government to make a team consisting of a cross-sector of disciplines. In Sampang, the referral system team was formed together with a DHA team and HR team in 2013. The problem that Sampang faced was about the culture of the community where self-referrals were high at 30%. The objective of this paper is to identify the sustainability of DHA implementation in Sampang. The data collection techniques in this paper have used secondary data. This paper give results, that Sampang already had DHA team, various data from SKPD/vertical institutions, and there is interaction between policy makers and DHA team. DHA has provided benefits for district, such as advocacy when additional health funding is needed, and better health financing allocations, which will contribute to strengthening the health system in Sampang according to the specific needs there. The expected result is a recommendation for the government of Sampang to help them make DHA in Sampang sustainable.

1 INTRODUCTION

In 2000, the flow of national funds became increasingly complex, so the nation needed to develop a tool (account) to make the measurements of the health expenditures easier. As was already mentioned on the AIPHSS webpage, the need for a Health Account increased when *Sistem Jaminan Sosial Nasional* (SJSN) was enacted in 2014 (AIPHSS, 2013). Health Account is a new way of health expenditure planning based on evidence. The needs of health in the future can be analysed and planned based on the evidence from a given calendar year (AIPHSS, 2013). Health Account includes a comprehensive, consistent, and systematic way of monitoring the utilisation of financing in a given health system.

Indonesia has already applied Health Account, referring to the International Standard System, as agreed by the WHO. AIPHSS mentioned that health expenditure in Indonesia still amounts to 3% from *Produk Domestik Bruto* (PDB), even though the recommendation from the WHO amount closer to

5% from PDB (AIPHSS, 2013). Health Account in Indonesia is as in the below figure:



Source: Ernawaty, 2017

Figure 1 : Health Account in Indonesia

Different from other countries, Health Account applied elsewhere is only the National Health

Account (NHA), but Indonesia can't apply just NHA. This is because the government system is based on a system of decentralisation, and the reports of health expenditure from all sources at the regional level can't be done completely collated (Bappeda of West Java, 2016). Therefore, Indonesia also applied the Provincial Health Account (PHA) and District Health Account (DHA).

One of the districts in Indonesia which has already applied DHA is Sampang (AIPHSS, 2015). Sampang already had a team in place for the referral system in 2013 that consisted of a DHA team and a Human Resources team (AIPHSS, 2015). Therefore the question is, how good is the sustainability of DHA in contributing to the strengthening health system in Sampang?

In 2014, Sampang had 21 community health clinics, and one hospital. The Ministry of Health standard of Indonesia said that the ratio between community health clinics and the total population is 1:30.000. However, the reality in Sampang is that there are 929,918 people (data from 2014), so that one community health clinic can serve 39,870 person. Therefore, for the proportion of community health clinics in Sampang to be correct, there needs to be 28 community health clinics (Health Office, 2014).

The health funding of Sampang itself comes from APBN Ministry of Health, APBN Ministry of Social, provincial APBD (PAD), district/municipal APBD (DBH, DAU, DAK and PAD), donors, grants, household health expenditures and social institutions/foundations. The total health cost of Sampang in 2014 based on the multiple sources of its financing was Rp 339,749,065,932.00 (DHA Team, 2014). The other data mentioned that the APBN funds in 2014 amounted to Rp 23,652,717,00.00 which was allocated accordingly. The JKN funds amounted to Rp 21,693,567,000.00, overseas grants from AIPHSS amounted to Rp 1,878,083,000.00, and BOK amounted to Rp 1,959,150,000.00 (Health Office, 2014).

Sampang also faces problems to do with the culture of the community where self-referrals are high at 30% (AIPHSS, 2015). The implementation of DHA of Sampang needs sustainability to strengthen the health system. The aim of this paper is to identify the sustainability of DHA implementation in Sampang.

2 METHOD

This paper was prepared using secondary data collected from existing data sources. The data sources were PowerPoint presentations, papers, documents, regional governments, the Department of Health and overseas coordination boards. The appropriate references have been attached.

After all of the data was collected, the information was compiled into a series of sentences forming a comprehensive paragraph. The author's opinions were also added, and the data collected was used to reinforce the author's opinion.

3 RESULTS

The implementation of DHA in Sampang can be seen of as sustainable if it meets four criteria such as the DHA team having the task to manage data related to district health expenditure from various cross sectors, various data coming from SKPD or vertical institutions/centres, commitment from policy makers/the government, and the interaction between policy makers and the DHA technical team. From the results of the DHA implementation in Sampang, it already had a DHA team in 2012. The below are the members of the DHA team in Sampang (DHA Team, 2014):

1. Anas Muslim, ST. M.AP (Bappeda)
2. Yupita Widyaningsih, S.KM (Dinkes)
3. Daqiqu Syafatain, W. S. ST (Dinkes)
4. Taufiqurrahman, S.KM. MM (RSUD)
5. Ahmad Anang M. S.ST (BPS)

The second results of DHA implementation related to the data source for the analysis of health financing of Sampang were derived from the realisation of the 2013 budget in *Satuan Kerja Perangkat Daerah* (SKPD) as well as vertical institutions/centres in Sampang, like the Department of Health, RSUD, BPS (Susenas), the Office of the Secretariat of the Regional People's Legislative Assembly, the General Section of the Regional Secretariat, Bappeda, BKD, the Department of Education, the Department of Social, Bapemas, BPPKB, Food Security, PNPM, PT. Askes, PKH, PMI and Jampersal For Private Practice Midwives (DHA Team, 2013).

The third criterion is about the interaction between the policy makers and the DHA technical team. This interaction is shown by the existence of health expenditure arrangements based on the funding manager of Sampang in 2014, as follows:

Table 1: Health Care Allocation Based on Financial Manager in Sampang District 2014

| Financing Manager | Amount of Expenditures | % |
|---|------------------------|---------|
| Public Sector | 198,895,545,944 | 59% |
| HF 1.1.1.2.3 Ministry of Social : Family Hope Program | 17,425,593,500 | 9% |
| HF 1.1.2.1 Deconcentration Fund | 88,750,000 | 0% |
| HF 1.1.3.1 District Governments : Health Office | 122,407,746,915 | 62% |
| HF 1.1.3.12 Other District/City Government | 1,482,711,600 | 1% |
| HF 1.1.3.3 District General Hospital | 56,789,188,429 | 29% |
| HF 1.1.3.9 Women's Empowerment and Family Planning Office | 701,555,500 | 0% |
| Non Public Sector | 140,853,519,988 | 41% |
| HF 2.3.1 Household : OOP beyond cost sharing | 138,028,079,988 | 97.994% |
| HF 2.4.1 NGO / Social Institution / National Foundation | 1,525,200,000 | 1.105% |
| HF 2.4.2 NGO/ Social Institution / Foreign Foundation | 1,300,240,000 | 0.923% |
| Grand Total | 339,749,065,932 | 100% |

4 DISCUSSION

The results of the secondary data have not shown two of the criteria that must exist to find out the sustainability of DHA implementation in Sampang, such as the commitment from policy makers/the government, and the interaction between policy makers and the DHA technical team. The sustainability of DHA implementation in Sampang can be seen from the criterion that already mentioned in the results.

DHA team consisting of a cross-sector, the secondary data results indicate that the DHA team has been formed and whose members consist of a cross-sector. However, there are two people in the team who come from the same sector of health. These DHA team members should be more equally distributed from every sector. There is no other supporting data stating the reason why, in a DHA team, there are two people from the same sector, but for the beginning of DHA implementation in Sampang, this effort is good enough because there is an effort from the government to implement DHA to monitor district health expenditure which is more systematic than what existed previously. The DHA team from across multiple sectors is indispensable for an institution to work well, producing accurate data which is correct, and beneficial for the DHA (District Pasaman Government, 2011).

The data sourced from SKPD and vertical/central agencies, Sampang's DHA team gets health expenditure data from SKPD and related vertical/centre agencies. This is appropriate for the sustainability of DHA implementation in Sampang. A variety of data from SKPD sources and vertical

agencies/centres increases the support of active participation from each SKPD, which means that the DHA activities in Sampang can be a success (District Pasaman Government, 2011).

The commitments of policy maker/government, this criterion is important in guaranteeing the sustainability of DHA implementation in Sampang. The commitment of the policy makers is long-term. There is no secondary data related to the commitment of the policy makers, but the actual commitment of the policy makers/government making can be manifested in the form of DHA team institutionalisation through regulation (AIPHSS, 2016). Therefore, the implementation of DHA in Sampang has been working.

The interaction between policy makers and the DHA technical team, this criterion has been demonstrated by the existence of the health spending arrangements made by the DHA team. This interaction is needed to enable the team to respond to specific policy needs through deeper sub-sector analysis work as needed (AIPHSS, 2016). The results are not explained in-depth for the needs of each sub-sector; the data only shows the health needs of each sector more generally.

The sustainability of the implementation of DHA can bring benefits to districts such as a tool for monitoring and evaluating district-level health financing ranging from the adequacy of health costs, allocations to health policies, and effectiveness and efficiency of health financing; serving as the basis for financing reforms, the development of the health insurance system, and the development of social insurance systems; and the basis for performance-based planning and budgeting [8]. Therefore, from the existing data analysis related to the DHA

implementation of Sampang, it is certain that the District Health Account of Sampang will contribute to strengthening the health system in Sampang according to the specific needs of the location.

5 CONCLUSIONS

The implementation of DHA in Sampang has taken place both due to the seriousness of the government in the establishment of the DHA team to the interaction between policy makers and the DHA technical team from the 2012 data obtained. The first obstacle came from the preparation of this paper describing the sustainability of DHA in Sampang in relation to its contribution to strengthening the health system such as the lack of data sources of the latest year discussing about the DHA in Sampang. It is therefore not known whether DHA in Sampang is still going on now or not. Another obstacle in the preparation of this paper was the difficulty of accessing the secondary data related to DHA in Sampang. This should be easy in the DHA era because the community should also participate, monitor and access it.

The policy makers/government should be able to remedy the shortcomings of the DHA system in Sampang, so that in the future, the Sampang District health expenditure is more open and the community can also monitor any source of financing for health. Therefore, a good DHA system can help the government of Sampang do better advocacy, as well as the community also becoming more aware about the details of health expenditure in the District.

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Excessive Cigarette Consumption by Indonesian People and Economic Status in Indonesia

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Keywords: Cigarette, Cigarette consumption, Poverty, Cigarette consumption a day, Smoker.

Abstract: Cigarette consumption in Indonesia has increased sevenfold, from 33 billion to 217 billion cigarettes. Indonesia has producing cigarettes exceeding the maximum given by the tobacco industry roadmap in 2013. Some 332 billion stems have been produced by Indonesia, an excessive figure amounting to about 260 billion cigarettes (Tobacco Control Support Center, 2014). This study attempts to find a link between cigarette consumption in society by province and the economic status of Indonesians. Data in this study are taken from *Riskesdas* and *Susenas*. It is concluded that there is a downward trend in the country's poverty against the percentage of Indonesia based on province. In addition, it finds that the three provinces that had the highest have the average daily cigarette consumption in 2013 were Bangka Belitung Islands, with as many as 18.3 cigarettes each day, followed by South Kalimantan with as many as 16.7 cigarettes and, finally, Riau with as many as 16.5 cigarettes each day.

1 INTRODUCTION

Indonesia is the largest tobacco producer country in the world. The first tobacco plantation in Indonesia was in the 1800s when the Javanese were introduced by the Netherlands. After that, in the 1930s, they started producing cigarettes as rolled up with paper (Aliansi Tembakau Indonesia, 2013). From the 1970s to 2000s, the level of cigarette consumption in Indonesia has increased sevenfold from 33 billion stems producing 217 billion cigarettes. In 2008, consumption rose to 240 billion of cigarettes per year. With smokers in Indonesia numbering more than 60 million and cigarette consumption at 240 billion cigarettes each year, it can be calculated that the average daily cigarette consumption is 10.95 cigarettes (WHO, 2008).

Indonesia's cigarette production exceeds the maximum given by the tobacco industry in 2013. As many as 332 billion cigarettes have been produced by Indonesia, surpassing the limit set of 260 billion stems (Tobacco Control Support Center, 2014). A pack of cigarettes contains 16 cigarettes that, in bandrol at Rp 9.999, is considered too cheap (Tobacco Control Support Center, 2014) and is

considered to be the cause of continued increased occurrence of cigarette consumption in Indonesia every year. In 2001, it was noted that cigarette consumption in Indonesia was 182 billion cigarettes, but the figures for consumption the cigarette increased significantly by 2009s to 260.8 billion cigarettes (Tobacco Control Support Center, 2014).

The Tobacco Control Support Center stated that cigarette consumption in Indonesia increased significantly from 182 billion cigarettes in 2001 to 260.8 billion cigarettes in 2009. The increase in consumption was due to factors such as low cigarette price, increased household income and population growth in Indonesia, which is ranked fourth largest in the world after China, the United States and Russia (Tobacco Control Support Center, 2014).

The purpose of this article is to know the pattern of cigarette consumption by the people of Indonesia in 2007, 2010 and 2013 and to know the economic status in Indonesia in that year. At the end of this article will be seen, whether the pattern of cigarette consumption by the community in every province in Indonesia will affect the economic status of the province.

2 METHOD

This research is descriptive research and aimed to know the numbers for cigarette consumption in Indonesia by province and economic status. Variables in this study include cigarette consumption by Indonesian society and economic status in Indonesia. The data used for this research are sourced from Riset Kesehatan Dasar (RISKESDAS) data for 2007, 2010, 2013 and

Survey Sosial Ekonomi Nasional (SUSENAS) data for 2007, 2010, 2013.

3 RESULTS

Data showed in this study obtained from some secondary data related to smoking and poverty in Indonesia. Result about smokers in which smoking more than 10 years Indonesia grouped by provinces in Indonesia in year 2007, 2010 and 2013.

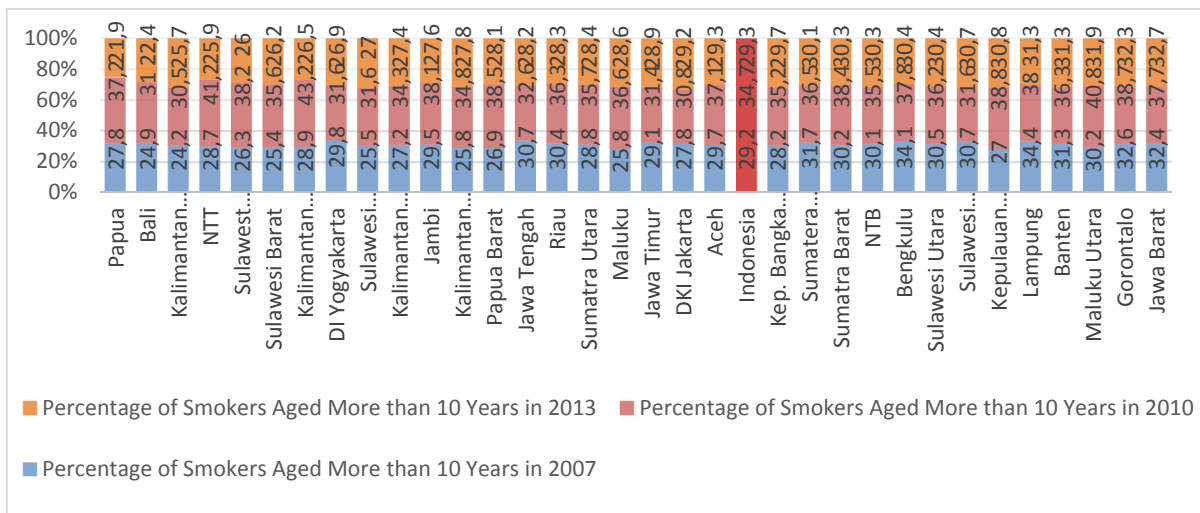


Figure 1: Distribution of Early Age Smokers in Indonesia year 2007, 2010, 2013.

Figure 1 showed that in 2007 the percentage of smokers in Indonesia by province is 29.2%, and then in 2010 the percentage increased becomes 34.7%. However in 2013 the percentage is decreased become 29.3%.

Beside data related to smoking, distribution about poverty in Indonesian population also grouped by provinces in 2007, 2010, and 2013.

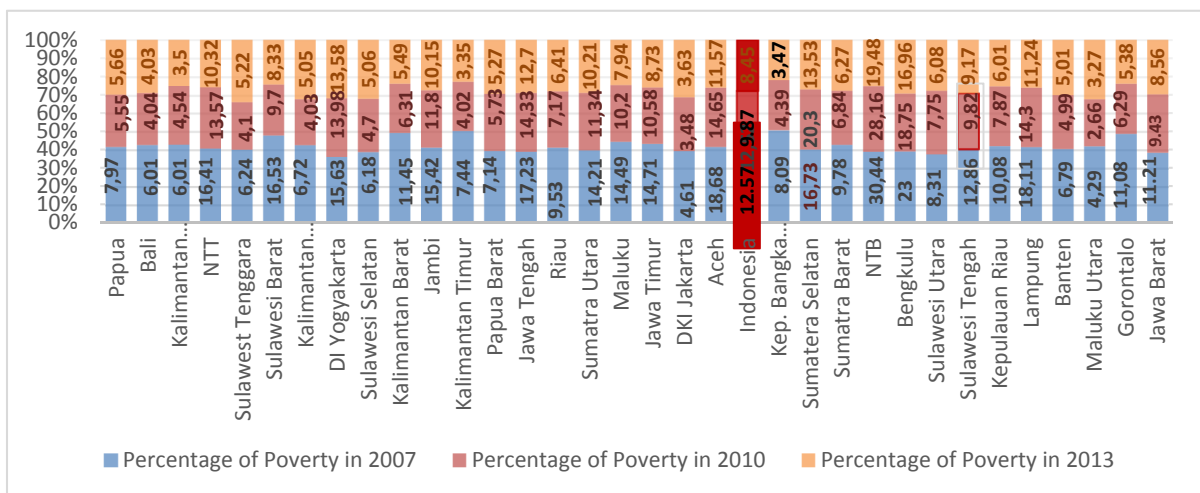


Figure 2: Poverty Distribution of Indonesian Population in 2007, 2010, 2013.

From Figure 2, it is known that the average distribution of poverty of Indonesia Population in 2007 was 12.57%, then in 2010 decreased become 9.87% and in 2013 decreased become 8.45%.

Figure 3 showed the average distribution of the number of cigarettes smoked daily in 2007 and 2013 by Province in Indonesia.

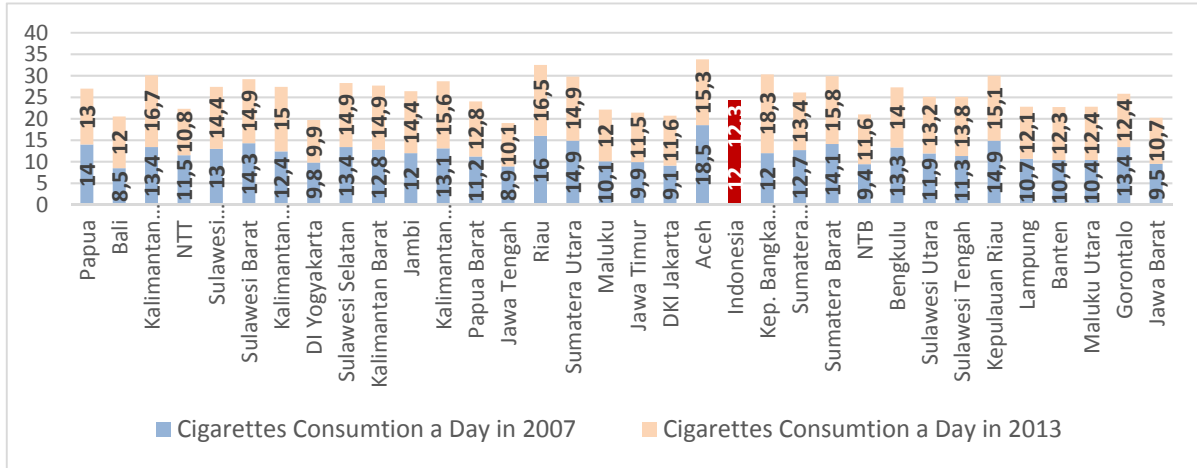


Figure 3: The average distribution of the number of cigarettes smoked daily in 2007 and 2013.

From the figure 3 it can be seen the distribution of cigarettes smoked each year in 2007 and 2013, in the average known in Indonesia in 2007 was 12 cigarettes a day, and in the year 2013 average of

cigarettes consumption a day increased a little bit become 12.3 cigarettes a day.

Figure 4 showed the percentage of people in Indonesia based on the number of their average cigarettes consumption in a day.

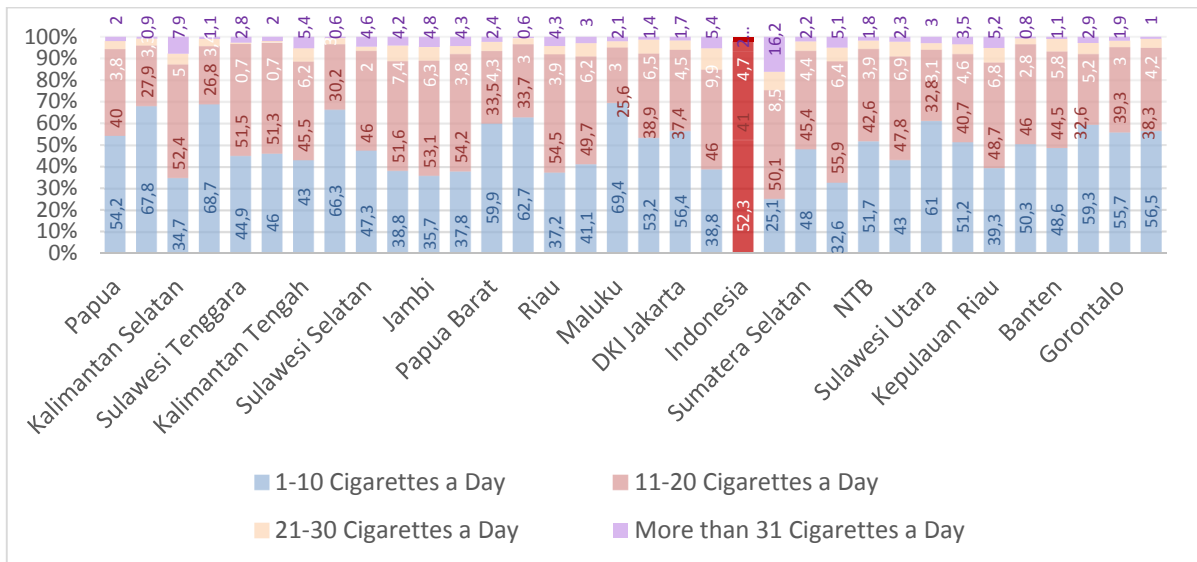


Figure 4: Distribution The average number of cigarettes smoked daily in 2010.

Figure 4 showed that the average number of cigarettes smoked every day in 2010 by province in Indonesia, it can be seen that as many as 52.3% of

Indonesian people consume cigarettes as much as 1-10 cigarettes a day.

4 DISCUSSION

From Figure 1.1, it can be seen that, in 2007, the percentage of the national population aged 10 years and over who smoked every day was as much as 29.2%. The highest percentage of smokers hest prevalence of smokers in 2010 was found in Central Kalimantan Province (43.2%), followed by East Nusa Tenggara (41.2%) and North Maluku (40.8%). In 2013, it is found that the average percentage of smokers in Indonesia is 29.3%) The three provinces having the highest percentage rate in 2013 are West Java (32.%), Gorontalo (32.3%) and North Maluku (31.9%).

Based on Figure 1.2, the incidence rate in 2007, the percentage of the national poverty rate was 5%. NTB province is the poorest province with 30.44%, followed by South Sumatera Province (20.3%) and Lampung Province (18.11%). In 2010, the poorest province in Indonesia is NTB with 28.16% followed by Bengkulu Province (18.75%) and South Sumatra (16.73%). In 2013, it can be seen that the national percentage was (8.45%, with the poorest provinces in Indonesia being NTB with as much as 19.48%, followed by Yogyakarta Province (13.58%) and South Sumatera Province (13, 53%).

From Figure 1.3, it can be seen that, in 2007, the average daily national consumption of cigarettes was as much as 12 cigarettes. The three provinces with the highest average daily cigarette consumption are Aceh Province with 18.5 cigarettes a day, followed by Riau Province with 16 cigarettes a day and South Sumatera Province and Province of Kepulauan Riau with an average daily consumption of 14.9 cigarettes. The national average cigarette consumption a day in 2013 was 12.3 cigarettes a day with the three provinces having the highest average daily cigarette consumption being Bangka Belitung Islands Province with as many as 18.3 stems, followed by South Kalimantan Province with as many as 16.7 stems and Riau Province with as many as 16.5 cigarettes a day.

From Figure 1.4 above is can be seen that, in 2010, the majority of Indonesia's population consumed cigarettes by as many as 1-10 stems with an average national percentage of 52.3%. The three provinces with the highest percentage for consumption of 1-10 cigarettes a day were Maluku Province (69.4%), East Nusa Tenggara (68.7%) and Bali Province (67.8%). In 2010, the national average percentage for cigarette consumption was 11-20 cigarettes per day (41%), where the three provinces with the largest percentage were West Sumatra (55.9%), East Kalimantan (54.2%) and Province

was found in Bengkulu Province (34.1%), followed by Lampung (34.4%) and Gorontalo (32.6%). National prevalence of smokers in 2010 was as much as 34.7%. The hig

South Kalimantan (52.4%). The national average percentage for cigarette consumption is 21-30 cigarettes a day (4.7%). The three provinces with the highest percentage of cigarette consumption of 21-30 cigarettes a day are Aceh Province (9.9%), Bangka Belitung Islands (8.5%) and West Kalimantan (7.4%). The national average percentage for cigarette consumption is more than 31 cigarettes a day (2.1%). Where there are three provinces with the highest percentage for cigarette consumption of more than 31 cigarettes a day, Bangka Belitung Islands (16.2%), South Kalimantan (7.9%) and Aceh (5.4%).

It can be seen that, in 2007, the highest percentage of smokers in Indonesia is found in Bengkulu Province (34.1%), Lampung (34.4%) and Gorontalo (32.6%). In the same year, NTB province is the poorest province with the highest percentage of poverty (30.44%), followed by South Sumatera Province (20.3%) and Lampung Province (18.11%). Then the three provinces with the highest average cigarette consumption are Aceh Province with as many as 18.5 cigarettes a day, followed by Riau Province with as many as 16 cigarettes a day, and the Province of South Sumatra and Riau Islands Province with average daily consumption of as many as 14.9 cigarettes.

In 2010, it can be seen that the highest prevalence of smokers in Indonesia was found in Central Kalimantan Province (43.2%), followed by East Nusa Tenggara (41.2%) and North Maluku (40.8%). Regarding the value of national poverty (9.87%), it is seen that the three provinces with the highest percentage of poverty are NTB (28.16%), followed by Bengkulu (18.75%) and South Sumatera Province (16.73%). For the national average percentage for cigarette consumption of 1-10 stems (52.3%), the province with the highest percentage of consumption is Maluku Province (69.4%). For the national average percentage for cigarette consumption of 11-20 cigarettes per day (41%), the province with the highest consumption percentage is West Sumatra Province (55.9%). Next is the national average percentage for cigarette consumption of 21-30 cigarettes per day (4.7%) and the province with the highest consumption is Aceh (9.9%). The last is the national average percentage for cigarette consumption of more than 31 cigarettes

as day (2.1%), and the province with the highest percentage is the Province of Bangka Belitung Islands (16.2%).

5 CONCLUSIONS

The national average cigarette consumption inhaled in 2007 and 2013 was as many as 12 cigarettes a day. Then it can be seen that, in 2010, the majority of Indonesia's population consumed as many as 1-10 cigarettes with an average national percentage of 52.3%. In 2010, the national average percentage for cigarette consumption of 11-20 cigarettes per day was 41% and the national percentage for cigarette consumption of 21-30 cigarettes per day was 4.7%. The national percentage for cigarette consumption of more than 31 cigarettes per day was 2.1%. The national average percentage for cigarette consumption of 11-20 cigarettes a day (41%), is still very high. In 2010, the highest prevalence of smokers was in Central Kalimantan Province with a figure of 43.2%.

It can be seen that the pattern of the distribution of smokers by age ≥ 10 years for 2007 and 2013 tends to decrease, as there are 20 provinces that experience a decline rate from 2007 to 2013. Indonesia is a country with high cigarette consumption as can be seen from the results presented. The majority of provinces in Indonesia have a daily cigarette consumption that exceeds the national average. In 2007, there were 18 provinces with numbers exceeding the national average. From the above results, it can be concluded that the trend of daily cigarette consumption by province from 2007 to 2013 is one of increase, because there are 28 provinces found to that have increased daily cigarette consumption from 2007 to 2013, while, in 2010, it is found that the average daily cigarette nationwide is as many as 52.3%, with as many as 1-10 cigarettes a day.

For further research, data on household expenditure for cigarette consumption can be added in order to see the correlation between Indonesian cigarette consumption and its economic status.

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Impact of Tobacco Use on Poverty in Indonesia

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Keywords: Tobacco, Poverty, Health, Indonesia.

Abstract: According to World Health Organization (WHO) data, almost 80 percent from a total of 1 billion smokers globally live in low and moderate income countries. The proportion of tobacco use in the poorest smoker households in Indonesia accounts for almost 12 percent of their incomes (Ahsan, 2009). The paper was carried out to know how tobacco use can lead to poverty in Indonesia. This paper uses descriptive method to collect quantitative data and results show that tobacco use is the third largest expense after food and beverages and grains. Tobacco use also become the largest expenditure on people with medium and low prosperity. The conclusion is that tobacco use has many negative impacts on poverty in Indonesia. The following paper seeks to find more about how tobacco use can impact poverty in Indonesia.

1 INTRODUCTION

According to BPS data for September 2016, the number of poor people (people with per capita expenditure per month below the Poverty Line) in Indonesia decreased to 27.76 million people (10.70%) compared to 28.01 million people (10.86%) in March 2016 (Central Bureau of Statistics, 2017). Based on the area of residence, in the period of March to September 2016 the number of poor people in urban areas increased by 0.15 million people, whereas in the rural areas it decreased by 0.39 million people (Central Bureau of Statistics, 2017). The largest number of poor people by province in September 2016 is East Java with 4.63 million people, while the lowest number of poor people by province in September 2016 is North Kalimantan with 47,030 people (Central Bureau of Statistics, 2017).

Smoking is common, because of its relatively affordable price, widespread and aggressive marketing, lack of knowledge of the dangers and inconsistencies of public policy on tobacco, whereas smoking can cause health, economic, social and environmental burdens (Kosen, 2008; Data and Information Center Ministry of Health, 2015). Smoking can cause various diseases, especially lung cancer, stroke, heart disease and blood vessel disorders, as well as decreased fertility, increased incidence of pregnant out-of-body, fetal (physical and mental growth) slows, seizures in pregnancy, infant immune disorders and increased perinatal

death (Kosen, 2008). Based on the results from RISKESDAS (2013), smoking behavior of the population 15 years and above did not decrease from 2007 to 2013 and even showed an increase from 34.2 percent in 2007 to 36.3 percent in 2013. In 2013, it was found 64.9 percent of men and 2.1 percent of women were still smoking cigarettes, with 1.4 percent of smokers aged 10-14 years and 9.9 percent of smokers in the unemployed group (Agency for Health Research and Development Ministry of Health, 2013).

2 METHOD

This research uses descriptive analysis method with a quantitative approach. The use of this quantitative descriptive method straightens the research variables that focus on actual problems and phenomena that are currently occurring in the form of meaningful numbers (Shinta, 2013). The data used come from government agencies, such as the Central Bureau of Statistics (BPS). The data already collected will be processed again into data obtained from the results of the indicators of research variables and interpreted in writing by the researchers (Shinta, 2013).

3 RESULTS

Table 1 shows average expenditure (rupiahs) and percentage of monthly average expenditure per capita by commodity group and urban rural classification in March 2016. In the table, cigarettes account for the third largest expenditure after grain.

Table 1: Average Expenditure (Rupiahs) and Percentage Of Monthly Average Expenditure Per Capita By Commodity Group and Urban Rural Classification, March 2016

| Commodity Groups | Expenditure (Rupiah) | Percentage (%) |
|---------------------------------|----------------------|----------------|
| Grains | 64,566 | 6.82 |
| Tubers | 5,057 | 0.53 |
| Fish/shrimp/common squid/shells | 33,620 | 3.55 |
| Meat | 20,526 | 2.17 |
| Eggs and milk | 28,025 | 2.96 |
| Vegetables | 34,505 | 3.65 |
| Legumes | 10,349 | 1.09 |
| Fruits | 19,268 | 2.04 |
| Oil and coconut | 12,705 | 1.34 |

| Commodity Groups | Expenditure (Rupiah) | Percentage (%) |
|-----------------------------|----------------------|----------------|
| Beverages | 16,019 | 1.69 |
| Spices | 9,166 | 0.97 |
| Miscellaneous food items | 9,443 | 1.00 |
| Prepared food and beverages | 133,834 | 14.14 |
| Cigarettes | 63,555 | 6.72 |
| Total | 460,639 | 48.8 |

Source : Susenas Results March 2016, Central Bureau of Statistics

Expenditure quintile can be used to measure the level of welfare or the level distribution of income/expenditure, by sorting the average expenditure per capita from the smallest to the largest, then dividing them equally into five groups of expenditure (Central Bureau of Statistics, 2016). The higher the expenditure quintile, the increasingly prosperous the household (Central Bureau of Statistics, 2016). Table 2 presents the monthly percentage per capita expenditure by food group and expenditure quintile.

Table 2: Monthly Percentage Per Capita Expenditure By Food Group And Expenditure Quintile, March 2016

| Commodity Groups | First | Second | Third | Fourth | Fifth | Total |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Grains | 25.94 | 20.02 | 16.69 | 13.13 | 8.54 | 14.02 |
| Tubers | 1.29 | 1.09 | 1.00 | 1.29 | 0.98 | 1.10 |
| Fish/shrimp/common squid/shells | 6.57 | 7.09 | 7.57 | 7.60 | 7.22 | 7.30 |
| Meat | 1.97 | 2.68 | 3.41 | 4.36 | 6.18 | 4.46 |
| Eggs and milk | 4.19 | 4.80 | 5.32 | 6.05 | 7.34 | 6.08 |
| Vegetables | 9.09 | 8.70 | 8.31 | 7.75 | 6.16 | 7.49 |
| Legumes | 3.19 | 2.77 | 2.43 | 2.27 | 1.75 | 2.25 |
| Fruits | 2.33 | 2.84 | 3.37 | 4.08 | 5.52 | 4.18 |
| Oil and coconut | 3.78 | 3.41 | 3.12 | 2.81 | 2.10 | 2.75 |
| Beverages | 4.64 | 4.16 | 3.89 | 3.53 | 2.75 | 3.48 |
| Spices | 2.48 | 2.33 | 2.23 | 2.04 | 1.62 | 1.99 |
| Miscellaneous food items | 2.28 | 2.27 | 2.24 | 2.14 | 1.77 | 2.05 |
| Prepared food and beverages | 19.32 | 22.68 | 24.31 | 27.83 | 36.47 | 29.05 |
| Cigarettes | 12.94 | 15.16 | 16.11 | 15.12 | 11.60 | 13.80 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

Source: Susenas Results March 2016, Central Bureau of Statistics

Generally, tobacco-related illnesses take a long time (15-20 years) to manifest after the smoking behavior begins, so that the epidemic of tobacco-related diseases and the number of deaths in the

future may continue to increase (Tobacco Control Support Center – IAKMI, 2014). Table 3 shows the total cost of treatment of diseases related to tobacco use in Indonesia in 2013.

Table 3: Total Cost of Treatment of Diseases Related to Tobacco Use, Indonesia 2013

| Disease | Total cases | Cost per episode | Total cost in 2013 |
|------------------------------|-------------|------------------|--------------------|
| Low Birth Weight babies | 216,050 | 6,185,362 | 1,336,347,460,100 |
| Neoplasm of Mouth and Throat | 6,670 | 3,733,141 | 24,900,050,470 |
| Neoplasm of Esophagus | 1,710 | 3,733,141 | 6,383,671,110 |

| Disease | Total cases | Cost per episode | Total cost in 2013 |
|--|-------------|------------------|--------------------|
| Neoplasm of Stomach | 10,440 | 3,733,141 | 38,973,992,040 |
| Neoplasm of Liver | 13,400 | 3,733,141 | 50,024,089,400 |
| Neoplasm of Pancreas | 2,910 | 3,733,141 | 10,863,440 |
| Neoplasm of Lung, Bronchus and Trachea | 54,300 | 3,733,141 | 202,709,556,300 |
| Neoplasm of Cervix | 28,940 | 3,733,141 | 108,037,100,540 |
| Neoplasm of Ovary | 7,690 | 3,733,141 | 28,707,854,290 |
| Neoplasm of Gall Bladder | 10,160 | 3,733,141 | 37,928,712,560 |
| Coronary Heart Disease | 183,950 | 6,017,579 | 1,106,933,657,050 |
| Cerebrovascular Disease/Stroke | 144,780 | 7,726,946 | 1,118,707,241,880 |
| Chronic Obstructive Pulmonary Disease | 284,310 | 4,551,951 | 1,294,165,188,810 |
| Total | | | 5,353,829,437,990 |

Source: Tobacco Control Support Center – IAKMI, (2014)

Every year in the state budget of revenues and expenditure (APBN), the Government tends to target cigarette excise taxes revenue to rise by reason of

reducing tobacco consumption in the community. Chart 1 shows government revenue from cigarette excise in 2010-2016.

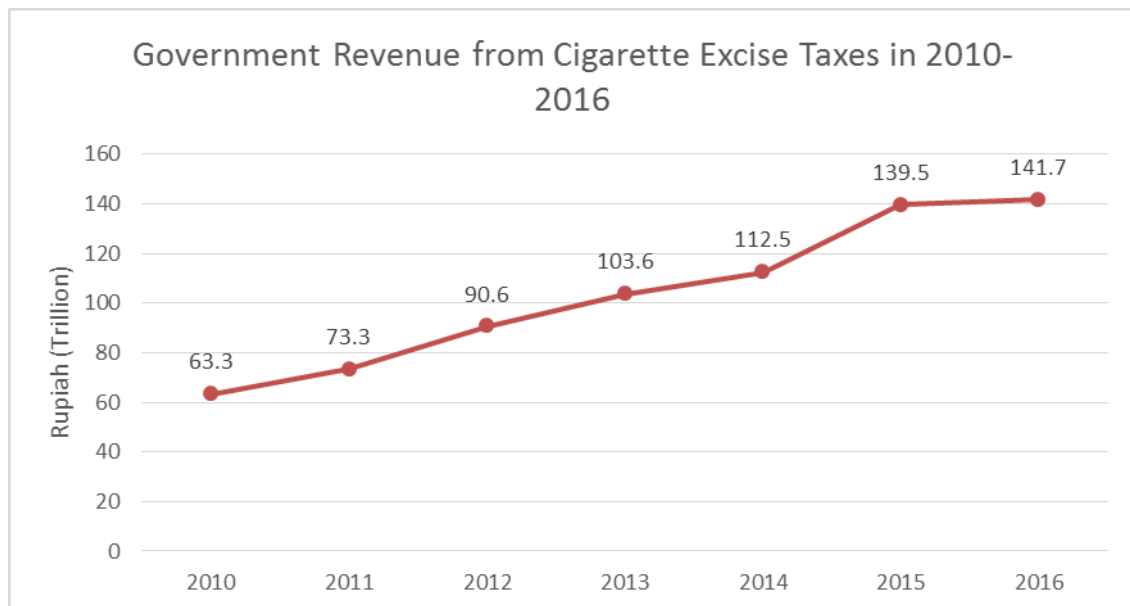


Figure 1: Government Revenue from Cigarettes Excise Taxes in 2010 – 2016

4 DISCUSSION

Based on Table 1, cigarettes account for the third largest expense after food and beverages and grains. This shows that the people of Indonesia prefer to buy cigarettes than foods such as meat, vegetables and fruits. Tobacco use causes unnecessary and actually preventable diseases, even worsening the welfare of the poor and increasing the burden of the country's economy.

Table 2 shows the highest expenditure of cigarettes in the third expenditure quintile (medium

prosperity), while the lowest expenditure of cigarettes is in the fifth (high prosperity) expenditure quintile. People with medium to low expenditure tend to spend more money on cigarettes than on food. When the Poverty Line increases it increases cigarette consumption (Sari, 2016). This can happen because of the strong nicotine content in cigarettes so that the addiction leads to continued smoking and which is difficult to prevent.

Table 3 explains that the cost of treatment for diseases caused by tobacco use is high. Estimated data may be missed as the greater the use of tobacco,

the higher the cost of treatment. Therefore, the money that could have gone to buy other purposes is used to fund the cost of treatment of diseases caused by tobacco use. It can be estimated that the cost of treatment for diseases caused by tobacco use can account for all BPJS funds. According to WHO, there is association between tobacco-related illness and low-income level, especially for all-cause mortality, lung cancer, low birth weight for gestational age.

Table 4 shows that cigarette taxes received by the Government are constantly increasing. However, the number of smokers in Indonesia is still not reduced, and has even tended to increase because of the ease by which the people of Indonesia can obtain cigarettes wherever and whenever. The amount of received cigarette excise taxes revenue is still not comparable with the impact of smoking due to economic, health, social and environmental impacts. According to Sari (2016), there is a significant association between cigarette consumption and Poverty Line. Although there has been a cigarette tax, the cigarette consumption continues to increase.

5 CONCLUSIONS

Based on the research result, tobacco use has a significant impact on the expense of medium and low prosperity. In addition, the use of tobacco also reduces financing for more important uses, such as education, health and food. Although every year the cigarette excise taxes target and revenue always increasing, it's not enough to reduce amount of smokers in Indonesia. It requires effort by the Government and the people themselves to reduce tobacco use, such as the adoption of FCTC policies that have been shown to reduce the degree of tobacco use and the promotion of healthy lifestyles to improve public health status.

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East Java Provincial Commitment in Integrating Regional Health Warranty Program (*Jamkesda*) Towards a National Health Guarantee - *Kartu Indonesia Sehat (JKN-KIS)*

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Keywords: Integrate, JKN-KIS, East Java, Java Governor Regulation, *Jamkesda*.

Abstract: The Minister of Home Affairs of Republic Indonesia has instructed the Regional Government to implement all of the related programs of JKN-KIS in to the national strategy program. This study has used the literature review method. East Java is one of the provinces in Indonesia that has been committed to heeding to the instructions from The Minister of Home Affairs with the policy set forth in the East Java Governor's Regulation No. 35 of 2016 on the Mechanism of Financing and Claiming of Health Service for Participant of Health Insurance Region. The policy set by the governor regulates what governs every city and district in the East Java province, especially concerning the members of "Jamkesda" who should move to the JKN program managed by BPJS (*Badan Penyelenggara Jaminan Sosial*). They should give a report to the Governor through the Public Health Office of the East Java Region. This is important for the East Java Province to prove that they are already participating in the policy that was instructed by the Central Government.

1 INTRODUCTION

Resulting from the 58 assembly in 2005 in Geneva, the World Health Assembly (WHA) declared that sustainable health financing through Universal Health Coverage (UHC) should be organised by a social health insurance mechanism. To make this a global commitment and basic constitution, the government is therefore responsible for the implementation of public health insurance through *Sistem Jaminan Sosial Nasional (SJSN)*. *Sistem Jaminan Sosial Nasional (SJSN)* is an Indonesian government program that has the goal to provide protection and social welfare for all of the people of Indonesia. Through this program, it is hoped that the whole community will be able to fulfil the basic need of decent living, in the case of things that result in a loss or decrease of income due to illness or accident. SJSN has multiple programs and principles. SJSN has 3 principles; humanitarian, benefits and social justice for all of the people of Indonesia. The programs contained in the *Sistem Jaminan Sosial Nasional (SJSN)* include health insurance, accident insurance, pensions and death insurance. The principles adopted in SJSN implementation are the principles of mutual cooperation, non-profit principles, the principle of openness, prudential principles, accountability principles, portability principles, compulsory

membership principles, trust fund principles and fund management principles.

One of the programs being enforced by the government is the Health Insurance Program, which is now called the National Health Insurance-Healthy Indonesia Card (JKN-KIS). The existence of *Jaminan Kesehatan Nasional-Kartu Indonesia Sehat (JKN-KIS)* managed by BPJS (*Badan Penyelenggara Jaminan Sosial*) Health is to enforce the regulations contained in Law Number 40 established in 2004 regarding *Sistem Jaminan Sosial Nasional (SJSN)*. This program has given something new for all of the people of Indonesia about the certainty of protection for their rights, especially in relation to health insurance. As mentioned in Article 28 H Paragraph (3) of the 1945 Constitution, every person has the right to social security which enables their complete development as a dignified human being. In accordance with SJSN Law, health insurance is administered nationally using the principles of social insurance and equity. The health insurance aims to ensure that the participants benefit from health care and protection when meeting their basic health needs. This is in line with the 1945 Constitution, Article 34 in an effort to improve the performance of *Jaminan Kesehatan Nasional-Kartu Indonesia Sehat (JKN-KIS)*. The Government, in this case the Minister of Home Affairs of the Republic of Indonesia, instructed the Regional

Government to implement all of its obligations related to the JKN-KIS program including, among others, instructing the Regional Government to integrate the *Jamkesda* program into the JKN-KIS program and the national strategic program.

2 METHODS

The type of this study is a literature study. According to *Notoatmojo, S. 2010: "Literature study method is activities related to the method of collecting data library, reading and mecatat, and manage research materials"*. The data used ranged included textbooks, journals, scientific articles and regulations in East Java which contain the concept studied. Journals and scientific articles used that are relevant to this research on integrating Jamkesda towards a JKN KIS. In this case, what is to be studied are the regulations and programs in the eastern Java province that support the central government's instruction to integrate *Jamkesda* in to JKN-KIS.

3 RESULT

Since January 1, 2014, the nation of Indonesia has entered a new era of era A National Health Guarantee (JKN), which will gradually cover all Indonesians and is mandatory. JKN is mandate for Undang-undang Number 40 in 2004 that *Sistem Jaminan Sosial Nasional* (SJSN), and implemented operationally after discharge Undang-undang Number 24 in 2011 that *Badan Penyelenggara Jaminan Sosial* (BPJS). Implementation National Health Guarantee (JKN) organized by BPJS Health listed at Government Regulation and Presidential Decree, among others : "Peraturan Pemerintah Nomor 101 Tahun 2012, Peraturan Presiden Nomor 12 Tahu 2013 and Roadmap JKN".

The benefits of National Health Insurance also involve promotive, preventive, curative and rehabilitative services including medicine and medical consumables in accordance with any medical needs. In order to realise the Universal Health Coverage that started 2015, BPJS Health activities focused on the integration of the membership of *Jamkesda* in to JKN-KIS. In line with the instructions from the Minister of Home Affairs of the Republic of Indonesia, the Regional Government is obliged to perform its obligations related to the JKN-KIS program, including the Regional Government integrating Regional Health

Insurance (*Jamkesda*) into the JKN-KIS program. The law that strengthens this is stated in Article 67, Law Number 23 from 2004 regarding the Regional Government, as it is one of the obligations of the Regional Head and the Deputy Head of the region that is implementing the national strategic program. The Government began to follow up on the instructions by the Ministry of Home Affairs with local government regulations or programs that supported the integration of *Jaminan Kesehatan Daerah* into *Jaminan Kesehatan Nasional-Kartu Indonesia Sehat* (JKN-KIS). One of the Regional Governments that followed up the instructions was the East Java Province.

The East Java province followed the instructions from the Ministry of Home Affairs by issuing the governor's regulation of the East Java number 35 of 2016 laws on the mechanism of financing and the submission of health service claims for regional health insurance participants. As for several matters discussed in this regulation, among others in Article 3, Paragraph (1), it is explained that the district/city government that has integrated JAMKESDA participants into JKN programs managed by BPJS (*Kesehatan*) shall report to the governor through the provincial health office; paragraph (2) explained that if the district/city government does not provide the report as referred to in paragraph (1), then the district/city government shall pay the claims of the participants of the *Jamkesda* card holders who are receiving health services in PKK.

In addition to the existing regulations, the commitment of the program run by the East Java provincial government is to integrating the policies of the participants of the national health insurance program with the data of the poorest in society as in *Penerima Bantuan Iuran* (PBI).

4 DISCUSSION

Integrating Jamkesda towards JKN KIS is local government register the poor and unable to BPJS Health and pay their dues as defined in Presidential Decree Number 111 in 2013 that health insurance. Local governments may register a number of poor and disadvantaged former Jamkesda participants who are either sick or healthy according to the adequacy of the budget and will register again the poor and incapable as followers. The population will benefit as regulated in the presidential regulation on health insurance. Residents will get uniform health services according to medical needs.

Current regulations in East Java are in response to the instructions from the government on the obligations of local governments concerning integrating *Jamkesda* in to JKN in East Java. It is the issuance of the East Java governor, regulation number 35 in 2016 about the mechanism of financing and the claims of health services for the participant's health insurance. In the regulation, it reviews the obligations of the district or municipal governments that have integrated JAMKESDA members in to the JKN-KIS program.

In addition to these regulations, East Java also executes policies in terms of the governance of the national health insurance program participants in relation to data collection from the poorest of society as relates to *Penerima Bantuan Iuran* (PBI). This is also the way that the East Java Province proves their commitment to carry out central government instructions to do with integration obligations throughout Indonesia.

In a study conducted by M. Ali Imron Rosyadi, his findings stated that the implementation of the national health insurance program policy in East Java Province is standard and that the target has been clearly regulated according to the Decree of the Minister of Social Service No. 146 / HUK / 2013. This is in accordance with the stated criteria both from the criteria of the participants and the amount set aside for the task.

In an article on the official page of BPJS, there are several cities or districts that have not integrated *Jamkesda* in to the JKN-KIS program such as the Trenggalek Regency, Pasuruan City, Batu Town, the Sumenep Regency and the Sampang Regency. The factors affecting some areas that have not integrated *Jamkesda* are constraints to do with APBD. The province of East Java remains determined to achieve the 100% integration program by 2019

To support the implementation of the policies that have been established by the provincial government of East Java, the provinces have also prepared resources for the success of this integration. Starting from human resources and financing from the Ministry of Social Service, the Social Services, BPS, Health Offices and BPJS (*Kesehatan*) are ready to participate in the involvement of PBI data so that the process of the integration with *Jamkesda* runs well and on target.

The Governor of East Java has a high level of commitment when it comes to realising the success of the JAMKESDA integration. By listing the poorest of society into the PBI, it makes it easier for the government to execute the central government's

instruction concerning the obligation of each region to integrate *Jamkesda* into the JKN-KIS program.

The policy regarding JKN participants receiving the PBI has been regulated in Government Regulation Number 101 in 2012 that PBI and decision social minister of Indonesia Number 146/HUK/2013 that the determination of the criteria and data collection of the poor and the needy. But this activity is not implemented maximally. It is still evident that many poor people are not included in the PBI. In 2015, PBI 14.001.871, Jamkesda or PBI Non Kuota 707.305 and SPM 70.000.

But the head of East Java Province has a high commitment to realize the success of this JKN, poor people who are not included in the PBI Jamkesda in charge of the budget, also the community has the motivation to become participants independently.

5 CONCLUSIONS

As seen in the East Java governor's regulation number 35 in 2016, there is substantial proof that the East Java Provincial Government is committed to the instructions of the Central Government in terms of the obligations the integration of *Jaminan Kesehatan Daerah (Jamkesda)* in to the *Jaminan Kesehatan Nasional – Kartu Indonesia Sehat (JKN-KIS)*, managed by BPJS (*Kesehatan*).

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Partnership Analysis of National Health Insurance Pooling Mechanism Among Informal Workers in Banyumas Regency

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Keywords: *BPJS Kesehatan*, Informal worker, Partnership, Premium collecting, Universal coverage.

Abstract: Indonesia in achieving Universal Health Coverage has the challenge to protecting informal workers. But, informal sector workers covered *BPJS Kesehatan* by the Workers Not Receiver Wages is still low enrolment. Premium collection of *BPJS Kesehatan* for members especially informal workers is important to the sustainability of National Health Insurance program. The premium collection of *BPJS Kesehatan* can't reach for informal sector as a whole. Expansion of premium collection *BPJS Kesehatan* is needed to facilitate the informal sector to register and pay *BPJS Kesehatan* premiums. The aim of this research is describe the partnership in collecting premiums of *BPJS Kesehatan* for informal workers in Banyumas. This research is qualitative research with 14 informans. Research location in informal sector worker of palm sugar farmer and batik worker in Banyumas. Data collection was done by in-depth interview, observation and documentation. The results of this research indicate that the partnership in collecting premiums desired by informal sector workers in Banyumas is partnership through association or cooperative. This partnership facilitates the payment of contributions *BPJS Kesehatan* by associations or cooperatives that they are regular contact or who they trust. Oversight and guidance to the partnership were done by the Department of Labor and Cooperative Banyumas and *BPJS Kesehatan*.

1 INTRODUCTION

Indonesia's efforts to achieve universal health coverage still face challenges to be faced, previous research says that the challenge faced in reaching Universal Health Coverage (UHC) is to provide protection to informal sector workers. However, in this time, informal sector workers covered by national health insurance with non-PBI members category for non-wage workers or Pekerja Bukan Penerima Upah (PBPU) are still low enrollment. Data *BPJS Kesehatan* in August 2017, indicating that the recipient contributions or Penerima Bantuan Iuran (PBI) is the type of membership in Indonesia, as many as 109.54 million participants (61%). Unlike the case with non-PBI members is wage workers or Pekerja Penerima Upah (PPU), that is as much as 42.32 million participants (24%). Non-PBI membership for Non-Wage Workers (PBPU) or informal sector has the least amount, only 27.60 million participants (15%).

Informal sector people have certain characteristics that must be well understood.

Informal workers in the 2012-2019 JKN roadmap are non-wage Workers (PBPU) or workers outside the working relationship (self-employed), most of whom do not occupy permanent business locations and irregular income. Collection of premium contributions from workers in the informal sector requires processes and procedures that are very different from the formal sector. This difference is causing the current premium arrears in *BPJS Kesehatan*. The biggest arrears come from segments of Non-Wage Member (PBPU) or the informal sector. Up to the 3 rd Quarter of 2015, the segment's premium debt reached more than Rp. 2.43 trillion. Data from *BPJS Kesehatan* Purwokerto Branch shows in 2015, about 57.84% of members aren't pay contribution, the majority of arrears by informal sector workers covered by national health insurance with categories of non-wage workers.

Efforts to expand the member *BPJS Kesehatan* of the informal sector and the collection of informal sector premiums in Banyumas, especially for palm farmers and batik worker, need an innovative approach. Innovative approach one by doing

partnerships in the collection of premiums in the informal sector so they regularly pay premiums and willing to join a member *BPJS Kesehatan*. This partnership can be carried out between *BPJS Kesehatan* Purwokerto Branch and Cooperatives or associations of informal sector workers. The scheme of increasing informal sector members through cooperatives will bring ease in the collection of premiums from informal sector workers. Payment of insurance premiums can be made directly one year or monthly using the loan facility from the Cooperative. Cooperatives provide ease of supervision, communication, advocacy and provision of information in this channelling between stakeholders and the agency of health insurance to the informal sector.

2 METHODS

This research is qualitative research with case study. The research location in Banyumas district at Nira Satria Cooperative as an association of informal sector workers of palm farmers and Perbain as association of batik workers. Data collection was done by in-depth interview, observation and documentation. The study began in March until July 2017. The subjects were 16 participants consisting of 1 head of Cooperative Nira Satria, 1 head of batik association of Perbain, 1 head of membership unit of *BPJS Kesehatan* Purwokerto Branch, 1 head of batik worker, 1 head of Banyumas Cooperation Office, coconut, 5 palm farmers and 5 batik workers.

All Interviews were digitally recorded and then transcribed for analysis in OpenCode 4.03 qualitative analysis software. Two researchers analyzed the transcripts through direct content analysis, a qualitative data analysis method, using OpenCode 4.03. Codes were developed primarily according to the four themes. The researchers analyzed transcripts line by line and assigned new codes to additional emerging concepts. OpenCode 4.03 was used to sort and organize the themes and to examine the patterns emerging from each of the themes. To ensure consistency and common understanding of code concepts, the analysts discussed the coding process and one senior member of the team checked the analysis results.

3 RESULT

As mentioned in the Methods section, the partnership analysis identified four key topics for

assessment; below, we summarize and describe the interviews by topic.

3.1 The Perception of Informal Sector Workers on Registration Becomes A Member of *BPJS Kesehatan*.

Participants who are palm farmers want the cooperative to register the farmers who have not enroll into *BPJS Kesehatan* member. They want Cooperative Nira Satria willing to register palm farmers to become member of *BPJS Kesehatan*. This can be seen in the following participant quote:

“I want a cooperative willing to help register health insurance, if we have difficulties, difficulty registering, cooperatives can register us to have health insurance. I want it like that. The cooperative should help us register *BPJS Kesehatan*.”

Informal sector workers want the ease of registration into *BPJS Kesehatan* members. The ease of registering to become a member of *BPJS Kesehatan*, according to the participants by registering through Nira Satria Cooperative. Nira Satria Cooperative can facilitate registration of informal sector workers, especially palm farmers become BPJS member because the cooperative is where they sell the production of coconut sugar they make. They sell coconut sugar every five days to the cooperative

3.2 Perceptions of Informal Sector Workers About Paying Premiums *BPJS Kesehatan*

Member of *BPJS Kesehatan* especially member which including Non-Wage Worker (PBPU) must pay premium every month. This is also what must be done by the batik workers who joined the *BPJS Kesehatan* member. According to the participants, the ease of payment of premium *BPJS Kesehatan* by batik workers by paying premiums to batik associations. They are not used to Banks or Automatic Teller Machine (ATM). Premium collection through batik association coordinator. Coordinator of batik association who became channel between *BPJS Kesehatan* with batik association member who became member of BPJS. When the premiums have been collected by the coordinator of batik, then from the *BPJS Kesehatan* contacted to make payment premiums BPJS Health. This can be seen in the following quote information:

“...Ease of premium collection for batik workers through batik association. In batik association there is one coordinator. The coordinator can be a channel with *BPJS Kesehatan*. The batik coordinator will contact *BPJS Kesehatan* when the premiums of batik workers have gathered. When there is new information or regulations from BPJS regarding premiums can be through the coordinator of the association.”

Informal sector workers want ease in paying BPJS premiums. The paying premium of member *BPJS Kesehatan* can ease through coordinator of batik association. This coordinator can facilitate the payment premium of informal sector workers because of the batik coordinator where they sell their batik work

3.3 Giving Information to Informal Sector Workers Makes Them Interested in Becoming a Member of *BPJS Kesehatan*

Palm farmers and batik workers to be willing to participate *BPJS Kesehatan* needed information that makes them interested. Participants say that palm farmers and other batik workers are willing to join *BPJS Kesehatan*, they must first be given socialization by *BPJS Kesehatan*. Participants want to socialize about *BPJS Kesehatan* in Nira Satria Cooperative for palm farmers and batik association in Perbain cooperative. Nira Satria Cooperative and Perbain Cooperative every thirty-five days once there is a meeting. When the meeting at Nira Satria Cooperative and Perbain Cooperative has been completed can also be socialized from *BPJS Kesehatan* to palm farmers and batik workers.

“We want socialization at Cooperative. *BPJS Kesehatan* give socialization to us in Cooperative. Cooperative held a meeting at Wage Wednesday or meeting in Cooperative every Thirty-five days. When the meeting is completed BPJS can also socialize to us.”

“I prefer socialization from *BPJS Kesehatan* rather than a brochures about *BPJS Kesehatan*. The brochure can't give me information about benefits of *BPJS Kesehatan*. *BPJS Kesehatan* can socialize to batik workers through batik association. Batik association at Perbain Cooperative. Batik owners and batik workers gathered at meetings in Perbain so *BPJS Kesehatan* can easy to give information to batik association during meeting at Perbain.”

Cooperatives can partner with *BPJS Kesehatan* in providing information to its members and

informal sector workers who do not know about *BPJS Kesehatan*. Cooperatives can be a channel of *BPJS Kesehatan*. The cooperative room can also be a place of socialization about *BPJS Kesehatan* that can be provided by *BPJS Kesehatan* itself or from cooperatives. Therefore, if the information provided by the cooperative or association, the information provided from the cooperative to the member must be the same as the information provided by *BPJS Kesehatan* to the cooperative.

3.4 Partnership in The Collection of Premium *BPJS Kesehatan*

The member is not a recipient of the wages (PBPU) or informal sector workers who have participated in *BPJS Kesehatan* membership and joined in a community, such as cooperatives can collect *BPJS Kesehatan* premiums within a group. The collection of premiums within a group or through this community is known as the collective PBPU. The collective PBPU is a collection of premium PBPU participants with a minimum of 100 members. Members of the informal sector are grouped in an association or cooperative can also register its members collectively, through the cooperative. Requirements that must be met such as family card, resident card, and form. The cooperative can register its members to become a member of *BPJS Kesehatan* collectively and can collect the contribution of member's premiums collectively as well. In a cooperative there will be a coordinator who will be channel with *BPJS Kesehatan*. The following information from the Head Unit member, *BPJS Kesehatan* Purwokerto Branch, through the quote below.

“ So for the collection ... ee ... independent members or the general public, the community joined in a cooperative community, it could be, it could be in a group.. the group name is a collective PBPU... independent members of the collective, where a minimum of members is 100 people. So, within a community... there is a cooperative ... included in BPJS collectively with on behalf of the cooperative, the registration will bring the requirements such as Family Card, Resident Card etc. Through cooperative.. So that collects the contribution from the cooperative, which pays to the BPJS is from the cooperative. There is one coordinator cooperative. This cooperative who register the collect, collect to BPJS.. later from the BPJS Health relationship with the cooperative..”

Cooperatives or associations can be a place for informal sector workers. It can be formed to become an association of informal sector workers with the same job. The purpose of the establishment of the

association is as a partner between *BPJS Kesehatan* and members of informal sector workers, the benefit is that informal sector workers know about the benefits of being a member *BPJS Kesehatan*. Partnerships in the collection of premiums desired by informal sector workers in Banyumas district are partnerships through associations or cooperatives. This partnership facilitates the payment of contributions by partnerships between associations or cooperatives that they are regular contacts or who they trust

4 DISCUSSION

Efforts to expand the participation of the informal sector and the collection of premium contributions of the informal sector, especially palm farmers and batik workers need an innovative approach. Innovative approach one by using cooperatives as a method of gathering premiums. Membership in a microfinance institution such as a cooperative serves as a community-based association to participate in health insurance [5]. Cooperatives are the determinants of informal sector workers in access to premium payments to health insurance.

In Kenya, since 2003, the National Hospital Insurance Fund (NHIF) has been cooperating with cooperatives through savings and community credit. NHIF and cooperatives are also working together to increase membership of health insurance, taking photos in making NHIF identity cards, submitting NHIF identity cards and NHIF premium collection agencies. The cooperative also helps NHIF in socialization and promotion to its cooperative members who do not yet have health insurance. After working with cooperatives, NHIF can expand its membership to rural communities that have no health insurance. Cooperatives benefit by providing protection to their members through health insurance managed by NHIF.

Efforts to increase membership and awareness to regularly pay contributions to the informal sector in national health insurance found many obstacles. The low level of enrolment in the informal sector is triggered by several factors including low income, uncertain income, lack of awareness to participate in health insurance, if they join an irregular health insurance to pay premiums.

Approach with door to door premium collection or Door to Door collection. This approach is appropriate for cooperative members who are reluctant or difficult to reach payment points. Cooperative members will choose a door-to-door collection method with a person in charge of

collecting premium contributions from the cooperative. This effort allows members of the cooperative to regularly pay premium contributions each month. Members of the cooperative who have paid, are given proof of payment from the cooperative in charge of collecting contributions. Proof of payment is useful in preventing fraud in collecting contributions.

There is an increasing willingness to pay health insurance contributions to the informal sector after routine and intensive socialization of health insurance to the informal sector. This study shows, if routinely performed on informal sector workers such as coconut farmers and batik workers, their awareness will increase to follow the health insurance program and the willingness to regularly pay premiums will increase as well.

The provision of information on health insurance programs relates to the level of community participation incorporated in the dairy farm cooperatives against the health insurance program in Kenya. The more intensive the provision of information about the health insurance program the higher the level of participation of dairy farmers in the cooperative against the health insurance scheme.

In Uganda, the community participating in community health insurance is low enrolment due to the lack of information to the public about the benefits of being a participant of the health insurance. Kenya uses cooperatives in covering the informal sector with support by governments in the country. This cooperative is capable as a supporting tool in increasing the participation of informal sector into health insurance in that country because based on community or group. Informal participants will be easy to get information, register and collect premiums in health insurance.

In Philippines, Philhealth applies group-based participation by requiring individuals to enroll in a group or community-based health insurance scheme through *Kasapi*. The purpose of group-based participation is that expansion can be done more quickly and facilitated in collecting membership contributions. All group members in the association are enrolled, administrative costs are reduced and the only ill phenomenon that comes with health insurance or adverse selection can be reduced. Based on their occupational categories, informal sector workers may not be organized in groups or associations based on their work, but they may be members of community-based organizations such as women's groups, religious groups, agricultural groups or associations of traditional market.

5 CONCLUSION

Partnerships in the collection of premiums desired by informal sector workers in Banyumas District are partnerships through associations or cooperatives. This partnership facilitates the payment of contributions with partnerships between associations or cooperatives that they are regular contacts or who they trust. Supervision and guidance is done by the Office of Labour and Cooperatives with *BPJS Kesehatan*.

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Impact of Tobacco Control Policy for Health in Indonesia

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Keywords: Tobacco control, Health policy, Indonesia.

Abstract: Tobacco industries in Indonesia have a significant impact on the economic sector through creating opportunities in the farming and industrial sectors. Tobacco industries also contribute the biggest taxes, meaning that Indonesia's government earns significant revenue from it. On the other hand, increasingly the tobacco industries in Indonesia also have an impact on the health sector as consumption of cigarettes causes high prevalence of many diseases, such as cancer, cardiovascular, etc. The budgets allocated by government for dealing with the health effect of smoking are far greater than the taxes they receive. Therefore, a regulatory requirement is required. The role of the health sector in formulating a policy related to control of the tobacco industries needs to gain full support from all parties who feel the adverse impact of it, especially the Indonesian government itself. This paper reviews literatures related to the impact of tobacco control policy in Indonesia. The results show that there are many pros and cons in Indonesian society regarding tobacco control policy

1 INTRODUCTION

The tobacco industry is one of the largest industries in Indonesia with the majority of smokers in low and moderate income, especially among Indonesian men. It is estimated that around 65% of Indonesian men are smokers. Indonesia is the second largest cigarette market in Asia. Given that the Indonesian population numbers over 255 million and around two-thirds of Indonesian men consume tobacco-related product, it implies that there exists a huge market. There are about 53.7 million active adult smokers and 2.6 million active youth smokers in Indonesia (Ministry of Health, 2014).

According to the World Health Organization (WHO), there were 95 million smokers in Indonesia in 2015 and also 20% of the Indonesian youth were categorised as smokers. On the other hand, there are millions of passive smokers in Indonesia who must also be of concern. The high consumption of cigarettes in Indonesia is a result of citizens having easy access to buy and a wide distribution network which makes cigarettes available in all provinces in Indonesia. Another factor is that cigarette packs are cheaper in Indonesia than other countries, costing only USD \$1.4 a pack in Indonesia (WHO, 2012).

2 METHODS

This paper uses narrative review methods. Narrative review involves selecting studies that are compared and summarised on the basis of the author's experience, existing theories and models. The aim of this paper is an issue review, which is an investigation of an issue in a specific field of research. In this paper, the author wants to know what is the impact of tobacco control policy implementation for health in Indonesia.

3 RESULTS

Despite the fact that a pack of cigarettes in Indonesia is cheaper than in other countries, the Indonesian government actually tried to increase the nominal cigarette price in 2010, but Indonesia still has among the world's cheapest and most affordable cigarettes. Due to the increase of tobacco consumption and the increasing demand for cigarettes, the Indonesian government made a new policy. Increasing the excise tax has the potential not only to generate

additional revenues for the government, but also reduce cigarette consumption. Excise taxes on cigarettes was increased from 38% to 44% and, then, from 44% to 46%, but that is still below the maximum allowed by the country's national tax law. However, the tobacco industry is also a great source of income for the government through excises and taxes. The cigarette industry absorbs a lot of workers with skills and low formal education, so this is very helpful to the government's effort in reducing unemployment rate in Indonesia.

In the other hand, the development of the cigarette industry in Indonesia has another effect, especially concerning health. Widespread consumption of tobacco products in Indonesia implies negative consequences for the general health of the Indonesian population. Some of the adverse health effects include high prevalence of many diseases, such as cancer, cardiovascular, respiratory system disease, etc. This condition will prove fatal if there is no policy that regulates the high level of cigarette consumption, as the data showed that there are 53.7 million active adult smokers and 2.6 million active youth smokers in Indonesia. The youth population is a valuable asset to the economy, provided it can be absorbed by employment opportunities. Health is important to remain productive (South East Asia Tobacco Control Alliance. 2016).

It is undeniable that the tobacco industry also has a negative impact on consumer health, such as costs incurred for long-term medical expenses, lost employment due to declining health conditions, and effects on the health of passive smokers. Therefore, it needs to be measured, calculated and tested as to whether the benefits received by society, government, corporations and employees are comparable, greater, or less than the loss to be borne. Therefore, the government should pay more attention to making a firm policy to protect all elements. The government must be able to look at things from multiple perspectives, not just from the economic field. The policies made must be able to reduce the impact of the cost burden of cigarette-related disease.

4 DISCUSSION

The economic and social costs incurred by tobacco consumption continue to increase and this burden is largely borne by the poor. The annual rate of cigarette losses reaches 200 million US dollars, while the number of deaths from smoking-related

diseases continues to increase. In Indonesia, the total cost of tobacco consumption in 2005, which includes direct costs at the household level and indirect costs due to loss of productivity due to premature death, illness and disability was US \$18.5 billion. This amount was about five times higher than the excise revenue of US \$3.62 billion in 2005. (1 US \$ = Rp 8.500,00) (Barber, 2014).

The government needs to make regulations protecting children and teenagers from the aggressive efforts of the tobacco industry to capture them as long-term consumers and damage the present and future generations. Child and adolescent protection efforts from the dangers of smoking to reduce their access to cigarettes can be achieved by, among other things, raising the price of cigarettes, forbidding sale of cigarettes to persons under 18 and prohibiting the sale of bar cigarettes.

The government has a duty and authority to protect through increase in excise duty, a thorough ban on tobacco advertising, application of non-smoking areas, and creating warnings of health effects through the use of pictures.

The World Health Organization (WHO) issued the Framework Convention on Tobacco Control (FCTC), which is an international treaty, and became effective on February 27, 2005. The FCTC aims to protect current and future generations from health, social, environmental and economic consequences caused by smoking and exposure to smoke. In addition, to attract the world's attention to the problem of the tobacco epidemic, in 1987, the WHO created a World No Tobacco Day, commemorated annually every May 31 (WHO, 2012).

Indonesia is an agricultural country with most of its people working as farmers, some of whom are tobacco farmers. This matter ultimately lead to pros and cons against various government policies related to the control of cigarette in Indonesia. Pro groups support government policy with the idea that it can reduce the negative effects of high cigarette consumption, whereas the con groups consider that the policies will harm tobacco farmers, who are mostly from the middle to lower class. Therefore, it is necessary to have a policy review planning related to cigarette control to reduce the pros and cons. The policy review is expected to produce a new policy that does not harm any party. In addition, it can also provide tobacco use interventions and training to produce products other than cigarettes, so that tobacco farmers can still be productive.

5 CONCLUSIONS

The Indonesian government is expected to be able to overcome the various problems of the pros and cons related to tobacco control policy in order not to cause turmoil in society. The government should also seek tobacco management interventions and training into other products that continue to produce economic value. In addition, the need for socialisation to change the paradigm of society so that the benefits of taxing the cigarette industry does not benefit the country, but bears the burden of health costs to treatment of disease caused by consumption of cigarettes.

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Analysis of Indonesia's Political Economy Towards the Lack of Health Financing for Promotive and Preventive Efforts

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Keywords: Health financing, State budget, Health promotion, Prevention of disease.

Abstract: In Indonesia health is one of the most important aspects of state development. This is evidenced by the government's policy that health budget allocation is almost 5% of the state budget and 10% of the district budget. However, health financing that has been implemented in Indonesia is widely used for personal health (curative and rehabilitation efforts) capacity building and support. Meanwhile for prevention and public health services such as health promotion are still lacking. This study aims to analyse the considerations or reasons why the government has not maximised health financing for the purpose of prevention of disease and public health services from the perspective of political economy. This research is conducted descriptively where data obtained from supporting data such as books and publication documents. The results of this study indicate that the interests of different parties, inter-ministerial priority differences, socio-cultural aspects and fiscal limitations has caused the government to not maximise health financing for the sake of health promotion and the prevention of disease.

1 INTRODUCTION

In Indonesia health is one important aspect of state development, because health development is the means of realising that quality human resources is important. Better health means better human resources can be achieved. According to the Presidential Republic of Indonesia Regulation No. 72 of 2012 on the National Health System, health development is a part of national development that raises awareness, willingness and the ability for everyone to live to the highest standard of public health. This health development is the effort of all of the Indonesian nation, whether it be the community, private companies or the government.

National development in the field of health is carried out through the improvement of health efforts, better health supplies, medicines and medical supplies accompanied by increased supervision, community empowerment, and health management. One of the health development efforts is health financing where health funding comes from the Government, Local Government, private donators, the community and community organisations. According to the Presidential Regulation of the Republic of Indonesia Number 72 of 2012 on the National Health System, planning and arranging health financing is carried out with the

excavation and settlement of various sources of funds that can ensure the sustainability of health development financing, allocating it rationally and also effectively (The Law of Indonesian Ministry of Health, 2016).

In the case of excavation and settlement arrangements and the utilisation of funds originating from mandatory contributions, the Government and the Regional Government should make improvements between the sources of funds from mandatory contributions, State Revenue, Expenditure Budget funds, Regional Income and Expenditures, public funds, and other sources. According to Law Number 36 Year 2009 on Health, the Government's Health Budget amounts to at least 5% of the state budget and state expenditure outside of salaries. District/municipal governments have allocated at least 10% of their budget.

However, the health financing that has been implemented in Indonesia both in the state and provincial or district/city areas is widely used primarily for individual health efforts or curative and rehabilitation efforts. For public health efforts such as health promotion and disease prevention financing is still low. According to the Performance Accountability Report (2015), the results of the District Health Account 8 provincial analysis show the largest portion 52% of the funds is for capacity

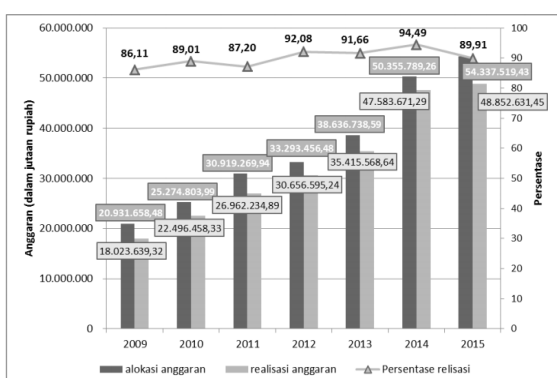
building and support, 42% for curative and only 6% for public health.

There are 6 community health programs in Indonesia is community nutrition, family health development, health and work effort development, management support, health promotion and community empowerment, environmental health (Anung, 2017).

2 METHODS

This research has used a descriptive research design which is retrospective to get a description of the health fund allocation from the State and Regional Budget. The data used has been the secondary data on health financing in Indonesia. Secondary data collection has been done by collecting publication documents such as the Indonesia Health Profile 2015, Performance Accountability Report 2015 and 2016, and the Health Data and Information from the Health Profile of 2016. The secondary data has been taken by reviewing the documents without any interviews with the parties due to the author's limitations in getting the sources.

3 RESULT



Source: Indonesia Health Profile, 2015

Figure 1: Allocation and Realization of The Health Ministry Budget of The Republic of Indonesia 2009-2015

Picture 1 shows that the allocation and realization of the health ministry's budget in the last seven years has increased. In 2009, the Ministry of Health of the Republic of Indonesia had a budget allocation of 20.93 trillion rupiahs with the realization of 18.05 trillion rupiahs and the percentage of realization was 86.11%. The number increased from year to year. In 2015. It was 54.3 trillion rupiah with a realization of 48.9 trillion

rupiah so the percentage of realisation therefore amounted to 89.91%.

The percentage of allocation of the regional income and expenditure budget of Health according to the program in Indonesia in 2011 has been shown in Table 1

Table 1: Percentage of the allocation of the regional income and expenditure budget of Health according to the program in Indonesia in 2011

| Province | Allocation | | |
|------------------|---------------------------|-----------------|---------------|
| | Capacity building support | Personal health | Public health |
| All | 52 % | 42 % | 6 % |
| West Java | 51 % | 48 % | 1 % |
| Gorontalo | 58 % | 32 % | 10 % |
| South Kalimantan | 55 % | 42 % | 4 % |
| Jambi | 56 % | 40 % | 4 % |
| West Sulawesi | 60 % | 30 % | 9 % |
| Lampung | 29 % | 67 % | 5 % |
| Bali | 52 % | 46 % | 3 % |
| NTT | 58 % | 30 % | 13 % |

Source: Performance Accountability Report, Indonesian Ministry of Health in 2015

Table 2: Public Health expenditure on health by service program, 2014

| Health care by function | % of public expenditure on health | % of total expenditure on health |
|--|-----------------------------------|----------------------------------|
| Health administration and health insurance** | 5.3% | 3.9% |
| Prevention and public health services | 13.9 % | 6.6 % |
| Medical services | 80.8 % | 89.5 % |
| - Inpatient curative care | 44.1 % | 37.9 % |
| - Outpatient curative care | 35.6 % | 34.4 % |
| - Rehabilitative care services | 0.4 % | 0.2 % |
| - Ancillary services to health care | 0.2 % | 3.5 % |
| - Medical goods dispensed to outpatient services | 0.5 % | 13.5% |
| Total % of current Health Expenditure*** | 100.0 % | 100.0 % |

Source: MoH (Center for Health Economic Policy Studies), AIPHSS in The Republic of Indonesia Health System Review, 2017

Table 1 shows that total public health spending for prevention and public health services reached 6.6% while 85% of health spending for medical services programs from all spending on health services

4 DISCUSSION

An increased allocation and realisation of Indonesia's health funds has been occurring on an annual basis due to the increasing demand for health financing in various health programs in Indonesia. However, the increase has not had the same effect in relation to public health in Indonesia. In the Presidential Regulation No. 72 of 2012 on the National Health System, it states that government funding for health development is directed to finance health programs that have a high amount of leverage on improving the public health status (The Law of Indonesian Ministry of Health, 2016). However, the percentage of allocation of health funds from the regional income and expenditure budget still indicates that the allocation of funds in to public health programs is still lacking and much directed towards the capacity building programs and supporters as well as personal health efforts.

According to the results of the analysis on the accountability report of the health ministry performance in 2015, this is related to Indonesia's commitment to the health sector still being relatively low compared to other countries with the same per capita income levels and Gross Domestic Product.¹ Indonesia always has an outlier status in terms of public health expenditure allocation, i.e. less than 2% of the Gross Domestic Product. The low portion of public health funds is due to the small fiscal capacity; only 12% of the Gross Domestic Product reaching the treasury. In addition to the limited fiscal capacity, the small portion of public health funds is also due to the government's lack of priority towards health compared to other sectors. Indonesia entered the world's 10% lowest decile in the world that gave low priority allocation to public funds for health.

According to the results of the analysis on the accountability report of the health ministry performance in 2015, the low allocation of public health funds is further exacerbated by allocative and technical inefficiencies, namely

1. Indonesia's primary health care allocation is very small compared to more developed countries. As a result, the use of advanced services is soaring. This reflects the dominance of specialist health services.

2. Drug costs sucks out a significant portion (> 40 percent of health costs). This figure is very high compared to similar figures in a number of developed countries that are only around 10-20 percent. The high share of drug expenditure is caused by an irrational drug prescribing pattern and patient demand.

Inefficiencies are also caused by disbursement issues that often occur at the end of the quarter each year. As a result, the use of funds is not suitable to fund programs that have an optimal impact on health outcomes. Delays in disbursement are also the cause of health facilities depending on a rental pattern so it is more expensive.

5 CONCLUSION

Increased allocation and realisation of Indonesia's health funds occurring on an annual basis is due to the increasing demand for health financing in various health programs in Indonesia. However, the percentage of the allocation of health funds from the regional income and expenditure budget still indicates that the allocation of funds in public health programs is lacking and much directed to capacity building programs and supporters as well as personal health efforts.

According to the results of the analysis on the accountability report of the health ministry performance in 2015, this is related to Indonesia's commitment to the health sector being relatively low, limited fiscal capacity, a small portion of public funds for health, and allocative and technical inefficiency.

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Influence Analysis of *BPJS Kesehatan* Ownership on Participant's Health Behavior in Surabaya

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Keywords: BPJS Kesehatan, Health behaviour, Ex-ante moral hazard.

Abstract: The Government of Indonesia aims to have Universal Health Coverage by 2019 which means that all citizens will be covered by JKN, a national health insurance program. Some studies have found the existence of ex ante moral hazard that can bring disadvantages for the government and the community itself. This research is intended to analyse the influence of *BPJS Kesehatan* towards health behaviour of the participants. The research design is analytic and cross-sectional with a multi-stage random sampling method. 250 respondents from two districts that had been randomly selected were enrolled in the study. A binary logical regression test was used to analyse the data obtained. The results showed a positive and significant influence of *BPJS Kesehatan* towards the participant's health behaviour, with a significance value of 0.039. The value is smaller than the alpha 0.05 which means that the statistical hypothesis has been rejected. Furthermore, OR analyses shows an exp.value of 1.951. In conclusion, the participation of *BPJS Kesehatan* influences the preventive health behaviour of the participants and they have the tendency to behave 1.951 times healthier than people who do not have health insurance at all.

1 INTRODUCTION

Health is the right of every individual. Protecting and ensuring the fulfilment of these rights for every citizen is the responsibility of the government. To make it happen, the government established an agency named *Badan Penyelenggara Jaminan Sosial (BPJS)* which officially began operating on January 1st, 2014. *BPJS* is in charge of organising the JKN (National Health Insurance) program with the services offered divided into *BPJS Kesehatan* and *BPJS Ketenagakerjaan*. Up until October 16th, 2016, there were 169,574,010 Indonesians registered on the JKN program (*BPJS*, 2016) out of a total of 237,641,326 Indonesians according to the Population Census of Indonesia, 2010.

In 2019, in accordance with the Indonesian Ministry of Health's strategic plan of 2015-2019, all Indonesian citizens must be registered as *BPJS Kesehatan* participants. It means that two years on from this year, all residents will have health insurance that allows them to access health services. This is one of the government commitment steps to

achieve Universal Health Coverage (UHC) in Indonesia. However, even when the whole of society has been insured, there will be the possibility of ex post moral hazards and ex ante moral hazards.

The results of the previous studies have shown the existence of ex post moral hazard and increased visits to health service agencies to get curative and rehabilitative facilities, while the existence of ex ante moral hazard is still not consistent. Anderson E. Stanciole's (2008) study shows that health insurance has an effect on lifestyle selection, increasing the tendency for active smoking, a lack of exercise and obesity, and decreasing the tendency to consume alcoholic beverages. Dhaval Dave and Robert Kaestner (2006) pointed out that otherwise, the ex ante moral hazard was not found consistently in women, but showed consistent evidence as having an effect on men.

This study is designed to analyse the influence of *BPJS Kesehatan* ownership towards health behaviours (preventive) of the participants in Surabaya. The results of this study are expected to be used as a reference for the Government or the

parties associated with the implementation of JKN to allow them to be more prepared for the possibilities that can arise after the achievement of UHC 2019. In addition, the results of this study can be used as government considerations to improve the quality of the National Health Insurance (JKN) program.

2 METHODS

This explanative quantitative research explains and tests the hypothesis of the research variables. The study was conducted over a period of five months, starting from March to July 2017. The study design was cross-sectional with a population consisting of the *BPJS Kesehatan* participants in Surabaya. The design was used because the study examined two variables at the same time. The independent variable is the ownership of *BPJS Kesehatan* in Surabaya. The dependent variable is health behavior. The sampling technique used was multi-stage random sampling. The location of the research was obtained by randomly taking individuals as samples from 2 sub-districts from the 31 sub-districts in Surabaya, and then selecting 2 urban villages until the final 2 RW (*Rukun Warga*) were chosen as the research location. The selected RWs were RW 1 Krembangan Utara, Pabean Cantian and RW 7 Nginden Jangkungan, Sukolilo, Surabaya.

The equation used to determine the sample size is known as the Lemeshow formula (1997):

$$n = \frac{N Z^2 P(1 - P)}{(N - 1)d^2 + Z^2 P(P - 1)} \quad (1)$$

From the formula above, we have got a sample size of 250 people, with a ratio of 4:1 which was obtained from the number of participants of Surabaya City BPJS 2016 and the number of people who do not have health insurance (the population in 2016 - the number of participants of BPJS in 2016, assuming that non-BPJS participants are included in the community who do not have health insurance because of the difficulties in knowing the number of people who do not have *BPJS Kesehatan* in Surabaya. The assumption is only used to determine the ratio of the research sample). The data used in this study was the primary data obtained from the data collection in the field using the aid of a questionnaire instrument with a Likert scale (1-4). The questionnaire passed the test of validity and reliability before being given to the community.

Based on the research objectives and the data scale of each variable (the scale of the independent variable data is nominal, the dependent variable is the ratio), the linear regression test with a dummy variable could be used. However, because there are some unfulfilled assumptions in the test, the Binary Logistic Regression test was used to perform the data analysis.

3 RESULTS

A total of 250 respondents participated in this research. Each of them was asked to fill the questionnaire to assess their health behavior.

The data obtained are analysed by binary logistic regression test. Below is the result of partial test and model formation:

Table 1: Variable in the Equation

| | B | S.E | Wald | df | Sig. | Exp (B) |
|----------------------------------|--------|-------|-------|----|-------|---------|
| Step 1 BPJS owner- ship | 0.668 | 0.323 | 4.267 | 1 | 0.039 | 1.951 |
| Constant | -0.804 | 0.292 | 7.599 | 1 | 0.006 | 0.447 |

Based on Table 1, it can be seen that the coefficient of the participation of BPJS is 0.668 (value significance (p) = 0.039). This value is less than alpha 0.05, which means that it has been rejected. This, in turn, means that "there is a significant influence of *BPJS Kesehatan* participation on the health behaviour of the participants" or "BPJS participation affects the participant's health behaviours". In addition, from the Table 1, Exp(B) shows a value of 1.951 which means that the probability of societal members who have health insurance behaving more healthily is 1.951 times better than those who do not have health insurance at all.

4 DISCUSSIONS

Risk management theory states that people do not like to be in risky circumstances, so they try to hand over the responsibility of risk to others. The other party in this study is the provider of health insurance, but with the granting of this responsibility, a person will have two possibilities related to moral hazards. It describes the changes of behaviors in prevention and treatment caused by

health insurance (Yaohui Dong, 2017). Those moral hazards are called ex post moral hazard, when there is increase in visits to health services and ex ante moral hazard, which is the possibility of increasing risky behaviours or decreased health preventive behaviours.

Research that has been done shows that the ex ante moral hazard effect has not been consistent, that in some behaviours can be seen to have a significant impact whereas in others, the behaviour has not. However, other studies have shown that the ownership of health insurance had an effect on the increase in risky behaviour. The inconsistency of similar research results suggests that health insurance can have ex ante moral hazard risks or not, when under different circumstances.

This research study indicates that there is influence when it comes to *BPJS Kesehatan* insurance ownership toward the health behavior of the participants, but does not prove the existence of ex ante moral hazard. The results of this study show that people who have *BPJS Kesehatan* insurance will actually behave twice as healthy as those who have no insurance at all. This can be used to deduce that the ownership of *BPJS Kesehatan* actually increases health preventive behaviours among the participants. The participants in Surabaya City still maintain and suggest that even if they already have insurance, they can keep on maintaining their health, by not tending towards risky behaviours which lead to bringing in negative effects towards their health.

The health behaviors mentioned in this study are behaviours related to physical activity, hygiene, diet, sleep patterns, health checks, smoking behaviours, and other preventive behaviours.

5 CONCLUSIONS

From the discussion above, it can be concluded that *BPJS Kesehatan* has an influence on the participant's health behaviour in the Surabaya context. The result of the data analysis shows that those who have health insurance have health behaviour that is twice as good as those who do not have health insurance at all. Having health insurance will encourage the participants to behave more healthily. They tend to have a good physical activity, hygiene, diet, sleep patterns, health checks, smoking behaviours (do not smoke in public areas or do not smoke at all) and other preventive behaviours.

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The Impact of Purchasing Pattern after Increasing Cigarette Taxes to National Health Status and Health Insurance in Indonesia

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Keywords: Tobacco smoking, Purchasing pattern, Cigarette taxes, Health status, Health insurance.

Abstract: Tobacco smoking had been an international health issue for many decades. Tobacco kills more than 7 million people each year and more than 1 billion smokers live in low- and middle-income countries. Indonesian has been known as one of the country with lowest cigarette taxes. It leads to a significant decline in health status and an increase the burden of national health insurance. The discourse to raise cigarette taxes in September 2017 later will be an effective solution to reduce the number of smokers in Indonesia and pressing down the purchasing pattern. Using a literature review of several related research and, the result shows that purchasing pattern after increasing cigarette in another country have an impact to national health status and health insurance. Therefore, it is necessary to have a further analysis about the implementation in Indonesia.

1 INTRODUCTION

Tobacco had been used in the early America and significantly increases its popularity by the arrival of Spain to America which also introduced tobacco to the Europeans. The cigarettes shaped tobacco was becoming popularized in the new world by the industrial revolution era (Heckewelder, 2006). A cigarette, or “cigaret”, is a small cylinder tobacco leaves which had finely cut and rolled in thin paper for smoking. Along with the spread, health problems related to the use of cigarettes began to appear (Wigand, 2006).

The literature shows that tobacco kills more than half of its user. Tobacco also kills more than 7 million people each year which more than 6 million of those deaths are the result of direct tobacco use. Moreover, more than 1 billion smokers in the world (80%) live in low and middle-income countries (World Health Organization, 2017). Thus it can be stated that cigarettes have caused a decline in the quality of human health in general. While a deterioration in the quality of health may impose additional burdens on the financing of national health insurance. Accordingly, WHO FCTC (Framework Convention on Tobacco Control) stated that Tobacco use caused serious disability and significantly increases the risk of a number of

additional diseases not immediately linked to it such as tuberculosis (Tobacco-Free Kids, 2017). However, it is the wider economic and development impacts of tobacco that must be better understood.

In Indonesia, there are approximately 57 million active smokers, consist of around 63% men and 5% women. Thus make Indonesia ranked third in the world for total number of smokers. (Tobacco-Free Kids, 2017). Indonesia also known as one of the countries with low cigarettes taxes. Increasing cigarette tax is expected to suppress the purchasing pattern of Indonesian as a solution to improve health quality and ease the burden of national insurance.

2 METHODS

In this research, a systematic literature review for many researches around the world including Indonesia will be used, using a keyword cigarettes purchasing pattern, relation between smoking, health status, health cost and national health insurance. The hypothesis is that there is correlation between cigarette’s purchasing pattern after increasing cigarette taxes to national health status and national insurance.

3 RESULTS

Result compiled from some journal researches related to smoking behaviour, tobacco tax, health

status, and health insurance. Table 1 is the research compilation related to cigarettes purchasing pattern.

Table 1: Cigarettes Purchasing Pattern Research

| Journal Tittle | Writer and Published Date | Research Method | Result of the Studies |
|--|--|-------------------------------------|--|
| Purchasing Patterns and Smoking Behaviours After a Large Tobacco Tax Increase: A Study of Chinese Americans Living in New York City | Jennifer Cantrell, MPA, DrPH Candidate, March 2008 | Cross-sectional study | a. 54.7% of respondents is in at least one tax-avoidance strategy. b. Among the 216 smokers, changes in smoking behaviour in response to the tax increase is reported. |
| Effects of Tobacco Taxation and Pricing on Smoking Behaviour in High Risk Populations (US) : A Knowledge Synthesis | Pearl Bader, October 2011 | Systematic Review, Expert panel | Raising cigarette prices through increased taxes is a more effective tobacco control policy measure for reducing smoking behaviour among youth, young adults, and persons of low socioeconomic status, compared to the general population. |
| Cigarette Purchasing Patterns Among New York Smokers | Kevin Davis, March 2006 | Analytic Method | Smokers in New York are sensitive to higher cigarette prices and reduce the number of cigarettes they smoke when prices are increased. |
| Raising Cigarette Taxes Reduces Smoking, Especially Among Kids | Ann Boonn, January 2017 | Systematic Review | Cigarette consumption from 1970 to 2015 show that there is a strong correlation between increasing prices and decreasing consumption. |
| Analysis of Product Influence, Price And Promotion To The Result of Purchase of Surya Cigarette (Study At Universitas Kanjuruhan Malang Indonesia) | Dadang Tru Nugroho, 2015 | Multiple Linear Regression Analysis | The product variables, prices and promotions simultaneously affect the buying decision. |
| Cigarette Taxes and Smoking | Kevin Callison, 2014 | Synthetic control approach | There is negative, small and significant association between cigarette taxes and either smoking participation or the average number of daily cigarettes. |
| Promotion, Distribution, Price Influence Against Purchase Decision of Surreal Promild Cigarette : Study in Indonesia | Jilly Bernadette Mandey, 2013 | Multiple Linear Regression Analysis | Promotion, distribution, and price have a significant effect on purchasing decision, while price has no significant effect to purchasing decision. |

A view study shows that there is correlation between cigarette prices and cigarette taxes with the purchasing pattern of cigarette. Therefor there is

some research showing the opposite result of those hypotheses.

Table 2: Smoking and Health Status Research

| Journal Tittle | Writer and Date Published | Research Method | Result of the Studies |
|---|---------------------------|--------------------|--|
| Self-Rated Health Status and Smoking | Nouran Mahmoud, 2011 | Bivariate Analysis | There is significant relationship between self-rated health status and the exposure variables smoking status. |
| Public Health Implications of Raising the Minimum Age of Legal Access to Tobacco Products | Bonnie et al., 2015 | Literature Review | Tobacco use is associated caused mortality with several cases such as lung infections, coronary heart disease, chronic obstructive |

| Journal Tittle | Writer and Date Published | Research Method | Result of the Studies |
|----------------|---------------------------|-----------------|---|
| | | | pulmonary disease and a variety of cancers. |

The result of the studies shows that there is a correlation or relationship between smoking cigarette and decreasing heath status. Thus, high

cigarette purchasing pattern will affecting smokers heath status.

Table 3: Smoking and National Health Insurance Research

| Literature Tittle | Published | Result of the Studies |
|--|------------|---|
| Tobacco Cost to Economy | WHO, 2013 | Tobacco’s cost includes social, welfare and health care spending, higher numbers of accidents and higher insurance premiums. |
| Info BPJS Kesehatan* ; Dues Adjustment | BPJS, 2015 | Raise cigarette taxes and allocate a portion for health financing the community can increase the budget allocation for national health insurance. |

* BPJS Kesehatan is Indonesian Health Insurance Program

The result of the studies shows that there is a correlation or relationship between smoking cigarette and burdening national health insurance. Thus, low cigarette purchasing pattern and high cigarette taxes will ease the burden.

proving that the correlation between the two variables is weak and insignificant (Callison & Kaestner, 2014; Mandey, 2013). This may be due to differences in the characteristics of respondents, research area and socio-economic levels. So it can be concluded that increasing cigarette tax in one of effective effort to pressing down cigarettes purchasing pattern in many region including Indonesia.

4 DISCUSSION

Implementation of non-smoking areas in Indonesia, especially in Surabaya has not fully run optimally as a whole. There needs to be firm action in the form of sanctions for those who violate the Regulation of No Smoking Area. Related parties may create promotions or enforce the latest model of tobacco control on Non-Smoking Areas (KTR). Most Indonesians love the latest information with the latest. This will minimize the citizens of Indonesia who consume cigarettes, They gradually follow the process will understand that health is more important and more apply the good tobacco control for us together and encourage the movement of society to create Indonesia free from smoke.

4.1 Purchasing Pattern after Increasing Cigarettes Taxes

Based on the results of literature review studies obtained some research results indicate that there is a significant influence between price increases or cigarette taxes with a decrease in purchases pattern and smoking habits in the society (Bader et al., 2011; Davis et al., 2006; Boonn, 2017; Nugroho et al., 2015). However, view amount of research

4.2 Smoking and Health Status

Some previous research results have illustrated the existence of a negative influence between cigarette consumption and health status, both self-health status and national health status (Mahmoud, 2011; Bonnie et al., 2015). Cigarette illnesses such as coronary heart disease, lung infections, and chronic obstructive pulmonary disease have become one of the leading causes of death in the world. Both for active smokers and second-hand smokers, health problems that appear because the toxic substances in cigarettes are endanger. Hopefully, by decreasing cigarettes purchasing behaviour after increasing cigarettes taxes will reduce the risk of smoking-related diseases in Indonesia

4.3 Smoking and National Health Insurance

Implementation of the national health insurance system in the form of “BPJS Kesehatan” in Indonesia is expected to provide maximum service for the entire community. However, there is some

obstacles in the implementation of Indonesia's national health system, one of them is the operational BPJS Health in 2014 which experienced an imbalance or mismatch in the ratio of claims, due to the outgoing financing greater than the contribution of the incoming premiums up to 103.88% (BPJS Kesehatan, 2015). Therefore it can be predicted that lower cigarettes purchasing pattern will be able to pressing down the cost-economy which related to smoking-related disease. Besides, the higher cigarette tax might be increase the budget allocation to the national health system so as to improve the quality of health service and maintain the health insurance program continuity in Indonesia

5 CONCLUSIONS

Based on the results of several literature reviews related cigarettes purchasing pattern can be concluded that the increase in cigarette taxes may have an impact on the decline of cigarette purchasing pattern, so that will be one of the effective solution to increase the national health status and reduction the burden of national health insurance in Indonesian.

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International Labor Migration of Health Care Workers in Japan Under the Economic Partnership Agreement: The Case of Indonesian Nurses

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Keywords: Economic Partnership Agreement (EPA), International labour migration, Health care workers, Falling birth-rate and depopulation.

Abstract: With falling birth-rate and depopulation accelerating in Japan, the country relies on international labour in various fields. The Japanese government began to receive Indonesian (2008), Filipino (2009), Vietnamese (2014) nurses, and health care workers under the Economic Partnership Agreement (EPA). Meanwhile, many of these candidates cannot pass the national exam and go back to their countries after three years, although they entered Japan as a solution of chronic labour shortage in health care fields. This research demonstrates that there is mismatch between Japanese and Indonesian governmental policies that leads to a consequent loss of opportunities for the nurses. This paper analyses the interviews with two nurses who passed the national examination and reside in Japan and six ex-candidate Indonesian nurses who returned to their country as well as, an interview at the Japan International Corporation of Welfare Services (JICWELS) and *Badan Nasional Penempatan dan Perlindungan Tenaga Kerja Indonesia (BNP2TKI)*. It examines what institutional issues exist under the current Economic Partnership Agreement (EPA) system. The collected voices and data reflect the actual situation for both receiver and sender countries to understand both countries' policy mismatch. As the EPA program and research are still ongoing, we also aimed to find out more on the suitable environment for international labour migrations to enter Japan from the perspective of the EPA sustainability framework.

1 INTRODUCTION

In this paper we will conduct an analysis focusing on the foreign nurses coming to Japan, whom Japan started to accept in 2008 through the Economic Partnership Agreement (EPA).

This year, 2017, marks the 10th year since Japan started to accept nurses in accordance with the EPA. For our analysis, we focus on Indonesian nurses who, in accordance with the EPA, come to Japan. There are three reasons for selecting Indonesian nurses. First, Indonesia is the first country that started sending nurses to Japan in 2008. Second, the author speaks Indonesian (*Bahasa Indonesia*). Third, we conducted an interview in Indonesia on a topic that was not covered by previous studies.

In previous studies, the nurses who came to Japan in 2008 were called the "first-batch" and those who came in 2009 were called the "second-batch" (Kawaguchi, Hirano & Ohno 2009, 2010c). We use

the same terminology in this article. At present, Japan accepts foreign nurses based on the EPAs from three countries: Indonesia, Philippines, and Vietnam.

Ogawa *et al.* (2010) argue that 'nurse and care worker candidates who come to Japan through the EPAs are one of the solutions to labour shortage in the field of nursing and care in Japan'. The survey conducted by above mentioned authors in 280 hospitals, shows that 51.8% of the hospitals responded: "we are well aware of it" to the question "Are you aware that Japan is trying to introduce foreign nurse and care worker candidates based on EPAs?" On the other hand, regarding reasons for not willing to accept candidates, the answer "there are concerns regarding their ability to communicate with patients" was the most common with 203 hospitals, while 142 hospitals responded: "It will increase the workload of the staff in charge of education, and

there are concerns about Japanese language proficiency.

Previous studies have shown that medical institutions are aware of the EPA and that there is a strong interest towards foreign nurses. Also, it is evident that hospitals that wish to accept foreign nurses and care worker candidates have expectations for securing labour power personnel: "...as part of an international contribution and exchange... [and] to resolve labour shortage even if only slightly," and "we expect them to add to the workforce as nurses in the future." At the same time, the following responses were given by those who were reluctant to accept foreign nurses: "There are concerns with regard to their ability to communicate with the patients" and "It will increase the workload of the staff in charge of training nurses, there are concerns about Japanese language proficiency." These hospitals indicated their concern for the Japanese language proficiency of the candidates and for looking after the candidates from acceptance until they pass the national examination. It appears that they are aiming to resolve the shortage of human resources on the job site but at the same time they are concerned that the burden on those already working may increase by accepting the foreign candidates (Ogawa *et al.* 2009, 2010).

Previous studies conducted a survey of hospitals but they did not include interviews that involved nurses who were working in the field. Hence, in this study we discuss the opinion of nurses in response to the limitations of the previous studies.

We would like to describe the related organizations of Japan and Indonesia to better understand the agreement between these two nations. In Japan, accepting country, the Japan International Corporation of Welfare Services (JICWELS) is responsible for accepting nurses. In Indonesia, the sending country, *Badan Nasional Penempatan dan Perlindungan Tenaga Kerja Indonesia (BNPPTKI)* is responsible for sending nurses to Japan.

The aim of this paper is to provide an empirical evidence on the implementation of the EPA. We believe that this study can trigger opportunities for promoting new immigration policy. Moreover, new ways of approaching the issue of immigration in the field of nursing and care taking based on the implementation of the EPA scheme are being observed.

In addition, in the aspect of international relations, there is a possibility that effective implementation of the EPA system can become one of the conditions for acceptance of foreign workers

to Japan. Therefore, the EPA can exceed the level of being a means for solving a problem of lack of working power and affect the immigration policy of Japan.

To understand the implementation process of the EPA, the study addresses the following research questions: Does the current state of foreign nurses coming to Japan within the framework of the EPA reflect an effective functioning of the policies? Are there any issues that can be resolved regarding foreign nurses?

Our research findings demonstrate that there is an impact on nurses' economic wellbeing in Indonesia. The significance of the present study is that it indicates how the movement of human resources between nations may act as a framework that plays the role of resolving the global problem of aging societies with low birth-rate. We attempt to bring to light the possibility that there may be implications with respect to international relations.

The national examination results of the nurses who come to Japan through the EPA are reported in Japan each year. We believe a statistical data on the movement of nurses may reveal problems faced by the Indonesian nurses as well as problems faced by the accepting hospitals, which arise from accepting them. The number of nurses who pass the examination is small and the overall passing rate is low (Ministry of Health, Labour and Welfare 2017).

We argue—that foreign nurses and care worker candidates will become expert professionals of the countries faced by an aging society with low birthrate, not only in Japan but in an international community. Hence, a careful review of the process of the acceptance of nurses and care worker candidates through the EPA which is currently taking place in Japan is likely to become a model case for an international community.

2 METHODS

The research method that was employed is interviewing different stakeholders. We conducted analysis based on interviews with two Indonesian nurses residing in Japan and six ex-candidates who returned to Indonesia. The interviews conducted with nurses were aimed at discussing the EPA program. Numbers are used to keep the names of participants anonymous (e.g., Nurse 1, and Nurse 2). (TABLE 1)

In addition, interviews were conducted with the accepting hospitals directors of nursing where nurses

practiced and passed the national examination in Japan. We were able to interview the directors of nursing departments in two hospitals in Japan about: (1) the circumstances leading to acceptance; (2) support system for nurses; (3) difficulties that emerged after accepting the nurses.

Two hospitals in Japan were selected for this study. The two hospitals that interviews were conducted are among of few hospitals that produced successful candidates who passed the Japanese national examination (Ogawa *et al.* 2009, 2010).

Following the research ethics, we explained the purpose of the interview and all of the participants signed the consent form.

In Indonesia, the author conducted an interview in the government office of *Badan Nasional Penempatan dan Perlindungan Tenaga Kerja Indonesia (BNPPTKI)* in Jakarta as a first Japanese intern. The Director of *Badan Nasional Penempatan dan Perlindungan Tenaga Kerja Indonesia (BNPPTKI)* was interviewed about: (1) the EPA program; (2) existing implementation problems; (3) future plans regarding the implementation of the EPA program. In addition, six ex-EPA nurses from the second-batch who came to Japan were interviewed. The interviews were conducted in Indonesian language. (TABLE 2)

| | Nurse 1 | Nurse 2 |
|--|-----------|----------|
| Hospital type | General | General |
| Location | Osaka | Yokohama |
| Age | 29 | 34 |
| Year of passing the national examination | 2012 | 2011 |
| Nursing career in Indonesia | 3 years | 5 years |
| Nursing career in Japan | 5 years | 6 years |
| Religion | Christian | Muslim |
| Year of arrival to Japan | 2009 | 2008 |
| Total number of candidates in the hospital | 2 | 1 |
| Gender | Female | Female |

Note: Data was collected and developed by author

Figure 1: Interview participants (nurses) in Japan

| | Nurse 3 | Nurse 4 | Nurse 5 | Nurse 6 | Nurse 7 | Nurse 8 |
|--|-----------------------|--------------------------|-----------|-----------|----------|----------|
| Hospital type | General | Rehabilitati on Hospital | General | General | General | General |
| Location | Aichi | Osaka | Fukuoka | Okayama | Kumamoto | Yokohama |
| Age | 30 | 23 | 25 | 25 | 27 | 35 |
| Year of passing the national examination | Fail (Try again 2014) | Fail | Fail | Fail | Fail | Fail |
| Nursing career in Indonesia | 7 years | 1 years | 3 years | 3 years | 6 years | 4 years |
| Nursing career in Japan | 3 years | 4 years | 3 years | 3 years | 3 years | 6 months |
| Religion | Christian | Christian | Christian | Christian | Muslim | Muslim |
| Year of arrival to Japan | 2009 | 2009 | 2009 | 2009 | 2009 | 2009 |
| Total number of candidates in the hospital | 1 | 1 | 1 | 1 | 1 | 1 |
| Gender | Female | Female | Female | Female | Female | Female |

Note: Data was collected and developed by author

Figure 2: Interview participants (nurses) in Indonesia.

3 RESULTS AND DISCUSSION

3.1 Survey in Japan: Directors of Nursing Departments and Nurses

First, we report the points of view of the directors of nursing departments of the two hospitals where we conducted interviews and collected data regarding the shortage of nurses in Japan. At the hospital, which agreed to cooperate with the survey in August 2013 there was a shortage of doctors and nurses and challenges of hiring nurses.

Director of the nursing department in the hospital pointed out that there is a shortage of doctors and nurses. “Hiring nurses on a large scale is taking place mainly at large hospitals in urban areas and there are concerns that local hospitals may suffer”.

It is the patients and their families who will face problems because of shortage of doctors and nurses. The more specialized the hospital, the more important the number of doctors and nurses for the development of a healthy hospital environment. The interviews revealed the possibility that the shortage of nurses may directly affect the revenue of the hospitals.

The hospital, which agreed to cooperate with us in December 2013 stated: “The Ministry of Health,

Labour and Welfare says ‘one nurse should take care of seven patients’ but, in reality, it is not easy to do this under the current circumstances. There are 314 beds in our hospital and there are about 100 nurses that most of them work on a full-time basis.” To the question of difficulties faced by accepting foreign nurses, the director of nursing department provided the following answer: “We encountered no problems by accepting foreign nurses. The nurse who was hired had good nursing skills, good communication skills and she was also a hard-working person. Therefore, we cooperate and support each other. We tried hard and helped her to pass the national examination.”

Data from the Ministry of Health, Labour and Welfare and the Japan Nursing Association indicates that, from the viewpoint of the international community, the sufficient number of nurses are not secured for one patient in Japan and there are concerns about the lack of nurses. They emphasise that “The greater the number of nurses per hospital bed, which means 7 [patient] to 1 [nurse], the better the patient safety and it can provide with the highest quality.” Based on the analysis of the interviews and statistical data, we conclude that shortage of nurses is a social problem that requires much debate. The Japanese government sees it as an “urgent issue” and it has been brought into question in the National Assembly.

In view of the current situation in Japan, we believe that foreign nurses are important human resource that should be treated in the same way as Japanese nurses, and we also think that it should be a requirement for them, as it is for Japanese nurses, to pass the national examination since they are dealing with people’s lives. In reality, they strive to pass the national examination while working at host hospitals.

According to the rules, the nurses are required to pass the examination within three years after coming to Japan and if they fail, they need to return to their home country. Based on Japan-Indonesia Economic Partnership Agreement Foreign Nursing, “we have been accepting candidates for nurse/nursing care worker candidates, and a cumulative total of 1,562 people have entered the country. Acceptance from these three countries is not done as a response to the labor shortage in the field of nursing and nursing care but rather from the viewpoint of strengthening cooperation of economic activities as a result of negotiations based on a strong request from the partner country.”

The interviews and statistical data from the hospitals indicate that nurses are expected to have advanced “expertise.” It is required that they should have high levels of expertise with an increased

workload which becomes the cause of failure in national examination. The data indicates it is important to secure human resources in the nursing field which, is current and future issue of Japan. (The House of Representative, Japan 2006).

We were able to understand the actual situation of the shortage of nurses in Japan, however, there are also limitations that the EPA has. Specifically, the official view of the Ministry of Health, Labour and Welfare is that with regard to the acceptance of foreign nurses, nurse candidates who come to Japan based on the EPA are not a solution to the shortage of workers. We assume the government and those in the actual field may have different outlooks concerning accepting nurses in Japan.

Hospitals that accept nurses are expected to be responsible for providing training for nurses with the purpose of preparing them for acquiring national qualifications. The interviews led to new questions about whether the burden on the accepting hospitals would increase or leaving hospitals unable to accept nurses in the future, if the purpose of accepting nurses were not to resolve labor shortage.

It will have a great impact on the international community if Japan constructs a framework that will allow the nurses coming to Japan within the framework of EPAs to settle down in Japan as members of the Japanese society instead of having a status of foreign workers. The framework of the current EPA has limitations in terms of people-to-people exchange, but the fact that the Ministry of Health, Labour and Welfare as well as the Ministry of Foreign Affairs have set aside a budget to implement the EPA (Ministry of Health, Labour and Welfare 2013) suggests its importance as a state policy.

Interviews of nurses who are influenced by the policies between nations cannot be overlooked. We interviewed two Indonesian nurses who agreed to cooperate with the study. Both passed the challenging national examination. Following is a chronological analysis of the interviews.

The interviews were conducted in the hospital. We interviewed a “second-batch” Indonesian nurse (see Table 1) who came to Japan in 2009 and the director of nursing department of the same hospital separately. The director of nursing department mentioned: “It’s not difficult to accept (the nurses)” and “nurses are faced with the challenge of passing national examination.”

The nurses were asked the following questions:
(1) Are there any discrepancies between the treatment you receive at the accepting hospital and

what was explained to you during the briefing at the time of departure from Indonesia?

(2) Did the hospital support you until you passed?

(3) Are there any difficulties that you face at the hospital in Japan?

The common difficulty to both the nurse and the director of nursing department, as their responses revealed, was that the nurse was unable to speak Japanese at the early stages of arrival in Japan. However, the director of nursing department responded that “although there were problems with the language, no complaints were received from the patients as there are no significant differences in medical skills between Japan and Indonesia.” Also, the director stated that “the hospital had also hoped the nurse would pass the national examination and that it was not only for the purpose of human resource development but also for resolving the problem of shortage in staff.”

The response from the director of nursing department in the interview indicated that the nurse had a positive effect on other Japanese staff in the hospital by showing them that she was making an effort. Although she had difficulty understanding Japanese, the hospital created a good working and learning environment for her. To answer the questions on hospital support until national examination and difficulties that she faced at work in Japan, the nurse mentioned that the hospital used a unique technique to help her learn Japanese and obtain national qualification. For example, an acquaintance of the director of nursing department (a retired nurse) taught her medical terms three times a week.

The hospital encouraged the nurse to set aside time for studying in the afternoon, while working in the morning, and the Administration Division of the hospital properly handled and explained the Japanese system (income tax, pension system, etc.) regarding her salary. This led to trust and also resulted in her passing the national examination despite the language barrier and life obstacles, which she overcame with support of the hospital.

Finally, with respect to the question on differences between the treatment received at the hosting hospital and what was told prior to coming to Japan the nurse mentioned her salary. Prior to departure, she was told at the briefing that her salary would be around 200 thousand yen, which was guaranteed in Japan. However, the actual amount she received was different as dormitory fees and taxes were deducted, but she said she found it acceptable because, as mentioned above, the Administration Division explained about the

Japanese tax system and miscellaneous fees to her in detail.

At the same time, data revealed that among nurses who came to Japan in the second-batch, there were colleagues of the nurses who returned home before finishing their contracts in Japan. The reason was the hospital did not set aside time for them to study, the salary was different from what they had been initially told before departure, or they had been assigned to a local region where daily conversation was in a dialect, making it difficult to learn Japanese. We found that the difference of what was told at the briefing and the reality was the problem.

Our next step, was to conduct individual interviews in December 2013 with a nurse who came to Japan in 2008 in the “first-batch” and the director of nursing department.

The nurse indicated that the Japanese national examination was an issue in her answer to the question on discrepancies between the treatment she received at the accepting hospital and what was explained to her during the briefing at the time of departure from Indonesia. She said that during the briefing in Indonesia, they were told that they would be able to be involved in medical care as a nurse upon arriving in Japan and she did not know she needs to take the national examination. Both the nurse and the accepting hospital were confused about this and we were able to confirm that there was in fact, a miscommunication in Indonesia and Japan. We realized that this is an important issue that has the possibility of developing into a problem between states, and movement of people that the international community was concerned about, since Japan started accepting foreign nurses in 2008.

Regarding the support system of this hospital, the work shift system was designed so that the nurse could work in the morning and studied in the afternoon. In addition, prior to the national examination, the nurse was sent to Tokyo Academy (vocational school) to attend a national examination intensive course. In this way, the nurse herself and the hospital worked together to pass the national examination. The nurse told us that, although the work is demanding, as she works in the field of critical care medicine, she finds it very rewarding and she cannot imagine returning home to Indonesia.

Also, she has been wearing a scarf to cover her head, which is worn by Muslim women, since she arrived in Japan and the hospital also respected her wishes. The hospital stated that no complaints had been received from the patients thus far, and there were no concerns about religion as the time and place for prayer had been set aside within the

hospital and she made sure her professional responsibilities were not affected.

It became clear that both the hospitals and the nurses had undergone various forms of trial and error at the two hospitals with respect to acceptance. We believe information was not shared fully between the countries of Japan and Indonesia. As a review of the interviews, we conclude that, first, the explanation that was given to the first and second-batches when coming to Japan was neither clear nor sufficient.

Second, the way the nurses are treated differs depending on the accepting hospital. The present survey showed that Indonesian nurses are a valuable workforce and the nurses themselves find the nursing job rewarding. However, it seems that the above-mentioned problems suggest the EPA framework is not fully functioning yet.

3.2 Director of BNPPTKI and Ex-Candidates

The interview results by *Badan Nasional Penempatan dan Perlindungan Tenaga Kerja Indonesia (BNPPTKI)*, which have not yet been disclosed in Japan, are as follows. First, the director and the dispatching organization, are concurrent in making efforts to ensure that as many candidates as possible pass the national examination. To the question “What is the problem?” we received the answer that there was a miscommunication during dispatching the first- and second-batch in regard to passing the national examination in Japan.

The interviews revealed that various problems had arisen during three years after 2008 due to miscommunication between Japan and Indonesia.

Second, to reflect on the EPA program, the director stated that, “We would like two candidates to be accepted in one hospital,” and “BNPPTKI cannot request the system of acceptance of the hospital. It is responsibility of Japanese government and candidates”.

We will carefully examine this problem in the future based on the actual interview results of two hospitals. Third, the Indonesian government still sees many prospects with respect to the policies of the EPA. To reflect on the future plan about the EPA program, the answer was: “We are preparing to increase the briefing and testing venues in Indonesia to make it easier for more candidates to apply to the EPA program.” It is desirable for both Japan and Indonesia to continue their collaboration.

Next, we conducted a follow-up interview with ex-nurse candidates who came to Japan in the

second-batch but returned home without passing the national examination. As we have already mentioned, careful examination is required on the issue of whether there is a difference in acceptance among hospitals. We hope to shed light on this issue faced by those working in the field, based on the interviews with the ex-nurse candidates who returned home.

The following paragraph demonstrates the results of the interviews of six ex-candidates, which were conducted in August 2013.

First, the interviews revealed that there were numerous comments regarding the accepting hospitals. The most common comment was that they would have passed the national examination if there had been no difference in treatment among the hospitals.

According to interviews with nurses, “The hospital’s treatment had caused me to become unmotivated to pass the national examination. I was only able to work in the capacity of a nurse assistant, which did not lead to the improvement of my skills. I wanted to pass and continue working as a nurse in Japan.” (Nurse 8) “I do not wish to be involved in medical care even if I go back because people will consider the three years in Japan as a period of absence during which I was not involved in medical care.” (Nurse 3, Nurse 6 & Nurse 7). Lastly, “I would like to try again if I had the chance” (Nurse 3, Nurse 5 Nurse 6 Nurse 7 & Nurse 8). The reasons were that the wages of nurses are low in Indonesia. In future studies we would like to investigate whether differences in nurses preparation to national examination are caused by hospitals or any other factors by exploring the following questions:

- (1) What are the differences in support of work and preparation routine to the challenging national examination at the hospital?
- (2) What are the issues of acceptance system in the hospital?
- (3) How do nurses get a job in Indonesia after they return to Indonesia?

Based on the follow-up interview with those who returned home, we believe in the future, it is necessary to carefully observe, the circumstances of the issue regarding the treatment and system that the candidates themselves are unable to overcome even if they wished to work in Japan.

4 CONCLUSION

First, regarding the cause of conflicting information in the differences in policies of relevant authorities

on the acceptance and dispatch, the interviews in the Japan International Corporation of Welfare Services showed that its way of thinking is not different from that of the Ministry of Health, Labour and Welfare. For example, they do not see the nurses come to Japan from Indonesia with the aim of supporting the labour shortage.

On the other hand, the interviews of the Indonesian Agency for Overseas Placement and Protection revealed that Indonesia, the dispatching country, views their activities as a contribution to the resolution of labour shortage. This may be one reason for the miscommunication between Japan and Indonesia.

Second, the interviews with the first and second-batch, and the candidates that returned home revealed that there is a difference in the acceptance system from hospital to hospital. However, case studies of hospitals that accepted candidates who failed the national examination are not conducted, yet. This topic remains to be explored in the future.

Both the candidates and the accepting hospitals indicate language barrier as a factor to explain the low examination pass rate. We would like to point out that improvement in Japanese language ability depends on how much time the accepting hospital sets aside for work and study.

However, the level of the examination must not be lowered from an ethical viewpoint, as it is an occupation that concerns human life.

Third, when there is a difference regarding the EPA between the signing countries, there is a possibility that it may develop into problems involving the candidates as well as international relations. We conclude, based on interviews that it is likely to develop into international relations. We consider that, although Japan currently has a good relationship with Indonesia, new demands arise between the governments.

Our research showed that the EPA is aimed at mutually strengthening economic collaboration between nations and it is a considerably important agreement for the relation between the Association of Southeast Asian Nations (ASEAN) and Japan.

Analysis of the current situation revealed that the EPA framework, accepting foreign nurses in aging society with declining birth-rate is significant as this means nurses' cross-border movement and their contribution to global community. It is important that policies concerning movement of people are made with sufficient mutual decision-making by the nations.

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Impact of Tobacco Use on Poverty, Economic Development and Patterns of Tobacco Use by Poverty and Country Income Groups

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Keywords: Economy, Tobacco, Cigarette, Poverty, Development.

Abstract: The impact of smoking is not only on the aspect of health, but will also affect socioeconomics; one of the effects is poverty. Therefore, there needs to be a control in accordance with UU No. 36 year 2009, that is, for negative impact of health to decrease. The purpose of writing this article is to determine the impact of tobacco use on poverty, economic development and the pattern of tobacco use by the poverty and country income groups. The method used is the study of literature. Data from several references indicate the following: the smoking proportion is higher among the poor, compared with the rich; household expenditure on cigarettes can reduce the burden of basic needs, so the nutritional status of the community will decline further; cigarettes exacerbate the degree of poverty; and cigarettes not only exacerbate household poverty, but also the country, because the income is slightly less than the impact of cigarettes.

1 INTRODUCTION

Indonesia is famous as an agricultural country, the country's majority livelihood is farming. The products of Indonesia agriculture are, rice, corn, wheat, and so on. According to Kosen, in TCSC IAKMI (2014:31) Indonesia was the world's fifth largest tobacco producer in the year 2012, with production of 135,678 tonnes, or approximately 1.9% of the total world tobacco production.

In addition, being the biggest tobacco producer, Indonesia has the highest number of tobacco consumers, particularly smoking tobacco products in ASEAN countries. Based on the results of the Riskesdas, in 2013, the average resident age ≥ 10 years in Indonesia smoked 12.3 cigarettes or the equivalent of a pack, as well as there being more male smokers than female smokers. Over the years, the proportion of people who smoke has rise; in 2007 it amounted to 34.2% in 2010 it was 34.7%, and, according to Riskesdas, in 2013 it amounted to 36.3%. It is also supported by the growing number of tobacco between the years 2010 and 2012.

The impact of smoking is not just in terms of n health in, but will also be promoted in terms of socioeconomics and environmental effects for smokers themselves or those around them. From the

economic sphere alone, smoking can increase the burden of the family when there are family members who smoke. In addition, due to spending on smoking, other needs within the family can be reduced. As well as other impacts which can add to the burden of a family impacted by tobacco consumption.

Because of the many problems that are posed, including the tobacco, this is a complex problem to solve. The government is unable to act on its own, but it also requires the role of health workers, community leaders, as well as the whole society in order to achieve the government's objectives to increase the degree of public health by lowering the number of active smokers in Indonesia.

2 METHODS

This is literature study. The data were collected in the form of secondary data from the data of the Badan Pusat Statistik (BPS), Riset Kesehatan Dasar (Riskesdas) in the year 2013, the Journal of TCSC, as well as supported by government regulations and legislation in force. Data from the Central Bureau of Statistics provided information about the percentage of household expenditures per capita a month according to group of goods and the place of

residence of the year 2016. Data Riskesdas 2013 provided information on diseases caused by tobacco consumption. Regulation is the Indonesian Ministry of Health Regulation Number 69 year 2013 about Standard of Health Care Tariff in Primary Health Care and Advanced Health Care in accordance of National Health Insurance program to provide information about the cost required for inpatient care due to illnesses caused by tobacco. These data are interpreted and linked in order to obtain the needed results.

3 RESULT

To obtain the needed information, i.e. to know the impact of tobacco control on facets of the economy, data related are needed, including, among others, regarding the percentage of smokers in Indonesia, spending on average in a month, the diseases caused due to tobacco consumption, as well as the cost needed for treatment when a person suffers from a disease caused due to the consumption of tobacco. From some of the data collected, the following can be said:

Table 1: Proportion of inhabitants aged ≥ 10 years according to the habit of smoking and the characteristics, Indonesia for year 2013

| The characteristics | Current Smokers | |
|-------------------------|-----------------|-------------------|
| | Smokers daily | Smokers sometimes |
| Jobs | | |
| Does not work | 6.9 | 3.0 |
| Employees | 33.6 | 7.4 |
| Self-employed | 39.8 | 6.5 |
| Farmers/fishers/workers | 44.5 | 6.9 |
| Others | 32.4 | 5.8 |

Source: Riskesdas 2013

Based on Table 1, it can be seen that the population with jobs as farmers/fishers/labour has the highest percentage (44.5%) of active smokers when compared with other jobs.

Table 2: The percentage of average expenditure per capita a month according to group of goods and place of residence for year 2016

| No | Group Of Goods | Percentage (%) | | |
|-----|-------------------------------|----------------|-------|-------------|
| | | Urban | Rural | Urban+Rural |
| I | Food | | | |
| 1. | Grains | 4.98 | 10.04 | 6.82 |
| 2. | Tubers | 0.38 | 0.80 | 0.53 |
| 3. | Fish/shrimp/calamari/scallops | 3.06 | 4.40 | 3.55 |
| 4. | Meat | 2.30 | 1.94 | 2.17 |
| 5. | Eggs and milk | 3.06 | 2.79 | 2.96 |
| 6. | Vegetables | 3.01 | 4.75 | 3.65 |
| 7. | Nuts | 0.97 | 1.30 | 1.09 |
| 8. | Fruit | 2.05 | 2.02 | 2.04 |
| 9. | Oil and coconut | 1.06 | 1.84 | 1.34 |
| 10. | Material drinks | 1.34 | 2.,30 | 1.69 |
| 11. | Spice | 0.79 | 1.28 | 0.97 |
| 12. | Other consumption | 0.89 | 1.19 | 1.00 |
| 13. | Food and drink | 15.22 | 12.27 | 14.14 |
| 14. | Smoking | 5.45 | 8.91 | 6.72 |
| | The amount of food | 44.57 | 55.83 | 48.68 |
| II | Not Food | | | |

| No | Group Of Goods | Percentage (%) | | |
|----|--|----------------|--------|-------------|
| | | Urban | Rural | Urban+Rural |
| 1. | Housing and facilities | 28.67 | 22.99 | 26.60 |
| 2. | A wide range of goods and services | 14.45 | 10.23 | 12.91 |
| 3. | Clothing, footwear and headgear | 3.01 | 3.12 | 3.05 |
| 4. | Durable goods | 4.81 | 4.65 | 4.75 |
| 5. | Taxes, charges and insurance | 2.67 | 1.60 | 2.28 |
| 6. | The purposes of the party and ceremony/kenduri | 1.81 | 1.58 | 1.72 |
| | The amount of non food | 55.43 | 44.17 | 51.32 |
| | The Amount of Food+ Non Food | 100.00 | 100.00 | 100.00 |

Source: Badan Pusat Statistik 2016

From the table, two significant findings can be seen, that spending for smoking in one of the two biggest spending for most of society in the city and the third most populous, in ninth place, for the villages. The community believe that spend money for smoking is better than spend money for rice or foods, which only amounted to 4.98, and energy sources of protein such as eggs and milk, which only amounted to 3.01%. For the rural community, spending on smoking is greater when compared to the huge expenditure to meet the needs of protein, such as eggs and milk, which only amounted to 2.79% of the total expenditure in total.

Table 3: Proportion of tobacco consumption related diseases and ICD-10 codes in Indonesia for year 2013

| Diseases | ICD 10 Code | Proportion of Disease due to Tobacco |
|--|-------------|--------------------------------------|
| Tumors of the Mouth and Throat | C 00-14 | 0.7 |
| Tumor of the Oesophagus | C 15 | 0.3 |
| Tumors of the stomach | C 16 | 0.25 |
| Liver tumors | C 22 | 0.1 |
| Tumors of the Lung, Trachea and Bronchus | C 33-34 | 0.9 |
| Cervical Tumor | C 53 | 0.3 |
| Ovarian Tumor | C 56 | 0.1 |
| Bladder Tumor | C 67 | 0.1 |
| Coronary heart disease | I 20-25 | 0.35 |
| Stroke | I 60-69 | 0.4 |
| Chronic obstructive pulmonary disease | J 44-47 | 0.7 |
| Low birth weight Infant | P 05, P 07 | 0.3 |

Source: Beban Kesehatan dan Dampak Ekonomi Merokok di Indonesia tahun (2013)

Table 3, illustrates data produced based on the results of a study conducted in Indonesia and Indonesia. Consumption of tobacco can be assumed for 7% of tumors of the mouth and throat of, while the remaining 93% can be due to other factors.

Table 4: Cost of inpatient care per patient in accordance with Indonesian Ministry of Health Regulation Number 69, 2013

| Disease | Treatment Cost in class III Hospital (Rupiah) |
|--|---|
| Low birth weight infant | 6.185.362 |
| Tumors of the Mouth and Throat | 3.733.141 |
| Tumors of the Oesophagus | 3.733.141 |
| Tumors of the stomach | 3.733.141 |
| Liver tumors | 3.733.141 |
| Tumors of the pancreas | 3.733.141 |
| Tumors of the Lung, Trachea and Bronchus | 3.733.141 |
| Cervical Tumor | 3.733.141 |
| Ovarian Tumor | 3.733.141 |
| Bladder Tumor | 3.733.141 |
| Coronary heart disease | 6.017.579 |
| Stroke | 7.726.946 |
| Chronic obstructive pulmonary disease | 4.551.951 |

Source: Beban Kesehatan dan Dampak Ekonomi Merokok di Indonesia tahun (2013)

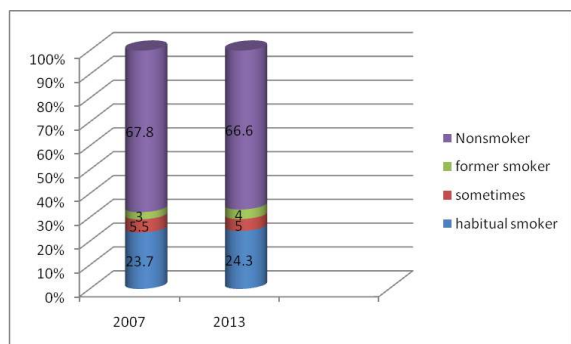
Table 4 gives the maintenance costs of hospitalization per patient for each illness due to smoking in accordance with Indonesian Ministry of Health Regulation Number 69, 2013.

Table 5: Total cost of tobacco-related disease sufferers' care for year 2013

| Disease | Total case | Cost for a Episode | Total Costs in 2013 |
|--|------------|--------------------|---------------------|
| Low birth weight infant | 216,050 | 6,185,362 | 1,336,347,460,100 |
| Tumors of the Mouth and Throat | 6,670 | 3,733,141 | 24,900,050,470 |
| Tumor of the Esophagus | 1,710 | 3,733,141 | 6,383,671,110 |
| Tumors of the stomach | 10,440 | 3,733,141 | 38,973,992,040 |
| Liver tumors | 13,400 | 3,733,141 | 50,024,089,400 |
| Tumors of the pancreas | 2,910 | 3,733,141 | 10,863,440 |
| Tumors of the Lung, Trachea and Bronchus | 54,300 | 3,733,141 | 202,709,556,300 |
| Cervical Tumor | 28,940 | 3,733,141 | 108,037,100,540 |
| Ovarian Tumor | 7,690 | 3,733,141 | 28,707,854,290 |
| Bladder Tumor | 10,160 | 3,733,141 | 37,928,712,560 |
| Coronary heart disease | 183,950 | 6,017,579 | 1,106,933,657,050 |
| Stroke | 144,780 | 7,726,946 | 1,118,707,241,880 |
| Chronic obstructive pulmonary disease | 284,310 | 4,551,951 | 1,294,165,188,810 |
| Total | | | 5,353,829,437,990 |

Source: Beban Kesehatan dan Dampak Ekonomi Merokok di Indonesia (2013)

From Table 5 it can be seen that the government had to pay about 5.35 billion rupiah alone for the cost of inpatient care diseases caused due to tobacco consumption during the year 2013.



Source : Infodatin hari tanpa tembakau sedunia (2015)

Figure 1: Smoker's behavior in Indonesia based on RISKESDAS 2007 and 2013

Based on that picture, smoker's behavior in Indonesia is much the same in five years ago. If smoker can consume 12 cigarette, so it can be calculate by:

$$0.234 \times 199,178,321 = 48,400,332 \text{ people.} \quad (1)$$

Average of cigarette's consume in a day = 12

If one pack of cigarette is Rp 12,500

So,

$$48,400,332 \times \text{Rp } 12,500 = \text{Rp } 605,004,150.00 \quad (2)$$

4 DISCUSSIONS

In Indonesia, the population with age ≥ 10 years working as a farmer/fisherman/labourer is mostly smokers for the year 2013. In some countries, many have found that the proportion of active smokers is greater among the poor than the wealthy elements of society. For Indonesia, for which the benchmark of welfare family income per capita was obtained it is in the low income community mostly working as farmers, fishermen and labour. Although Indonesia is an agrarian and maritime country, the farmers and fishermen still less prosperity well. This reinforces the fact that the proportion of active smokers is greater among the poor, particularly those who work as farmers, fishermen or labourers, when compared to the rich community.

According to data from *Badan Pusat Statistik* (BPS) for 2016, a great percentage of average expenditure per capita per month is generally spent for consumption of tobacco among the community and is very large in comparison with expenses for food. Even in the city, spending for smoking is greater when compared to grains and protein. In other words, consumption of cigarettes can reduce spending on the basic family necessities. The decline in expenditure for basic necessities impacts on the declining nutritional status of the public.

In addition to the effect on the nutritional status of the public, the presence of family members who smoke, especially for poor families, will certainly increasingly aggravate the level of

degrees of poverty. In the fulfilment of the basic necessities only, secondary community down already issued more business, especially if coupled with purchase on buy cigarettes, resulting in the burden of household spending growing. Not to mention the fact that, if there are family members suffering from diseases caused by smoking, then the burden borne will be even greater.

Based on data taken from the journal “Beban Kesehatan dan Dampak Ekonomi Merokok di Indonesia tahun 2013”, in conjunction with Indonesian Ministry of Health Regulation Number 69, 2013, it was found that in terms of national inpatient treatment for diseases arising from consumption of smoking in one year (2013), the Government spent around Rp 5,353,829,437,990 or approximately 5.35 billion rupiah. This is a huge amount and not proportional to the expenditure involved in removing funding from cigarette consumption compared to the revenues received by the state from the proceeds of the production of cigarettes. It has more than 5.35 billion difference from the impact and the cost from smoker what used up every day.

Due to there being a greater number of losses arising from tobacco than the benefits it brings, a controlled effort is needed. The government itself performs a variety of efforts to decrease tobacco consumption, ranging from advocacy efforts, by creating laws and regulations, as well as other efforts such as the establishment of the No Smoking areas (KTR) and unsettling images of what will be suffered if someone smokes.

Efforts have been made by the government to address the welfare of the people. However, all the efforts will be futile if there is no awareness among the communities themselves about the impact brought about by smoking, that it not only harms the smoker, but also others around them. This is because of the need for support from various parties to implement the programs that have been designed by the government. If consumption against smoking declines, the certain impacts on various fields of yesteryear also will fall. With a declining impact caused by smoking, one the Government can be sure in increasing the welfare of society. In a country with an already prosperous society, national development efforts initiated by government will also be easy to be realized.

5 CONCLUSIONS

The proportion of smokers in Indonesia is greater among the on poor population compared with the wealthy. When a resident has an active smoker in their family then it will give rise to the increasing burden of expenses. For the poor, the presence of family members who are active smokers may exacerbate the degree of poverty, not only because spending will increase, not just for basic necessities, but also to buy cigarettes. In addition, there are likely to be family members who suffer from a disease as a result of tobacco. As well as the harm to society, smoking also harms the country, because the income from the production of cigarettes alone is less than the cost to be borne by the government to treat diseases caused by smoking. Therefore, it needs the support of various parties to lower the levels of consumption in the community in order to realise national development.

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Economics of Tobacco Control: The Role of Tobacco in the National Economy

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Keywords: FCTC, The role of tobacco economy, Negative impact.

Abstract: The tobacco control regulations in Indonesia are faced with a dilemma in relation to its role in the national economy and its health impact. This can be seen from the intention of the Indonesian government to ratify the Framework Convention on Tobacco Control (FCTC). Such conditions make Indonesia a potential market for the tobacco industry. This research has used the descriptive research methodology with a literature study approach and secondary data. The results show the role of tobacco in the national economy as can be seen from its role as the source of state excise revenue, sources of employment and income for society. The main contribution of the tobacco industry is the source of excise revenue, while the related employment and income sources are relatively small. This is not comparable with the negative impact that Indonesian society receives, namely the decrease in health status and the large health expenditure from the associated negative impact. The biggest beneficiaries of the tobacco industry is the large-scale cigarette industry and multi-national cigarette companies. Firm policies from the Indonesian government are needed to minimise the negative impact of smoking. Given the greater negative impact compared to the positive impact of tobacco, the government must immediately sign and ratify the Framework Convention on Tobacco Control (FCTC) as a legal umbrella for tobacco control.

1 INTRODUCTION

The tobacco industry in Indonesia is growing rapidly from the original home industry into a national and multi-national industry. Tobacco companies are actively promoting their cigarette products through various means. Multi-national cigarette companies have sought to penetrate the monopoly and dominance of the national tobacco companies in many developing countries to enter and develop their own markets. Indonesia is a potential cigarette market for national and world cigarette producers due to the large population, high population growth rate and population participation rate, especially when it comes to young smokers.

Similarly, the cigarette industry has also played a role in the national economy as a contributor to state revenues through excise duty. The growth of the tobacco industry is also followed by the development of tobacco cultivation in many regions and has served as employment and the source of regional economy. The development of the tobacco industry and the increasing number of smokers causes opposition among health care groups and for those associated with the environment. Opposition to

cigarettes occurs in almost all countries. A lot of evidence shows that cigarettes trigger various diseases and adversely affect health. This situation makes the tobacco industry into a controversial industry; on the one hand, it is a national asset that plays a role in the national economy and on the other hand, it has a negative impact on health. The purpose of this research is to know how the role of tobacco in the national economy.

2 METHODS

This research uses the descriptive research method with a literature study approach and secondary data. This research therefore emphasises the collection of facts and data identification. The components in this research method are descriptions, analysing and interpreting the findings in clear and precise terms. The study was compiled based on the secondary data collected from various sources. The data was collected as much as possible and is relevant to the presence of the tobacco processing industry to the best extent possible to provide an overview of the current developments. The literature/desk review

study is derived from the results of previous studies or research on the tobacco industry and excise policy, the cigarette price development dilemma and quality of life, the effect of excise tariff on tobacco consumption, cigarette consumption and poverty in Indonesia. The secondary data collection is derived from BPS (Susenas), TNP2K (poverty) the World Bank, Customs DG, the Ministry of Industry and the Ministry of Health Republic of Indonesia.

3 RESULTS

3.1 Overview of Smokers in Indonesia

Indonesia is the third country in the world with the highest prevalence of smokers after China and India, which is 4.8% of the population or about 65 million smokers (WHO, 2008 in Tobacco Support Center, 2012). By age group, the highest percentage of smokers was in the productive age group (15-64 years). By sex, the prevalence of smokers in relation to men is greater than that of women. The number of smoking in certain age groups increases in the age of adolescents in relation to those aged 10-14 years old and those aged 15-19 years old. The result of Riskesdas (basic health research) in 2007, 2010 and 2013 showed that the age of smoking was highest in the 15-19 age group.

Table 1: Proportion (%) of age starts smoking

| Age (years) | Riskesdas 2007 (%) | Riskesdas 2010 (%) | Riskesdas 2013 (%) |
|-------------|--------------------|--------------------|--------------------|
| 5-9 | 0,1 | 1,7 | 1,6 |
| 10-14 | 9,6 | 17,5 | 18 |
| 15-19 | 36,3 | 43,3 | 55,4 |
| 20-24 | 16,3 | 14,6 | 16,6 |
| 25-29 | 4,4 | 4,3 | 4,6 |
| >30 | 3,2 | 3,9 | 3,8 |

Source: Riskesdas 2007, 2010,2013, Badan Penelitian dan Pengembangan Kesehatan

Table 2: Proportion (%) habit of cigarette consumption based on sex

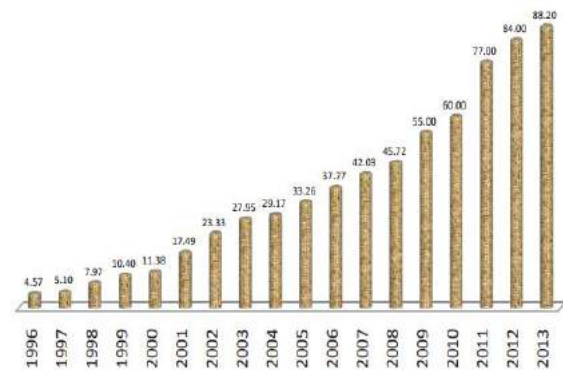
| Category | % Total | Genders (%) | |
|--|---------|-------------|--------|
| | | Male | Female |
| Cigarette smokers for the last 30 days | 18,3 | 33,9 | 2,5 |
| Electric cigarette holder for last 30 days | 2,1 | 3 | 1,1 |
| Smoked although only 1-2 suction | 32,1 | 54,1 | 9,1 |

Source: GYT, 2014, World Health Organization

The Global Youth Tobacco Survey (GYTS) declared Indonesia as the country with the highest teen smoking rate in the world. According to GYTS, in 2014 out of the teenagers surveyed, 18.3% of teens had smoked cigarettes during the last 30 days. In the adolescents surveyed, 33.9% of boys and 2.5% of adolescent girls were surveyed. The total recorded teenagers in the survey found that 2.1% out of the electric smoking teenagers in the last 30 days, 3% were teenage boys and 1.1% were adolescent girls. The total number of adolescents in the survey showed that as many as 32.1% had never smoked.

3.2 The Role of Tobacco in the National Economy

The role of tobacco in the national economy can be seen from several indicators such as the contribution of state revenues in the form of excise, employment and income sources. The role of the tobacco commodity that is quite real in the national economy is as a source of state revenue from excise. The value of tax revenue continues to increase from year to year. The tobacco industry as an employment source has absorbed 6.1 million people directly and indirectly, including 1.8 million tobacco and clove farmers.



Source: Ditjen Beacukai 2013

Figure 1: Cigarette excise revenue in 1996-2013



Source: Ditjen Beacukai 2016

Figure 2: Excise tobacco excise revenue trends

The pattern of revenue in 2014 is relatively stable. The increase in revenues in December 2014 is due to the change of design of the excise bands and tariff increases that came into effect at the beginning of the following year. The pattern of receipts in 2015 saw a significant spike in December. The pattern of acceptance in early 2016 means that January and February is lower than the same month's revenue in 2014 and 2015. However, from the next month after that, it continued to increase every month.

3.3 Impact of Smoking for Health

Tobacco is a plant generally consumed for cigarettes. The World Health Organisation reports

that smoking is the number one killer in the world. In the appropriate WHO report, it stated that in the 20th century, about 100 million people have died from cigarettes. Tobacco mortality rates are much higher than deaths due to tuberculosis, HIV/AIDS and malaria.

Various diseases can arise from cigarettes and attack almost all parts of the human body. The negative effects of cigarettes are felt directly for smokers (active smokers) and non-smokers (passive smokers). The World Lung Foundation and the American Cancer Society estimate that the cost of tobacco worldwide is \$500 billion per year in the form of direct health spending, reduced productivity and environmental degradation.

Table 3: Total Medical Costs of Tobacco Related Diseases, Indonesia 2013

| Disease | Total Case | Cost per episode | Cost Biaya (Rp) |
|--|------------|------------------|-------------------|
| Low Birth Weight Babies | 216.050 | 6.185.362 | 1.336.347.460.100 |
| Tumour of Mouth and Throat | 6.670 | 3.733.141 | 24.900.050.470 |
| Neoplasm of Oesophagus | 1.710 | 3.733.141 | 6.383.671.110 |
| Neoplasm of Stomach | 10.440 | 3.733.141 | 38.973.992.040 |
| Neoplasm of Liver | 13.400 | 3.733.141 | 50.024.089.400 |
| Neoplasm of Pancreas | 2.910 | 3.733.141 | 10.863.440 |
| Neoplasm of Lung, Bronchus and Trachea | 54.300 | 3.733.141 | 202.709.556.300 |
| Neoplasm of Cervix | 28.940 | 3.733.141 | 108.037.100.540 |
| Neoplasm of Ovary | 7.690 | 3.733.141 | 28.707.854.290 |
| Neoplasm of Gall Bladder | 10.160 | 3.733.141 | 37.928.712.560 |
| Coronary Heart Disease | 183.950 | 6.017.579 | 1.106.933.657.050 |
| Cerebrovascular Disease/Stroke | 144.780 | 7.726.946 | 1.118.707.241.880 |
| Chronic Obstructive Pulmonary Disease | 284.310 | 4.551.951 | 1.294.165.188.810 |
| Total | | | 5.353.829.437.990 |

Tobacco control measures have been supported by research in to the impact of tobacco consumption on health by the WHO. It is estimated that by 2020, it will be the biggest health issue. Predictably, tobacco consumption practices cause 8.4 million deaths each year. It also estimated that an increase in tobacco consumption in Asia could increase deaths fourfold from 1.1 million people (1990) to 4.2 million people (2020).

Another person's smoke (AROL) - also called second-hand smoke (SHS) – makes the non-smoking individual known to be a passive smoker. Second-hand smoke is estimated to cause 600,000 premature deaths every year in the world, with 31% of the deaths being children and 64% being women. Another study, published in the January 2013 in an issue of the New England Journal of Medicine, said that female smokers are more likely to die of lung cancer than they did decades ago. In the 1980s, women who smoked were 12.6 times more likely to

die of lung cancer. While in the 2000s, that possibility jumped sharply to around 25.7 times.

4 DISCUSSION

The tobacco industry has become part of the history of the nation and culture of society, especially cigarettes which are a commodity based on tobacco and cloves and are rooted in cultural heritage. The large potential of Indonesia as a cigarette market makes Indonesia the target of production and markets for multi-national cigarette companies. This is reflected in the entry of multi-national corporations Philip Morris International (PMI) and British American Tobacco (BAT), who bought large cigarette factories in Indonesia; PT HM Sampoerna and PT Bentoel.

Tobacco products also contribute significantly to the national economy. The contribution of this sector

includes the absorption of manpower, state income, and has become an important commodity for farmers. Excise receipts from tobacco products from year to year has always increased and in 2013 reached about 88.20 trillion. The industry provides a livelihood for 6.1 million people working in the tobacco industry directly and indirectly, including 1.8 million tobacco and clove farmers. Based on its role in the national economy, Indonesia's policy towards tobacco tends to maintain the tobacco and cigarette industries as the nation's assets. This is evident from the lack of intention of the Indonesian government to ratify the Framework Convention on Tobacco Control (FCTC). In the control of the cigarette hazard, the existing policy in Indonesia is more about compromise with the cigarette industry. The new steps taken by the government of Indonesia is at the stage of improving the knowledge of the public about the dangers of tobacco and cigarettes in the form of the obligation of applying a warning on cigarette packaging about the dangers of smoking on health.

The World Health Organisation reports that smoking is the number one killer in the world. Tobacco mortality rates are much higher than deaths due to tuberculosis, HIV/AIDS and malaria. Various diseases can arise from cigarettes and attack almost all parts of the human body. The negative effects of cigarettes are felt directly for smokers (active smokers) and non-smokers (passive smokers). Another person's smoke (AROL) - also called second-hand smoke (SHS) - is estimated to cause 600,000 premature deaths every year in the world, with 31% of the details being children and 64% being women. The World Lung Foundation and the American Cancer Society estimate that the cost of tobacco worldwide to be \$500 billion per year in the form of direct health spending, reduced productivity and environmental degradation.

Given the large impact of cigarettes on health, long-term monetary policies are required. One effort to minimise the negative impact of smoking is by reducing the number of smokers and the level of cigarette consumption. Some policies can be implemented through increasing cigarette prices, increasing the cigarette excise tax on cigarette promotion and non-smoking area restrictions.

5 CONCLUSION

Tobacco industry and smoking culture have long been a part of Indonesian society. There are benefits from the smoking industry is one of the role of the

national economy in Indonesia. The role of tobacco in the national economy can be seen from several indicators such as the contribution of state revenue in the form of excise, employment source and income source of society. The role of tobacco commodity which is quite real in the national economy is as a source of state revenue from excise. Excise revenue from tobacco products from year to year always increases and in 2013 reached about 88.20 trillion. But on the other hand can cause negative impact on health. About 100 million people died from cigarettes. Tobacco mortality rates are much higher than deaths due to tuberculosis, HIV / AIDS and malaria.

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Causal Factors Analysis of National Health Insurances Unpaid Premium by Informal Workers in Baubau City

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Keywords: Informal sectors, National Health Insurance's, Unpaid premiums, City of Baubau.

Abstract: National Health Insurances (NHI) as informal sectors member are facing difficulties in paying the contributions are vulnerable NHI participants to unpaid premiums. This problem is more common in the informal sector workers and non-workers. The expanding aspect coverage of membership and contribution sustainability, especially participants PBPU and BP is a major challenge that must be faced by *BPJS Kesehatan*. Objective of this research is analysing the contributing factors for unpaid premiums of informal workers participants in Baubau City. This research used mixed method, concurrent embedded design. Unit analysis this study is that people who are in unpaid informal sector participants pay dues of NHI. The data was collected by in-depth interviews and questionnaires. Results showed that there are seven factors that causes PBPU participants unpaid premiums at Baubau City are socio-demographic categorization because types of jobs that are not earning salary with earnings below UMR, forgot, dissatisfied with health services provided, limited access to premium payment channels, healthy, class restrictions, health seeking behaviour and knowledge. Conclusion from this research is unpaid premiums by JKN PBPU participants in Baubau City are still high, therefore needed a breakthrough and right strategy to prevent and reduce to PBPU participants who are unpaid premiums.

1 INTRODUCTION

In order to achieve UHC there are three dimensions that must be a priority: the expansion of membership (coverage), the extension of the benefit package (benefit package) and the sustainability of the contribution premium. Three years of the existence of JKN, this program has a lot of problems and challenges that must be experienced, one of which is the collection function of the premium (revenue collection) that is the coverage of membership and the continuity of payment of premium by the participants. This problem occurs mostly in the informal sector (PBPU) and Non-Workers (BP).

The aspect of extending the coverage and continuity of premium, especially the participants of PBPU and BP is a big challenge to be faced by *BPJS Kesehatan*, based on data *BPJS Kesehatan* report that there are about 47.33% or 9 million participants PBPU delinquent contribution by August 2016. In order to maintain the balance and sustainability of JKN financing, efforts to improve compliance and

sustainability of contributions by participants are as important as increasing the coverage of membership (Mundiharno & Thabrany, 2012). Informal sector participants have the greatest possibility of delinquent paying premiums because the main characteristics of these workers are non-permanent income and in many cases (especially in agriculture and plantation sectors) depending on the season, unlike the formal sector that the premium is universally administered by the institutions or organizations where they work and automatically deducted from their salary while informal sector workers have to manage their own premiums.

2 METHODS

This research used descriptive method, with mixed method research design: concurrent embedded (case study). Qualitative sampling technique using purposive sampling and quantitative sampling using cluster random sampling. The unit of analysis in this

research is the community of participant of JKN independent PBPU in arrears paying the premium. Data collection was done with in-depth interviews as well as questionnaires.

3 RESULT

This research used descriptive method, with mixed method research design: concurrent embedded (case study). Qualitative sampling technique using purposive sampling and quantitative sampling using cluster random sampling. The unit of

3.1 Socio-demographic Characteristics of Respondents

The socio-demographic condition of PBPU participants has an important role in influencing the high rate of premium payment arrears to the participants of JKN PBPU, the result of in-depth interview analysis describes the work and income become the dominant factors causing the PBPU participants in arrears premium. The age of 31-50 years has a tendency of delinquent pay dues compared to other ages, about 6 informants and 43.86% respondents, men are more likely to delinquent pay premiums than women, approximately 5 informants and 61.40% respondents and PBPU participants with higher education tend to be dominant in delinquent from other informants about 6 informants and 70.67% of each respondents are in arrears premium for ≤ 6 months. Work and income have a significant relationship with the premium arrears of participants JKN PBPU, for instance farmers with income IDR. 150,000. - IDR. 500,000 are in delinquent premium for > 6 months about 3 informants, artisans (motorcycle taxi, stones and wood) who have income IDR.500.000 - Rp.900.000 are in arrears premium for ≤ 6 months as many as 4 informants, while other jobs (apprentices, mall servants and retired civil servants) with revenue from IDR. 100,000 - IDR. 2,000,000 in arrears premium for ≤ 6 months about 3 informants. Informants with entrepreneurial occupation with income IDR. 2,500,000 are in arrears for ≤ 6 months.

In general, in many informants and respondents who earn below the UMR (\leq IDR 1,850,000) as many as 8 informants and 74.38% respondents are in arrears premium for ≤ 6 months, the number of family members > 4 people tend to be lower in delinquent pay premium if compared with the number of family members ≤ 4 people around 5

informants and 73.64% participants are in arrears paying premium for ≤ 6 months.

3.2 Causes Arrears of Premium Payments

The premium payer is over ≤ 6 months more than the informant who is in arrears of premium for > 6 months each of 10 informants and 6 informants respectively. Here are the reasons why participants of JKN PBPU are in delinquent of paying premiums:

3.2.1 Type of work

The type of informant work with low and uncertain income leads to premiums arrears, along with in-depth interview quotes with informants:

“Ehh honestly sir, ah hence mi we are unpaid because of the obstacle of money also not exist and income effects as well because our income as farmers is not fixed”. (Informant_1)

3.2.2 Health status and history of chronic illness

Two reasons participants enrolled JKN PBPU that healthy condition (7 informants and 35.96%) as anticipation to get health insurance when sick and financial protection. Ill condition (9 informants and 64.04%) due to need of health services in the near future, get free health service and self-esteem and advice from medical officer, besides the reason the participants registered for JKN PBPU when healthy is as a worship charity for saving in the next life and ethics-related awareness is also a trigger for the society to register to be a participant JKN PBPU so they are not comfortable if directly use the *BPJS Kesehatan* card when in a state of illness. But these conditions still affect the payment of premium payments, PBPU JKN participants who are healthy do not comply again pay a premium because they do not need any more BPJSK and it is useless if they do not use *BPJS Kesehatan* although they know that the obligation to pay premiums is in every month and rarely use it.

Regular utilization of health services so that the ownership of JKN PBPU becomes important because the absence of close families and relatives that can be relied on to help alleviate health financing and previous family experience when treatment requires high costs are the reasons participants register JKN PBPU, the presence of chronic diseases should be able to improve

compliance participants of JKN PBPU paid a premium due to the high frequency of use of health services, about 9 informants and 35.09% of respondents had chronic illness. The findings of this study illustrate that the participants of JKN PBPU who chronically ill choose surrender with the disease and switch to traditional treatment which more affordable and cheap so they do not want to pay BPJS Health premium again.

3.2.3 Membership Class

Class 3 is more dominant than other classes because of the cheap and affordable premium of about 8 informants and 64% of respondents. About 7 informants and 33.33% of respondents chose grade 2 because of the quality of health services despite their financial capacity due to poor quality experience of 3rd grade health services and class restrictions. The restriction of membership class 1 and 2 by the BPJSK officer becomes the participant's expense so that the premium paid is expensive and unreachable. Class 3 is more dominant than the other classes because of the low and affordable premium about 8 informants and 62.28% respondents, about 6 informants and 35.96% respondents choose class 2. Because of the quality of health care despite the ability of their financial capacity around 2 informants and surrounding class restrictions 3 informants, restriction of membership class 1 and 2 by unscrupulous officer BPJSK become the burden of participants so that premiums paid expensive and not affordable finally delinquent in premiums.

3.2.4 Knowledge

In general, in many informants it is found that knowledge of informants related to rights as participants of JKN PBPU is high enough to get quality health service, to pay medical expenses when experiencing illness or even free. Related to his obligations as a participant JKN PBPU informants have enough knowledge on monthly fee obligations, nominal and sanctions in arrears paying premiums and payment due. Informant's knowledge related to paying the premium on time is high enough about 9 out of 16 informants paid premiums on time, but some informants, 7 of the 16 informants in paying premium have low knowledge about the deadline payment so that affecting compliance of payment, forget and use health services infrequently. The consequences of PBPU JKN participants in arrears in paying premiums are the inactivity of membership and penalties, 11 out of 16 informants had high knowledge related to sanctions and penalties when

delinquent paying premium, however about 5 of the informants had low knowledge related to sanctions and fines when delinquent paying premium. Informants with initials ES related how to use and treatment procedures using *BPJS Kesehatan* card does not know. This is because informant has never used the *BPJS Kesehatan* card on the ground of still healthy

3.2.5 Access Premium Payment Channels

Approximately 13 informants and 71.05% of respondents made payments through banks because of the ease, although there are also difficulties such as queue, but a small number of participants feel bored and lazy because the old queue, about 10 informants and 86.84% respondents travelled ≤ 10 kilometres, easy access by having a motorcycle so that it is easy to reach becomes the reason the participants are not burdened with distance, but in a small part the participants feel burdened by the distance. The reason is difficult to reach because they have no a motorcycle. Approximately 14 informants and 98.25% respondents took ≤ 60 minutes to the payment site, most informants were not burdened with time because it was close and short, but in small numbers of informants felt burdened because they had no time and busy. Approximately 11 informants and 55.26% respondents spent \leq IDR. 10,000 for transportation costs, most informants are not burdened with the cost because they have a motorcycle so it is cheap and practical, but a few informants feel burdened because it is expensive. Limitation of access to premium payment services is also a contributing factor to JKN PBPU participant's delinquent paying premiums, long distance payment places that requires long travel time, expensive transportation costs and disruption payment system through auto-debit make some participants of JKN PBPU choose delinquent pay premium.

3.2.6 Experience of Health Service Access Utilization

About 15 informants and 96.49% respondents had used health services, around 8 informants most often use health services in Public Health Services (*Puskemas*) are those who suffer from sickness that could be handled by Public Health Services (*Puskemas*). Approximately 7 out of 16 informants using health facilities in hospitals are those who have high-cost diseases, require comprehensive and high-tech health services, most of the participants are satisfied with the quality of the health service

they get, however in some cases the experiences of JKN PBPU participants related to poor service quality and additional costs when getting treatment are some of the reasons participants delinquent pay premiums.

4 DISCUSSION

The results of this quantitative study show that around 25.33% of PBPU participants are no longer active in paying premiums or not paying health insurance premiums more than six months, the average of those who are in arrears of premiums is to have informal sector jobs with income below UMR due to uncertain income and not routine. Employment in the informal sector is an important determinant of participation in the NHIF program, our findings suggest that more efforts are needed to integrate informal sector workers into NHIF³. Previous research has shown that in many African countries one of the obstacles to efforts to implement comprehensive social health insurance is the difficulty of accumulating contributions due to the high proportion of the population in the informal sector⁴. A large number of household members are preventing people from enrolling in health insurance schemes because they cannot pay the premiums of their entire family members. Revenues are one of the main causes of PBPU participants delinquent paying contributions for ≤ 6 months and > 6 six months (inactive) are those with uncertain income, non-regular income and income below the Minimum Wage of Municipalities.

Most of the participants who signed up to participate in PBPU were those with ill health conditions because they needed health services in the near future so that were forced to enroll JKN with the hope of obtaining free healthcare, those who participated in PBPU mostly worked in the informal sector where the work had non-routine income, uncertain and still below the UMR so reasonable if they are delinquent to pay premiums. The tendency of participants to register when the illness is the impact of the social health insurance policy, as it is known that social insurance does not have underwriting as in commercial insurance, so this situation becomes a weakness of social insurance, high adverse selection on PBPU participants is the impact from the discontinuity of premiums or high burden of *BPJS Kesehatan* premiums because participants pay only premiums when ill⁶. The health status of the participants at the time of registering to *BPJS Kesehatan* affected the arrear of premium payment, the PBPU participants who enrolled in the ill condition 1, 3 times the risk

of delinquent paying premiums than the PBPU participants who enrol in healthy condition⁷. Quite a few participants who registered as *JKN Mandiri* participants suffered from illnesses requiring care and costly medical treatment (Nopiyani, et al, 2015). This research is in line with Nopiyani and Pujiyanti's research in 2015, indicating that most participants enrolling to be PBPU participants are those with ill health conditions so they need financing and health care insurance in the near future. Quantitative findings about 3.33% of PBPU participants due to delinquent premiums are healthy so feel no longer need to pay per month if not using health services and it's just a waste of money only.

The behaviour of the health seeking pattern by the people also influences the compliance of the public paying the premium, a small percentage of the participants with chronic health disorder tend to choose traditional treatment either by themselves or with the help of others such as masseuse or shaman, so no wonder if there are still a small number of PBPU delinquent paying premiums JKN despite having a history of chronic diseases because of the high trust of PBPU participants to the traditional medicine which effective and cheap and because the payment process is voluntary depending on the economic capacity of the people. But distinguish the results of research conducted by Dong et al, (2009) found that continuous utilization of health services due to certain diseases will encourage people to register themselves as participants of *JKN Non-PBI Mandiri* and encourage people to obediently pay JKN contributions. The risk of noncompliance decreases with the increasing number of visits to FKTP and FKTL because participants who suffer from illness or health problems should receive services at health facilities will be more diligent to pay premium so they can continue to utilize JKN to access services Health at no charge⁹. A household with one family member who has a chronic illness or has had a disruption in routine activity over the past three months has a significant relationship to registering to become a CBHI member rather than a household without chronic disease (Alkenbrack, et al, 2013). There is an influence of the history of chronic diseases on the participation of the informal sector community as a participant of health insurance.

The high number of PBPU 3rd graders who are in arrears paying the premiums is a description that the group is risky or easy to get into the category of poor, unpredictable jobs and income, making them at risk for delinquent paying JKN premiums. Several cases in the study also found that PBPU participants generally chose grade 3 because the premiums were cheap so they could be reached and the willingness of the premium payer that is the child for those participants paid by others. The high number of

PBPU class 3 participants in arrears of premium compared to other classes illustrates that PBPU class 3 is a group that is still vulnerable or easy to go in the category/poor category also found in Pujiyanti et al research on PBPU participants in 10 Provinces of Indonesia 2015.

Class 1 and 2 restrictions by unscrupulous officers of health BPJS become a burden for PBPU participants because they have no choice but to be inconsistent with the income and financial condition of the family causing them to default in paying the premium. Their main reason for purchasing class fees is higher than their capacity because their previous experience of showing 3rd class health services is less satisfactory, such as less friendly healthcare workers and less comfortable treatment rooms were also found in Pujiyanti's et al research on PBPU participants in 10 provinces of Indonesia by 2015.

Access to limited premium payment channels such as limited payment places and payment system disruptions, travelled distance to payment access is far due to the difficulty of transportation to premium payers, long travel time so that participants do not have time because busy with work in the informal sector so forget, long travelled distance, time consuming and using public transportation such as motorcycle taxis and city transportation, causing expensive transportation costs because their income below the UMR is the cause of PBPU participants are not obedient to pay premiums.

In some cases in this study found that participants PBPU delinquent premiums because they do not know and forget the due date of premium payments this is due to the length of time they do not use health facilities either in the FKTP and FKTL because their health conditions are good and healthy are they educated and less knowledgeable. Not knowing sanctions when delinquent premium is a factor supporting the payment of premium not timely. Knowledge of premium dates and sanctions when late paying contributions is significantly related to the incidents of participants in the 2-6 months unemployment rate, therefore, it is necessary to innovate and improve the reminder/notification system due date and the late payment premium. Since both variables are factors that influence the delinquent premium, BPJS Kesehatan should be able to innovate in utilizing technology in order reminder mechanism more efficient for example through SMS gateway also found in research conducted by Pujiyanti et al in 2015. In contrast to the research of Mebratie et al., 2015 that the high understanding and knowledge of health insurance especially health insurance CBHI is significantly related to the low number of CBHI members out of the CBHI insurance scheme in

Ethiopia because they realize that CBHI insurance is not just for sick people only but healthy people also need, they also realize that it is not a savings scheme and their premium will not be returned.

Poor quality of health care is also one of the factors causing delinquent paying of premiums such as long registration booth queues, lack of stock of drugs resulting in additional costs when using health care facilities, the finding is in line with previous findings that factors affecting compliance of pay premium (in arrears compliance) namely education, sex, health status, occupation, place of payment, travelled time and transportation costs and related knowledge maturity and sanctions when not paying on.

5 CONCLUSIONS

There are seven factors that cause PBPU participants in arrears in paying premiums in Baubau City are socio-demographic categorization because the types of jobs that are not earning salary with earnings below the UMR, forgot, dissatisfied with the health services provided, limited access to premium payment channels, better health status (Healthy), class restrictions, health seeking behaviour and knowledge are the causes of PBPU participants delinquent paying premiums.

Unpaid-premiums for PBPU participants with earnings below UMR should be reviewed, the determination of premiums as mandated in the JKN roadmap, the government contributes by providing premium subsidies or PBPU participants who cannot afford the premiums transferred to participants of JKN PBI. Premium collectability is enhanced by various ways such as payment by adjusting the characteristics of PBPU participants. Socialization and education need to include stakeholder, cross sector of program including from community and private segment

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E-Health Counsellor (EHC), a Smartphone Application to Fight Cervical Cancer

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Keywords: EHC, Cervical Cancer, Technology, Mobile Phone, Knowledge.

Abstract: Cervical cancer is one of the most deadly diseases for women. Based on data from the Health Ministry, cervical cancer is the highest disease among developing countries and the fifth in the world. In Indonesia, cervical cancer is the second of the ten most prevalent cancers. One of the causes of the high incidence of such cancer is the lack of knowledge about it. This writing aims to show how knowledge can be so important to increase degree of health and EHC is such a media can be used to access knowledge simply in digital era. This research focuses on literature review. EHC is a mobile phone application that focuses on cervical cancer disease and is available for all society, especially for women. EHC includes the definition and means of prevention of cervical cancer and is also integrated to health workers and health facilities to facilitate the public in enhancing their own health. EHC provides private counsellors who connect members of the public with an expert and the goal is that people know more about cervical cancer and how it can be eliminated. So, result is may EHC can facilitate society to prevent cervical cancer by increasing knowledge and having private councillor.

1 INTRODUCTION

The World Health Organization (WHO) has stated that cervical cancer is one of the most deadly in the world and one which occurs mostly in developing countries. However, this disease is preventable. However, being preventable does not mean it is easy to handle. There are many factors that cause cervical cancer and lead to many casualties. There are several risk factors that can lead to cervical cancer, including unsafe sex, frequent couples and having multiple sex partners (Bosch et al., 2002). In addition to those risk factors, according to the theory proposed by L.W. Green, there are three factors that affect health, predisposing factors, enabling factors and reinforcing factors. Of these three factors, predisposing factors play a very big role, especially in terms of knowledge. Several studies have proven how knowledge plays an important role in the occurrence of a disease.

Research conducted in Ghana found that there are significant differences between women who have a higher level of knowledge than other women in the incidence of cervical cancer (Opoku, 2016). It proves that knowledge can be a tool to prevent

cervical cancer. Moreover, a study conducted by the National Health Interview Survey showed that that women with high knowledge tend to be healthier (Mamon, 1990).

In Indonesia, as a developing country with 257,912,349 people, cervical cancer is one of the most dreaded things, especially for women. According to the Ministry of Health, in 2013, the percentage of cervical cancer reached 0.8% and was the highest compared to other cancers. Riau Islands Province, North Maluku Province and D.I Yogyakarta Province have the highest prevalence of cervical cancer that is 1.5%. By 2014, more than 92,000 Indonesian women die from cancer with 10.3% of them due to cervical cancer. One factor of the high numbers is due to the absence of early monitoring process (CNN Indonesia, 2017).

Clearly this is problematic for the country. An integrated effort from all stakeholders is required to reduce the incidence of cervical cancer. Moral and financial support from the government is urgently needed, and a thorough improvement of knowledge should be strengthened to create community awareness. The literature review aims to document the importance of knowledge in the fight against

cervical cancer as well as the next step that may be applied. It addresses how such knowledge becomes easily accessible to all levels of society in all corners of Indonesia.

2 METHODS

This is qualitative research and all data obtained by secondary data. The literature includes journals, proceedings, theory and previous research available on the Internet. The first thing to do is to identify the keywords in the literature that may be in line with this research of cervical cancer, technology, mobile phones and applications. The publishing year is also a consideration in the selection of sources or references to obtain the latest data. The several websites used include WHO and NCBI websites.

After collecting the references, researcher then read the entire article in order to gain a point of view. The final step was to review the references that had been downloaded. Therefore, the structure of writing in the sub-section results is divided into two parts, the importance of knowledge and technology which is specific to mobile phones.

3 RESULT

3.1 The Importance of Knowledge

Knowledge is the right thing and can be justified. Knowledge is specific, relational and dynamic. There are two types of knowledge, tacit knowledge and explicit knowledge. Tacit knowledge is subjective and experiential and cannot be expressed in sentences such as crafts, beliefs, images and mental models. Whereas explicit knowledge is objective and rational and can be expressed with sentences, formulae and numbers, as in mathematical models such as databases and theoretical approach (Nonaka, 2006). Knowledge is an important aspect of health. Many models and theories are developed to transfer knowledge to be easily understood by the wider community (Kontos and Poland, 2009).

In health, there are many statements concerning the importance of knowledge in obtaining high degrees. One of the most famous theories is by Lawrence Green, who mentions that there are three factors that affect health, predisposing factors, enabling factors and reinforcing factors. Below is the model of theory described.

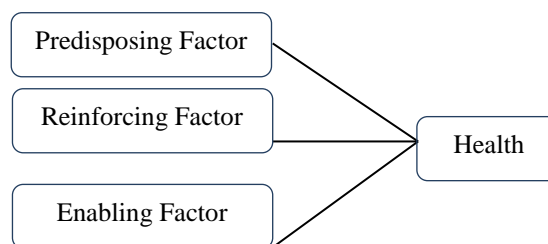


Figure 1: Model of Lawrence Green Theory

The existence of knowledge enlightens the community. Some of the benefits of knowledge in the health sciences can be a driving force to take positive steps in preventing disease, have a better understanding of the existence of system alteration and how to use them effectively and efficiently; good knowledge allows everyone to learn and make efforts to handle disease independently. In addition, the knowledge that may be provided through health education can also provide an understanding of the beliefs and traditions of society, both harmful and beneficial to health (Notoatmodjo, 2007).

3.2 Technology

The Department of Health states that health promotion has an understanding as an effort to empower the community to maintain, improve and protect the health of themselves and their environment through learning from, by, for and with the community, to help themselves and develop community-based activities in accordance with local culture and supported by sound public policy.

Based on its function as a distributor of health messages, the media is divided into three, as follows: print media, electronics and boards (Notoatmodjo, 2012). 1) Print media as a tool to convey health messages varies widely, such as magazines, rubrics and so on. 2) Electronic media as a target to deliver messages or health information is of different types, such as television, radio and mobile phones. 3) Media boards (Billboard) posted in public places can be filled with messages or health information. Media boards here also include messages written on zinc sheets attached to public vehicles (buses and taxis).

Today, the world is developing and technology is becoming inseparable. However, a thing to keep in mind is that the existence of technology was created with the aim to facilitate humans in meeting their life needs. Technology is changing and technology will definitely change the pattern of a person's activity. For example, television presence; there will be a new agenda of viewing every day as well as the

arrangement of the location of the home furnishings that are adjusted to the television placement. Technology is progressing, and now anyone can access technology, almost all people have mobile phones and some individuals have more than one. Nobody will miss information when technology is in their grip. Technology makes it easy; technology means it is not difficult for people to contact other people who are in distant places. Technology produces productivity; large companies use technology for efficiency reasons and productivity improvements rather than having to hire more money-consuming people. Technology promises speed' a variety of jobs can be completed quickly by utilising the technology optimally, such as the existence of a computer can facilitate a person in doing bookkeeping. Technology is showing popularity; today, many people are famous by uploading their performance on YouTube sites such as Canadian singer Justin Bieber (Martono, 2012).

The modern era is happening and synonymous with the digital community. Every human activity will be driven through a series of digital technologies and everyone has their respective numbers, such as ATM numbers and telephones, currently all digital.

4 DISCUSSION

Knowledge of cervical cancer becomes a very important thing to have, not only in the basics but in the details, not only about the definition of cervical cancer, but more about how steps can be taken to prevent it. As we now identify with technology and the digital community, so we need an information tool that can be accessed anytime and anywhere by anyone. Research conducted by Nasihah shows that there is a relationship between knowledge on early detection of cervical cancer disease (Nasihah et al, 2013). Furthermore, through research conducted by Mirayhasi, it stated that there is a meaningful relationship between knowledge of the participation of cervical cancer examination (Mirayashi et al, 2014).

Prevention and early detection of cervical cancer should be done to reduce mortality and morbidity caused by the disease. To do that, one of the things that can be done by continuously improving the knowledge of the community because however knowledge is very influential on the behavior of early detection of cervical cancer (Syahputra et al, 2016). By taking advantage of technological developments, there are things that can be done to improve the knowledge of the public that is to say

that the prevention of cervical cancer has a great distance with the community just in hand.

E-Health Counsellor (EHC) is a service provided to a community-based Smartphone application. EHC facilitates the public to access information related to cervical cancer, not just limited to the definition of cervical cancer, but includes preventive measures and online counselling services that connect people with health workers.

EHC is designed simply to be easy to understand. Content in the EHC includes: accounts that contain the user's personal data, settings that include language settings, notifications and so on, descriptions of cervical cancer complete with video, preventive measures, treatment steps and online counselling services. Preventive measures will detail what can be done to prevent the occurrence of cervical cancer, such as the use of condoms and injecting HPV along with a price so that people can be prepared. Similarly with the treatment step, explaining about the treatment that can be done along with a list of hospitals as well as the price of each treatment. Online counselling services allow people to choose their own health personnel who want to be a counsellor for the sake of comfort. This service is not limited by time and place.

EHC is expected to reach the entire community and make access to information easier. In order to access the EHC, everyone first sets up an account, the goal is to facilitate counselling with health workers. If you do not create an account then you still can access the EHC, you just cannot do counselling. Data on online counselling will be kept confidential and not be published.

This online information and counselling service requires Internet access and, therefore, needs support from several parties to make this real. There are several strategic steps that can be done, such as submitting a proposal to a sponsor as a development partner, in collaboration with the Department of Health and Communication and a hospital. What is really needed is the presentation to all parties involved regarding the urgency and benefits of EHC. Easy access to knowledge about cervical cancer is very important to be realised and plays a big role for people to be more introspective and enhancing of society's health. However this application is still in the design and experiments so it cannot be known exactly how the rate of decline in cervical cancer. Moreover, in the millennial era where people have always relied on gadgets, the authors believe that an EHC application on mobile phones can help improve people's knowledge of cervical cancer, and more recently developed similar applications to help

people realize the importance of health, physical and psychological.

5 CONCLUSIONS

This paper has documented how knowledge can be very important to health, especially cervical cancer. The literature review highlights the relationship between knowledge and disease incidence in some countries given the many deaths caused by cervical cancer, especially for developing countries like Indonesia.

Based on the literature, it is important to develop a tool that facilitates access to health knowledge, primarily cervical cancer. An E-Health counseling service is conceived to accomplish this and includes information not only about definitions, but actions, steps that can be done by the community independently, and online counselling with health personnel. It is simply designed to integrate some aspects and the parties involved to prevent or treat cervical cancer. This paper documents an art of knowledge in technology that can improve public health.

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Patient Satisfaction of the Indonesian National Health Insurance (JKN) Implementation: A Literature Study

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Keywords: The Indonesian National Health Insurance (JKN), Patient satisfaction, Literature study.

Abstract: Indonesian National Health Insurance (JKN) is part of the Indonesian National Social Insurance System (SJSN) that was implemented under the social insurance obligation mechanism. The purpose is to comply with the public's basic health needs. It has been three years since JKN was implemented. The road map of JKN aims to ensure that 75% of patients are satisfied with the quality of the health facilities. The objective of this research is to report by way of a literature study on the patient satisfaction towards the Indonesian National Health Insurance (JKN). The secondary data was collected from *BPJS Kesehatan* and JKN publications, and other relevant studies. The quantitative data was descriptively analysed to explain the problem of the recent years' patient satisfaction to do with The Indonesian National Health Insurance implementation. The results showed that the level of patient satisfaction towards JKN is still lower than the target that has been set. To determine the consumer's expectations and perceptions of a service that is believed to represent service quality researcher mostly used the SERVQUAL Instrument. Various factors such as health facilities level, the type of health care, and resources also has an influence on the patient satisfactory rating towards the implementation of JKN.

1 INTRODUCTION

Based on the UN Declaration in 1948 on Human Rights, Article 25, paragraph (1) and the WHA Resolution of 2005 in Geneva, it is explained that each country needs to develop Universal Health Coverage (UHC) through social health insurance mechanisms to ensure sustainable health financing (World Health Organization, 2005). In response to this, in accordance with the 1945 Constitution of the Republic of Indonesia, article 28H and 34 stating that health insurance should be obtained by all Indonesian citizens to achieve equality and justice, Law No. 40 of 2004 of the National Social Security System (SJSN). SJSN is intended to provide a guarantee of the fulfillment of the basic needs of decent living for the participants and members of their families, including in relation to the health aspect that is through JKN.

JKN is a form of social security in the form of health protection, so that the participants can obtain health care protection benefits when meeting their basic health needs which are given to everyone who has paid their dues. JKN's Program is implemented by a legal entity of the Social Security

Administering Body (BPJS) established as the organiser of the national guarantee program.

JKN is nationally organised under the principles of social insurance and equity principles. Through the principle of social insurance, JKN membership is mandatory for the entire population. With this principle, it is hoped that there will be mutual cooperation between the participant that has a disease risk from the healthy population to the sick population and the risk of big health expenditures from the rich to the poor. Thus, it will support the implementation of the equity principle (similarity in obtaining services in accordance with the medical needs), so that no more people encounter obstacles, especially financial barriers, when it comes to accessing health services.

JKN programs classifies the participants into three categories: Beneficiaries of Contribution (PBI), Wage Workers, and Non-Wage Workers. PBI is a poor and inadequate group, so the contributions are paid by the government. Wage workers are people who work and receive regular wages such as civil servants, military/police, and private employees. Non-Beneficial Workers Wages are self-employed/self-employed workers, so they must

register themselves and their family members voluntarily.

Implementation of JKN or social insurance is new for the people of Indonesia. Although the regulation has been established since 2004 (SJSN Act), 2011 BPJS replaces the old social security institutions, and by 2014 BPJS is enacted, education / provision of information related to JKN is still lacking. This can be seen in the tendency of people who do not understand the flow of JKN participation including the obligations and benefits gained. Until now the problem has always appeared in the form of a deficit BPJS budget. This is because residents do not regularly pay dues and more and more citizens who come to get free treatment.

2 METHOD

The author has used the literature study method to analyse the patient's satisfaction towards the Indonesian national health insurance's (JKN) implementation. The objective is to know whether or not the patients are satisfied with the implementation of JKN by reviewing and summarising the relevant publications and journals. Data was collected from BPJS Kesehatan and JKN publications, and google scholar using keyword: satisfaction; implementation; BPJS; JKN; and patient. The quantitative data was descriptively analysed to explain the problem of the recent years' patient satisfaction to do with The Indonesian National Health Insurance implementation.

3 RESULT

Since January 1st, 2014, the JKN Program has been officially implemented. This program is expected to provide many changes to the health system in Indonesia, such as financing management, health service management, information management, cross-sector coordination, and others. Furthermore, the system is also expected to affect other aspects beyond the health system itself, such as economic aspects, business aspects, employment aspects and wage aspects. This is in addition to the aspect of poverty reduction and social protection and up to the aspect of data collection and the recording of the population.

The participants of JKN as of January 1st, 2014 are participants of the health insurance programs that are transferred directly to the JKN program. The

health insurance program is a form of social security provided by the government for civil servants (Jamkesmas, Askes PNS, Health Insurance TNI/POLRI, and JPK Jamsostek). From that moment onwards, BPJS Health opened up registration for every citizen who wanted to register with JKN. BPJS Health estimates the number of participants of JKN as of January 1st, 2014 as being as much as 48.2% of the total population of Indonesia, or as many as 110.4 million people.

To achieve quality and sustainable health insurance in the National Medium-Term Development Plan (RPJMN) 2015-2019, the government targeted BPJS participants to increase to cover as much as 95% of the population and for the participants of PBI to increase to as many as 107.2 million inhabitants. Until 2016, the number of participants increased to 50.9 million people from January 2014. Coverage as per 2016 reached 67.6% of the total population, out of 180 million people.

In addition to participation, to optimise the services to the community, BPJS cooperates with health facilities in Indonesia. By 2016, BPJS has successfully expanded its cooperation with approximately 25,000 healthcare facilities consisting of 19,969 first-level health facilities (Puskesmas, Practice physicians, and primary clinics), 1,847 hospitals, 2,813 supporting facilities (pharmacies and optics) and others.

4 DISCUSSION

With the momentum of the changes in the BPJS Health management positions in 2016-2021, BPJS Health established three main focuses as a continuous step forward for implementing the JKN program, which is sustainable financial management, service stabilisation, and the optimisation of the mental health revolution. The second focus, the stabilisation of the services, is in order to improve the satisfaction of all *pesetas*. At the beginning of 2014, the BPJS health target was that the participants' satisfaction should reach 75%. This target has continued to increase along with efforts to improve the health care system. The next target is in 2019; it is expected that the Participant Satisfaction Index can reach 85%. According to the data from BPJS, the achievement of participant satisfaction in 2016 was 79% of the 156.7 million participants of BPJS. Compared to the 2014, the achievement of JKN participants' satisfaction is considered to have increased, which is interpreted as

being the hope of the community to continue being in the JKN program.

Patient satisfaction in the implementation of JKN cannot be separated from public complaints about the services provided. The majority of complaints are in the form of queue length or the difficulty in getting hospitalisation. There are at least tens of thousands of complaints related to the services provided.

A study was conducted on the customer gaps or inappropriate service expectations that were obtained by patients to do with the services received at RSAL by Dr. Ramelan Surabaya. Using these analyses, the difference between the services that impact on patient satisfaction can be seen (Handini and Chalidyanto, 2015). The majority of the patients showed very high service expectations to do with the BPJS services, especially in terms of communication and empathy. According to a study on the four types of first-rate health facilities (Puskesmas, Government Clinic, Private Clinic, and General Practitioner) in Denpasar City, the satisfaction level is still lower than the JKN target of 69.59% (Widiastuti, et al., 2015).

There is a significant correlation between hospital service quality and patient satisfaction level for BPJS (Putri, et al., 2014). Therefore the improvement of good service from the indicator of service quality, human resources, and hospital facilities needs to be done by each health facility to be able to increase patient satisfaction back to BPJS. Factors that many complained about include the lack of physical facilities and the abilities of the health workers. At Udayana Level II Hospital, for example, some of the third classrooms have not been equipped with barriers so that the patients are less comfortable.

The main factors causing patient dissatisfaction are the lack of hospital physical facilities such as patient seats and beds, the long service waiting time, and poor service complaints (Larasati, 2016). It can also be found in RSUD Panembahan Senopati Bantul that the patient's satisfaction is less because of the obstacles to do with the services including the lack of human resources in the registration section, the lack of integration of hospital information systems, and the poor implementation of referrals (Firdaus and Dewi, 2015). Low satisfaction levels have also been found in Makassar. The number of unsatisfied patients to do with hospital services is still high, so the implementation of JKN in Makassar is still in receipt of a lot of complaints. The main complaints that are dirty inpatient rooms and no

explanation from the doctor or pharmacist related to the consumption of drugs (Pasinringi, et al., 2015).

However, unlike the results of the research conducted in hospitals, the research on patient satisfaction at Puskesmas showed good results. Patients who received health services at Puskesmas were considered to be more satisfied. From the research that was conducted, as many as 51.9% expressed satisfaction towards the health service at Puskesmas Tuminting Manado Gaghana, 2014). A similar statement was found at Tegal Angus Tangerang Community Health Centre in which the patients were satisfied with the majority of the services provided (Yusnita and Widianti, 2017).

This study may have several shortage considered by limitation of author capability. The lack comes from basic data that used. The secondary data that used were not covering all open-sources journal sites. Beside that obtained/used journal is chosen merely using keyword: satisfaction; implementation; BPJS; JKN; and patient on google scholar website.

5 CONCLUSIONS

Since it was implemented in 2014, the national insurance system of Indonesia JKN has been frequently criticised. This cannot be denied because the insurance system is not widely known by the people of Indonesia, especially people with a middle-level income. Many complaints have been reported either by the media or through research studies. It is necessary to measure patient satisfaction on the implementation of JKN as it has been running for four years. The government itself has implemented an 85% satisfaction target for 2019. To achieve this, it is necessary to improve and cooperate efforts among the health services so as to improve the quality of health services that impact on patient satisfaction towards BPJS.

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The Impact of Health Insurance for Children Under 5 Years Old in Surabaya

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Keywords: Children, Health insurance, Health facilities.

Abstract: The study was established to examine the impact of various health insurances for children under 5 years old. This paper uses the descriptive analysis method to get a detailed explanation from online questionnaires. The population of this study was 217.183 children and the sample consisted of 100 children using incidental sampling. This paper has evaluated the impact of health insurance on the health care utilisation of children under 5 years old in Surabaya. The results are that there are still many children who do not have health insurance. In addition, the parents do not go for treatment in health facilities in accordance with the health insurance that they have.

1 INTRODUCTION

Health Development is a part of national development, in relation to the health development objectives of improving optimal public health. *Jaminan Kesehatan Nasional* (JKN) has been implemented since January 1st, 2014 based on *Undang-Undang Dasar* 1945 No. 40/2004 about the National Social Security System (SJSN) in order to achieve universal health coverage.

According to the Health Insurance Association of America, health insurance is defined as coverage that provides for the payments of benefits as a result of sickness or injury. It includes insurance for losses from accident, medical expenses, disability, or accidental death and dismemberment (Caxton, 2002). The importance of having health insurance is according to our needs. Having health insurance can protect from the sudden, unexpected cost of hospitalization which would otherwise make major dent into household savings or even lead to indebtedness. Healthcare is increasingly expensive, with technological advances, new procedures and more effective medicines that have also driven up the costs of healthcare. While these high treatment expenses may be beyond the reach of many, taking the security of health insurance is much more affordable. (IRDA, 2007).

Organization of the health services in the era of JKN covers all health facilities in collaboration with

Badan Penyelenggaraan Jaminan Sosial Kesehatan (BPJS Kesehatan) including primary health care and secondary healthcare, where primary health care is formed of *Puskesmas* or the equivalent, doctors, dentists, clinics and hospitals, which must organise their offered health services in a comprehensive manner. Health services before the era of JKN covered many different health facilities. Health facilities include *Jaminan Kesehatan Masyarakat* (Jamkesmas), *Jaminan Kesehatan Tenaga Kerja* (Jamsostek), *Asuransi Kesehatan* (Askes) for civil servants, pensioners, veterans, independent pioneer families and *Jaminan Kesehatan Daerah* (Jamkesda) which differs between the organiser and other organisers.

Child health has received a great deal of attention in all countries. The improvement of children's health in low-income countries is challenging because of nutrition problems and poor health care services. Children can be more vulnerable to illness. Poor children have limited access to preventive and sanitised facilities such as clean water and a flushing toilet, and it might be easier for them to get diseases and illnesses.

Members of *BPJS Kesehatan* including everyone, including foreigners who work a minimum of 6 (six) months in Indonesia, which includes been paying their dues. Non-PBI consists of civil servants, members of the military, members of the national police, officials of state, non-government civil service employees and private

employees that have had children who have never been married or do not have their own income; the children are still dependant family members.

The benefits of *Jaminan Kesehatan Nasional* (JKN) in primary healthcare includes the administration of the service, promotive and preventive services, examinations, treatment and medical consultations, non-specialist medical measures both operative and non-operative, care drugs and medical consumable materials, blood transfusions as needed, and a medical laboratory investigation and diagnosis at the first level.

Health insurance can improve health, health insurance certainly increases the quantity of health care consumed, and many medical interventions have proven to be greatly beneficial (Levy & Meltzer, 2008). In this study, we aimed to examine the impact of various health insurances for children under 5 years old in Surabaya.

2 METHODS

This study was conducted in Surabaya City, capital of East Java, the second largest city in Indonesia. The spread of the questionnaires was conducted over four days. The questionnaire was presented in the form of an electronic questionnaire, which is the Google docs app that can be accessed online via the internet. The data that was processed was analysed by the author to get a detailed explanation of the research. The intended target population in this study was the parents who had children (0-4 years) in Surabaya, amounting to 217,183 children (Census 2011).

In this study, there were several factors that made researchers unable to examine the entire population; cost, power, and time. The sample selection technique used was non-probability sampling which involves techniques that do not provide an equal opportunity for each element of the population to be elected as members of the sample. The researchers also used incidental sampling which is based on chance for the sample to meet with the researchers to be used as a sample; if it is deemed that they were found to be suitable as a data source. In this study, the researchers used a formula called the Yamane guidelines as follows:

$$n = \frac{N}{N \times d^2 + 1} \tag{1}$$

$$n = \frac{217\ 183}{217\ 183 \times 0.1^2 + 1} \tag{2}$$

$$= 99.9 \approx 100$$

n = sample size

N = population size

D = looseness of accuracy, because the sample error which can be tolerated (10%)

3 RESULTS

The study evaluates the number of *BPJS* cards have been used particularly for children under 5 years old, where the card has been used or if the card has been used properly in terms of the place of treatment, and the reason why they choose the health service. After the distribution of the questionnaire concerning the known kinds of health insurance held by the respondents, the results were as follows

Table 1: Kinds of Health Insurance Held By The Respondents

| Health Insurance | Number |
|--------------------------|--------|
| <i>BPJS Kesehatan</i> | 68% |
| <i>ASKES</i> | 21% |
| Private Health Insurance | 7% |
| Do not have insurance | 4% |

From the table above, it can be seen that there are still people who are not covered by the JKN from when it has been around since 2014. With the ownership of health insurance, the wage earners with a biological child not yet 21 years old or 25 years old in a period of study will be certain to take insurance from *BPJS Kesehatan* following their parents. 21% of children in Surabaya do not have health insurance as in the following table,

Table 2: Number of Children Own Health Insurance

| Children's Health insurance | Number |
|-----------------------------|--------|
| Yes | 79% |
| No | 21% |

When the children are sick, not all of the parents get their child to a medical facility in accordance with the health insurance they had. The respondents' answers were diverse as in the following table.

Table 3: Health Care Facility Used by The Children

| Children’s Health Service | Number |
|-------------------------------|--------|
| According to health insurance | 34% |
| Hospital | 21% |
| Specialist doctor | 23% |
| Private clinic | 14% |

The reason was an assortment of visiting health facilities for children who are sick as the following table

Table 4: Reason to Choose Health Care Facility

| Reason | Number |
|----------------------------------|--------|
| According health insurance | 34% |
| Easy access | 17% |
| Cheap | 7% |
| Subscriptions | 28% |
| According to employment agencies | 2% |
| Good service quality | 12% |

4 DISCUSSIONS

Universal health coverage for the entire population of Indonesia will become a reality later in January 1st, 2019, when all residents will have health insurance and get the same medical benefits. People without health insurance are at risk of financial hardship when in need of health care, which includes the vulnerable population groups. Children without health insurance, in a study at Hopkins Children’s, led by Fizan Abdullah, MD, Ph.D. said that ‘If you are a child without insurance, if you are seriously ill and ended up in the hospital, you are 60 percent more likely to die than the sick child in the next room who has insurance’ (Nolan, *et al.*, 2005).

There might be at least two possible reasons why some children do not have health insurance. Firstly, the premium of health insurance can be costly for poor households. Secondly, health insurance is sometimes to blame for poor health care services, and people can find it unhelpful to have health insurance. For children, a comprehensive package that covers not only health services but also developmental services, such as rehabilitation services that help children attain, maintain, or improve skills to maximise their function, is ideal.

In addition, the coverage of health insurance participants who choose healthcare did not correspond with the registered health facilities have also become a concern in this study. In providing health care to its participants, *BPJS Kesehatan*

applies what is known as a referral system. This system has been summarised in the terms and conditions for the participants of *BPJS Kesehatan* who want to get healthcare. If sick, the health facilities wherever they go are free or wherever the patient wants. It can be a hospital, *Puskesmas*, or clinic. However, it does not mean that the patients free to choose the health facility. They need to know whether the insurance company has worked together with a given health facilities or not.

BPJS Kesehatan has a different system. The healthcare provided is divided into three levels: Primary Healthcare which is the health service first attended by BPJS patients who want treatment, such as *Puskesmas*, clinics, or a general practitioner. Then, there is the Secondary Health care: this is a continued health service after receiving a referral from Primary Healthcare conducted by a specialist or dentist. Tertiary Healthcare is the last advanced health service if Secondary Health care cannot handle the patient, such as the main clinic or equivalent, public hospitals, and speciality hospitals. The objective is keeping health care carried out in stages. In practice, secondary healthcare will only be granted on the basis of a reference given by primary healthcare. Then, tertiary healthcare will be provided on the basis of a referral from secondary healthcare.

Primary health care is the starting gate for participants of *BPJS Kesehatan* to obtain health care. *BPJS Kesehatan* patients are required to come to primary healthcare if they have health problems and want to get treatment. If after checking it is necessary to be referred, the doctor will be made a referral to a specialist or another hospital. In the BPJS system, the patients choose the primary healthcare that they want to go (such as *Puskesmas*, or a public clinic).

However, based on this study, as many as 66% of respondents did not bring their children to primary healthcare but to other health facilities such as hospitals, clinics, specialist doctors, and others. The reason also varies including easier access, cost, already being a subscriber to the health service, good quality of service, and a recommendation from the workplace.

Regarding the quality of service, the patient perception of quality of service is associated as being between expectation and reality. It is, as stated by Bustami (2011), the ratio of the patient to reliability, responsiveness, assurance, empathy, physical appearance good facilities and the nursing services expected. When the service is obtained in accordance with the expectations of the patient, the patient's perception of the quality of hospital

services going to be good. Otherwise, if the service received does not match the expectations of the patient, the patient's perception of the quality of hospital services is going to be bad.

In addition, the cost of health care which is cheaper, speedier and more accurate in the delivery of services is one of the factors that affects the timing or duration of treatment for patients.

The utilisation of healthcare services is related to public trust in a health institution. When people say they would take advantage of health care services, they have to consider the quality that is to be obtained, the facilities accepted and the cost to obtain the health care services.

Health insurance is a powerful predictor of children's degree of access to and use of primary care, including such aspects as entry into the healthcare system, identification of a regular clinician, level of satisfaction with care, and the amount of physicians' service received. The effect of insurance remained substantial and statistically significant even after we controlled for several potentially confounding variables, such as family income and children's health status (Newacheck, *et al.*, 1998).

5 CONCLUSIONS

This study help provide a picture of children's health insurance ownership and their utilization. Health insurance for children has been an effective program providing comprehensive coverage and financial protection. It has also helped to reduce the disparities in health coverage and care that affects low-income children. But there are still many children who do not have health insurance. In addition, the parents do not go for treatment to health facilities in accordance with the health insurance listed for several reasons such as easier access, cost, already being a subscriber to the health service, good quality of service, and following a workplace recommendation. Suggestions to the *BPJS Kesehatan* are for them to disseminate the flow of health service at *BPJS Kesehatan*, so that the vision of *BPJS Kesehatan* that Universal Health Coverage 2019 seeks to complete can be achieved.

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Potential Informal Workers Participation for Health Insurance in Surabaya City

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Keywords: Health insurance, Informal workers, Participation, Health care, Ability, Willingness.

Abstract: Informal workers are the largest group of workers in East Java, with the total number of informal workers in East Java being twice the number of formal workers, which is about 12 million people. The Indonesian government itself has handed over the affairs of the workers' security guarantees to *BPJS Ketenagakerjaan* (Employment). Until now, the number of participants in *BPJS Ketenagakerjaan* (Employment) in East Java from the informal sector has only reached about 100,000 people. This study aims to describe the financial capacity of the informal workers to participate in health insurance in Surabaya. The method used is analytical descriptive based on the secondary data of the national employment survey and the Central Bureau of Statistics (BPS). The results of the study show that informal workers have the ability to pay health insurance premiums because the public is able to finance their non-essential needs, and there has been an allocation of funds for health services. The willingness variable is generated because the workers are willing to make payments when there is an adjustment required between the premium with the expenditure of income and the complete health service. There are some actions that still need to be developed; socialisation, motivating the informal workers group to save money and government/cross-sector involvement.

1 INTRODUCTION

Health is a human right which in Indonesia has been regulated in the constitution since 1945 and must ensure the fulfilment of health for the entire population of Indonesia without exception. Based on these basic regulations, health development has become a part of national development as an effort to create better public health.

In order to realise the success of health development, in 2004 the government issued the National Act No. 40 on the National Health Insurance System (SJSN). This regulation stipulates that the entire population is obliged to be a participant of social security, namely the National Health Insurance (JKN) through a Social Security Administration Agency (BPJS). This, in its implementation, uses the principle of social insurance involving compulsory membership, the amount of premium based on the amount of income and all members getting health services the same (Social Security Agency, 2004). Furthermore in 2011, the government issued Law Number 24 that stipulates that the National Health Insurance to be

held by BPJS consists of BPJS Health and Employment (Social Security Agency, 2011).

The emergence of regulations related to social security in the field of health requires a comprehensive reform, even while the conditions of the implementation of the existing regulations are still partial and overlapping. The scope of the program is not comprehensive and the benefits have not been felt by the community (Thabrany, 2005). The constraints result in low public participation in the JKN program, based on the data from the Social Security Administering Agency (BPJS) Health. Until March 17th, 2017, JKN-KIS participants have reached a total of 175 million people from several segments of the membership which is only 70% of the total population of Indonesia. The same condition is shown from the data from BPJS Employment up to June 2017; the number of participants has only reached 23.3 million people. Meanwhile, the total workforce in Indonesia is 130 million people and 50 million are workers in the formal sector. The remaining 80 million workers are in the informal sector. While in Surabaya, based on data from the BPJS Employment branch Surabaya

mentioned informal workers who have not joined for 811,789 people.

The low workers' participation is a problem that needs to be solved immediately. However, the ability and willingness of the informal sector workers in Surabaya to be a participant of the JKN needs to be further investigated as an effort to increase their participation and the success of the JKN program and universal coverage.

2 METHOD

This study aims to describe the ability and willingness of the health insurance financing in relation to the informal workers in Surabaya. The data has been obtained through a literature study and the analysis of the survey data was sourced from the National Labour Force Survey (Sakernas) and the Central Bureau of Statistics (BPS). Literature studies were conducted through the internet with book reference materials, the publication of survey results as well as documents related to the issues discussed. This study is an analysis of the number and percentage of participation of the public health insurance to do with informal workers, their income and expenses and property ownership as a variable that can measure the ability of the workers to pay the premiums/health insurance contributions each month.

The analysis in this study began by describing the number of workers in the informal sector based on the survey data from the Central Statistics Agency (BPS). Based on the type of work that will be conducted, an analysis of the health insurance financing capability based on income and the expenditure of the informal workers will be conducted and the fulfilment of basic needs according to Maslow's theory will also be looked in to. Meanwhile, in order to describe the willingness of the informal workers, an analysis based on the results of the interviews conducted with 3 respondents who were informal workers who have incomes at different levels (namely income workers with one month less than the expenditure in another month, the income of the same month as the spending in one month and workers with an income more than their spending in a month) have been conducted. The sampling technique used is non-probability sampling, so it does not use the principle of probability theory. The basis of the determination is certain considerations of the researcher and the purpose of the study. The descriptive data analysis was based on the interviews in the field to determine

the worker's willingness combined with the results of the literature study to determine the ability of the informal workers in Surabaya to finance their health insurance.

3 RESULTS

3.1 Number and Distribution of Informal Workers

Based on the official statistics – the data published by the provincial statistics centre of East Java (Badan Pusat Statistik) on May 6th, 2013 - it shows that the main job of the majority of the population of the East Java province is agriculture that is made up of 7.38 million people or 38.25% of the total number of workers. The second position followed by the trade sector amounted to 4.01 million people, or 20.78%, while the industrial sector occupies third place. Surabaya is the capital of the East Java province with the densest population and the highest number of labourers, both indigenous and made up of other urban residents working in Surabaya. In accordance with the statistical data of the National Social and Healthcare for employees (BPJS Ketenagakerjaan), Surabaya shows that the number of workers in Surabaya reached 1.475 million people with the number of informal workers being 811 thousand people. Both of these data sets present that the economic system in Indonesia is dominated by the informal sector.

Table 1: Informal Workers by Occupation

| Job | Frequency | Percentage |
|-----------------|-----------|------------|
| Seller | 51 | 34.0 |
| Pedicab Driver | 38 | 25.3 |
| Other | 22 | 14.7 |
| Driver | 12 | 8.0 |
| Coolie | 10 | 6.7 |
| Construction | 9 | 6.0 |
| Employee/Labour | 4 | 2.7 |
| Small Shop | 4 | 2.7 |
| Total | 150 | 100.0 |

Source: Informal Sector Research Results Surabaya, 2011 at Prioris Law journal, Vol. 3 No. 3, Year 2013

Based on the table above, the seller has the highest proportion making up 34% out of the total 150 respondents of the research. This high number is supported by data published by BPS that is Distribution of the Gross Regional Domestic Product of Surabaya at the Current Market Prices by

Industry of Surabaya Municipalit, 2010-2016 shows that the largest percentage of the contributors come Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles that equal to 27.59% out of the total 100% GRDP Surabaya in 2016

measurements of the average monthly income of informal workers based on the Survey of the Labour Force Situation in East Java in 2016, which showed the following results

Table 2: Informal Workers Monthly Revenue

| Revenue (thousands rupiah) | Frequency | Presentation |
|----------------------------|-----------|--------------|
| <500 | 31 | 20,5 |
| 500 - <1.000 | 56 | 37,1 |
| 1.000 - <1.500 | 33 | 21,9 |
| 1.500 - <2.000 | 7 | 4,6 |
| 2.000 - <2.500 | 10 | 6,3 |
| >2.500 | 14 | 9,3 |
| Total | 151 | 100,0 |

3.2 Income and Expenditure Informal Workers

Based on previous research conducted in 2011, with a total of 151 respondents, the data was obtained and deployed in accordance with the table below.

In the table below, it can be seen that the level of the majority of the revenue obtained is to the amount of IDR 500,000 - <IDR 1,000,000 per month at 37%. 21.9% of the total respondents have an income of between IDR 1,000,000 - <IDR 1,500,000. The above data is supported by the results of the

Table 3: Average of Employee/Labourer and Casual Employee's Net Wage/Salary (Rupiahs) per Month by Main Employment Status, 2012 - 2016 (Urban)

| Main Employment Status | August 2012 | August 2013 | August 2014 | August 2015 | August 2016 |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|
| Employee | 1.3807.907 | 1.650.568 | 1.721.697 | 1.859.531 | 2.222.655 |
| Casual Employee in Agriculture | 460.372 | 614.475 | 749.300 | 714.195 | 1.058.372 |
| Casual Employee in Non-Agriculture | 776.029 | 859.065 | 1.124.2333 | 1.320.533 | 1.434.695 |
| Total | 1.243.519 | 1.506.270 | 1.584.979 | 1.717.744 | 2.041.037 |

Based on the above data, it can be seen that the income of informal workers is still below the workers in a company or in the formal sector and is still around > IDR 1,000,000 until 2016, although this has since increased. Net income or the wages earned by workers will certainly be used subsequently for the purposes for themselves and their families. Comparisons between income and expenditure on food and non-food items would

indicate the ability of the informal workers to pay the premiums/health insurance contributions. The National Economic Social Survey 2012-2013 found that the average spending of the people of Surabaya totalled IDR 1,042,088 in 2013 with details of the expenditure on food needs being IDR 429,746 and IDR 612,342 on non-food. Non-food expenditure has been listed in the following table.

Table 4: Type of Non-Food Expenditure

| Type of Non-Food Expenditure | | | | | | | | | | | | | |
|----------------------------------|---------|---|---------|------------------------------|--------|---------------|--------|-----------------|--------|------------------|--------|---------|---------|
| Housing And Household Facilities | | Miscellaneous Goods & Services (including Health and Education) | | Clothes. Footwear & Headgear | | Durable Goods | | Tax & Insurance | | Party & Ceremony | | Total | |
| 2012 | 2013 | 2012 | 2013 | 2012 | 2013 | 2012 | 2013 | 2012 | 2013 | 2012 | 2013 | 2012 | 2013 |
| 252.507 | 261.534 | 200.920 | 230.780 | 15.502 | 31.891 | 57.251 | 45.820 | 37.514 | 23.110 | 28.199 | 19.207 | 591.893 | 612.342 |

Source: Social Survey 2012-2013 National economic

4 DISCUSSION

Health insurance owned by each individual becomes a necessity if the individual feels that there is the need. Some theories put forward state that according to Anderson, there are five factors that influence the demand for health services, namely: 1) perception; 2) the actual demand (hope, the assurance, previous experiences, customs, religion); 3) the ability to pay; 4) the motivation to obtain health services and the 5) environment (availability of health care facilities). The ability to pay on points to three is affected by income and the expenditure of each individual or family (Anderson, 1973).

Based on Table 2 and Table 3, the data shows that every year, there is an increase in revenue for informal workers. In 2011, the data showed that the majority of respondents had an income between IDR 500.000 - < IDR. 1,000,000 (Triyono, et al, 2013) while the data of the average income of urban informal workers each month in 2016 reached IDR 1,058,372 for informal workers in the agriculture sector and IDR 1,434,695 for non-agricultural informal workers (Central Bureau of Statistic of East Java, 2016). The increase is an improvement not only for private people but also for the economic conditions in Indonesia.

However, income earned does not necessarily become a reference point because of the other needs that must be met. The survey results indicated that the average public expenditure in Surabaya in 2013 reached IDR 1,042,088, with spending on food needs being IDR 429,746 and IDR 612,342 on non-food. When adjusted for, the average income in 2013 for informal workers amounted to IDR 859,065, so it can be seen that there is a considerable margin between revenue and expenditure (BPS, 2014; BPS. 2014).

The ability to pay the dues is a subjective assessment based on assumptions about how the person pays. Some references say that the amount of expenditures to revenues affects the ability of the individual to pay the health insurance dues, whereas in the survey it was stated that in this type of spending on non-food is a kind of "Miscellaneous goods and services including the health and education" (Noormalasari, et al, 2015) so people are able to allocate its income aside for a month for their health insurance premium. This statement can be supported by their ability to meet the needs of non-food items that aren't essential, as the demand for health services falls in to this category. Exceptions may occur if the individual's income is low or below the minimum wage or with the family expenses

exceeding 75% of the revenue. This group can be helped by the government because of the beneficiaries allied with the health services. Society's ability to pay dues does not necessarily make them decide to follow the health insurance plan, but the willingness to pay does affect it.

In interviews with the three respondents with different incomes, the results concerned some of the factors influencing them such as the level of education. With a low-income, the respondents have not yet been exposed to the information related to both health and employment insurance. For the respondents with medium and high incomes, it was found that they had not received information on the clear benefits that would come from following the health insurance plan.

The high-income respondents chose to follow private health insurance. This statement is consistent with the studies conducted in 2011 that resulted in 54 % of informal sector workers being educated to elementary school (SD) level. The lower education levels of informal sector workers is a potential obstacle in the implementation of social security. This is due to the lack of access to various programs relating to labour, because they are poorly educated and also from poor communities. The condition causes them to lack knowledge and not be able contribute to the work performed so easily.

The second factor is that the health services guaranteed are incomplete and the administration is convoluted. The demand from all three of the respondents indicated that the respondents wanted the amounts of fees to be in accordance with their respective revenue. A person's motivation to have health insurance can be caused by an adverse health status known as an endogenous factor. Efforts to increase JKN access will be more effective if JKN accommodates consumer preferences (Hidayat, 2008).

Other factors which affect the willingness to pay health insurance contributions is income per month, so big contribution rates should be adjusted by the amount of income per month. In the study conducted in 2010 in Semarang, it was stated that the amount of rupiah to be issued should be in accordance with the services provided, but a barrier occurs when there is a family of more than 4 people because the ability to pay has decreased. There is then the need for assistance and the responsibility of the government to step up in this regard (Djuhaeni, 2010).

5 CONCLUSIONS

In the survey, the results indicated that the average public expenditure in Surabaya in 2013 reached IDR 1,042,088 with spending on food needs being IDR 429,746 and IDR 612,342 on non-food. When adjusted for the average income in 2013 of informal workers amounting to IDR 859,065, it can be seen there is a considerable margin between revenue and expenditure. However, non-food expenditure has covered the need for health care services so then the informal workers should be able to pay the fees for their health insurance. This statement can be supported by their ability to meet the needs of non-food items that aren't essential, while the demand for health services is essential. All of the interview respondents were willing to pay the insurance premiums for the services to be acquired.

From the reviews that have been conducted, it was found that the government should subsidise the cost to society of the informal sector workers considering that their income is not fixed. In addition, the dissemination of information is important so that the informal workers who actually can afford to pay the fee are not reluctant to join the health insurance plan because they understand and know the benefits that come from the insurance. To realise the increase in the participation of informal workers to become active participants requires the involvement of various institutions and sectors such as the labour department and the health department so that it will not only be the formal sector workers who could benefit from health insurance.

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Dilemma of Tobacco's Policy in Indonesia: Increasing Country's Income or Increasing the Country's Poverty with National Health Insurance's Deficit?

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Keywords: Tobacco's policy, Country's income, National Health Insurance's deficit.

Abstract: Tobacco is still an issue in politics, economy and healthy in Indonesia. Indonesia gets attention about its tobacco's policy, because Indonesia has not been doing the FCTC's ratification steps. It's because Indonesia still has dilemmas associated with its tobacco's policy. Cigarette tax can increase the country's income, but cigarettes can cause catastrophic illnesses that generate a high absorption of the national health insurance's funds. The objective of this study is to describe the tobacco policies in Indonesia from the perspective of the economy and health in order to provide recommendations. The method of this research is a literature study with analysis about the topic from previous research studies, journals and other policies in Indonesia. The result of the research indicated that 95% of Indonesia's tax income is from cigarette tax. But, in 2015, about 23.90% of the national health insurance fund is for the treatment of catastrophic illnesses associated with smoking, and this condition can cause the fund to become deficit in the future. The conclusion of this study, there needs to be an accurate review to resolve the tobacco policy dilemmas in order to avoid the deficit of BPJS.

1 INTRODUCTION

Cigarette problems are endless to discuss. The issue of cigarettes is one of the delicate problems faced by Indonesia. Related to the dangers caused by cigarettes, WHO published an international agreement upheld by the parties involved called the FCTC (Framework Convention of Tobacco Control). Indonesia is one of the countries that played an active role in the formulation of FCTC as a drafting committee. The FCTC has been ratified by 177 governments from 192 countries that are members of the WHO. Indonesia which was active in the formulation of FCTC has proven to be the only country in the Asia Pasific region that has not ratified this convention (Ahsan, 2013).

Indonesia is still hesitant about ratifying the FCTC because Indonesia still having dilemmas with its tobacco policy. On one side, Indonesia relies heavily on tobacco taxes as a large percentage of the income for its country. If Indonesia ratifies the FCTC, people are worried that it could cause economic upheaval. On the other side of the coin, it cannot be denied that cigarettes are one of the main

causes of catastrophic diseases that can disturb the health of society. The health problem due to smoking behaviour such as lung cancer, heart disease, chronic kidney failure, stroke, and etc.

2014 was the first year of Indonesia's movement to start moving forward with the JKN (National Health Insurance) program to realise and implement universal health coverage. JKN is commonly referred to as BPJS, which is the organiser. JKN is an effort to be able to handle health problems with a system of working together, where one sick person is helped by many people. In fact, from year to year, BPJS's spending continues to increase beyond its accepted means. Projections up to 2019 say that the deficit will continue to occur. One of the reasons for this is because of the many costs incurred by BPJS when dealing with patients with catastrophic diseases, with one of the primary causes being the consumption of cigarettes (Pardede, 2016).

2 METHODS

The type of data in this study was secondary data that was obtained through studying the literature. A literature study is a type of research conducted by finding references or theories relevant with the case or problems associated with the study theme or question that is to be answered. References can be obtained through books, journals, articles on littering reports, and internet sites (Kuntjojo, 2009). In relation to the problem of tobacco policies in Indonesia, the literature collected relates to the tobacco policy advantages to do with the cigarette excise duty in order to see the current Indonesian tobacco position in relation to production or import export activities. It will also be in order to see the negative impact in the health sector, like BPJS, who have experienced a big deficit caused by them cover the charges of catastrophic diseases, where one of the causes is by cigarettes. The literature in this study is relevant because it's explain enough about the condition about tobacco and tobacco's policy in Indonesia. In other side, the literature also explain about the data of BPJS's financing absorption in catastrophic disease.

The data analysis that was used in this research study was the quantitative descriptive analysis method. This study aims to describe the problems that occurred, as well as describing the responses or perceptions of the people about the issues raised.

3 RESULTS

Indonesia is one of big country that provide tobacco for its own country or for other countries. Temanggung, Jember, Deli, Madura, and Lombok are the biggest region that provide tobacco in Indonesia. In the table 1, there are the data about tobacco production in Indonesia in 2015-2017.

Table 1: Tobacco Production in Indonesia 2015-2017

| Year | Production (Ton) | | | |
|--------|------------------|------------|---------|---------|
| | Smallholder | Government | Private | Total |
| 2015 | 192.899 | 577 | 314 | 193.790 |
| 2016** | 195.559 | 462 | 133 | 196.154 |
| 2017* | 197.497 | 660 | 139 | 198.296 |

Source: Indonesian Plantation Statistics for Tobacco 2015-2017

Information:

1. Preliminary figures *
2. Estimation Rate **

Table 2: Indonesian Tobacco Import- Export in 2014-2016⁴

| Year | Export | | Import | |
|------|--------------|-------------|--------------|-------------|
| | Volume (ton) | Value (USD) | Volume (ton) | Value (USD) |
| 2014 | 35.009 | 181.323 | 95.732 | 569.776 |
| 2015 | 30.675 | 156.784 | 75.353 | 412.328 |
| 2016 | 21.933 | 95.236 | 52.482 | 328.585 |

Source: Central Bureau of Statistics

Based on data from the Central Bureau of Statistics, there has been a downward trend related to tobacco import and exports from year to year. In the relation to the 'agree' and 'disagree' points of view about tobacco regulation policy in Indonesia, tobacco farming includes export and import values that can often be the reason for the disagree side. The data shows that, for the ingredients of processed tobacco products in Indonesia, there is more use of tobacco imports, while the number of exported tobacco is much smaller.

Indonesia has own regulation about tobacco's policy. The policy is about the excise tax of tobacco, the cigarette tax, and the excise tariff. In the table 3, there is tobacco excise policy in 2014-2017.

Table 3: Tobacco Excise Policy 2014-2017

| Year | 2014 | 2015 | 2016 | 2017 |
|--|-------|-------|-------|--------|
| Increase in excise tax rates | 0% | 8,7% | 11,3% | 10,5 |
| Cigarette tax | 10% | 10% | 10% | 10% |
| Total increase in excise duty + cigarettes | 10% | 9,6% | 12,5% | 11,55% |
| Average excise tariff | 51,4% | 48,2% | 44,4% | 49,1% |

Source: Fiscal Policy Office, Ministry of Finance

In 2014, there was a 10% increase in the tax burden due to the introduction of the cigarette tax - 10% of the excise tax. Thus, the greater the excise tax, the more it will obtain a greater tax income from cigarettes too. Based on the table above, there is an upward trend associated with the average revenue excise tax per year, so it is not appropriate if it is said that the excise tax depends on the production of tobacco. Tobacco production in Indonesia has always increased as the data indicates in Table 1.

Table 3 show, there was 10% increasing in excise tax from 2014 to 2017. The increasing of excise tax make some effect. There is some

research's result about the impact of 10% tax rate on consumption and acceptance of excise duty.

Table 4: Impact of 10% Excise Tax Rate on Consumption and Acceptance of Excise Duty⁵

| Study | % Decrease in Consumption | % Increase in Excise Duty |
|----------------------------------|---------------------------|---------------------------|
| De Beyer dan Yurekli, 2000 | 2,0 | 8,0 |
| Djutaharta et al, 2005 | 0,9 | 9,0 |
| Adioetomo et al, 2005 | 3,0 | 6,7 |
| Sunley, Yurekli, Chaloupka, 2000 | 2,4 | 7,4 |

Source: Fiscal Policy Office, Ministry of Finance

Table 4 shows that an increase in the excise tax can reduce cigarette consumption by about 0.9% - 2.4%, and increase tax revenue by about 6.7-9.0%. This means that the increase in excise tax can increase tax revenues and reduce cigarette consumption.

As we know, tobacco's policy in Indonesia is still dilemma. One side, from the policy Indonesia can take advantage from the tax to develop the country. But in other side if we depend on tobacco's tax, that can increase the catastrophic disease and absorb a lot of fund of BPJS.

Table 5: Percentage of Health Service Financing with BPJS related to Catastrophic Disease for about 23.90% in 2015

| Disease | Health Care Costs (%) |
|------------------------|-----------------------|
| Heart disease | 13% |
| Chronic Kidney Failure | 7% |
| Cancer | 4% |
| Stroke | 2% |
| Thalassemia | 0,7% |
| Haemophilia | 0,2% |
| Leukemia | 0,3% |

Source: Indonesia National Health Insurance

An expenditure of 23.90% out of BPJS's fund in 2015 was used to finance health services associated with catastrophic diseases, of which one primary cause is due to cigarette consumption. About 1.3 million or 0.8 recipients of national health insurance received catastrophic services and the most predominant was chronic renal failure.

4 DISCUSSION

Indonesia is one of the many countries that producing tobacco. The production of tobacco from 2015-2017 has continued to increase (Kementrian Pertanian, 2016). The product resulting from tobacco farming has become an important aspect for the disagree team, in order for Indonesia to ratify the FCTC. The side has said that Indonesia is a large tobacco producing country and that it can disturb Indonesian agriculture if Indonesia ratifies the FCTC. In fact, the increase of tobacco production in Indonesia apparently has not been able to meet the needs of tobacco in the country. It can be seen in Table 2 that the value of Indonesian imports of tobacco is much higher than the value of Indonesian tobacco exported to other countries (Kementrian Pertanian, 2016).

Additionally, Indonesia relies heavily on tobacco excise tax as the main revenue of the State through excise duty. 95% of excise revenues comes from tobacco taxes,⁶ and it is expected that by 2017, it will make up 98.7% of the excise revenue out of the target of APBN (State Budget and Expenditure of State) in 2016⁷. The way to achieve the target set out is to increase the excise tax by as much as 10%⁷. Based on several studies conducted in accordance with Table 4, it has been stated that a 10% increase in excise tax can reduce cigarette consumption and also increase tax revenue (Directorate General of Customs and Excise Ministry of Finance Republic of Indonesia, 2016).

The policy of increasing tobacco excise tax needs to be viewed wisely from all of the different sides. Indonesia should not only be driven by revenue in relation to the tobacco excise duty. According to the regulation of the Finance Minister (*Peraturan Menteri Keuangan Republik Indonesia Nomor 40 tahun 2016*), it was mentioned that the state revenue on excisable goods includes tobacco excise taxes, the excise of ethyl alcohol, the excise of ethyl alcoholic beverages, the fine from excise administration, other excise income, cigarette tax and non-tax state revenue (Ministry of Finance Republic of Indonesian, 2016). Goods subject to excise are goods that have characteristics such as their consumption needing to be controlled, their circulation monitored, having a negative impact, or their use needs to have imposed on them state levies for the sake of justice and equilibrium (Indonesian Government, 2007). There are many other items whose use needs to be controlled, such as plastic-based goods. Indonesia should increase state revenue through excise with more varied goods. Indonesia is

far behind other countries that have the political will to impose excise duty on plastic-based goods as a source of acceptance as well as an effort to control in order to protect citizens and their respective countries from negative impacts (Directorate General of Customs and Excise Ministry of Finance Republic of Indonesia, 2016).

Cigarettes are small bars that contain substances that can cause addiction, dependence and even death. In cigarettes, there are approximately 4000 types of chemicals that can endanger human health. The diseases caused by smoking are catastrophic such as cancer, heart disease, kidney failure, and others. The health impact of tobacco and tobacco products in the form of cigarettes has been anticipated with the use of the excise itself. Based on article 31 of the constitution (UU No. 28 tahun 2009) about district tax and district retribution, the tax revenue of cigarettes, both in provincial and district / city sections, is allocated at least 50% (fifty percent) to fund public health services and law enforcement by authorised personnel (Indonesian Government, 2009). The use of cigarette taxes in the health sector is among others, for: procurement and for the maintenance of facilities and infrastructure of the health care units, the provision of adequate public facilities for smoker activities (smoking area), and to popularise the dangers of smoking, and to generate public service ads about the dangers of smoking (Indonesian Government, 2009).

The regulation does not mention the negative impacts caused by cigarettes, such as medical expenses for smokers or for the people exposed by smoke. The treatment of diseases caused by cigarettes costs a lot of money. Indonesia is currently in the process of realising universal health coverage with national health insurance that has been implemented since 2014. As we knew, BPJS spending is much more than its revenue. One reason for this is because 23.90% of BPJS spending is used to finance the treatment of patients with catastrophic disease (Pardede, 2016). It is the reason why deficit and BPJS has become a big issue in relation to public health.

Based on article 25 of President Regulation (Peraturan Presiden No. 111 tahun 2013) about health insurance, there are several health services not covered by BPJS, such as health problems due to deliberate self-harm, and/or the consequences of self-harmful hobbies. Future discourse to do with BPJS will include the consumption of cigarettes as one cause of health problems - a hobby that can endanger the individual, so the disease and subsequent cost caused by cigarettes is not borne by

BPJS. It is a discourse that should receive attention and careful study because the financing of cigarette disease treatment has swallowed much of the BPJS budget. For example, in 2015, there were 1,211 cases of cirrhosis renal diseases costing Rp 1,613 billion, 757 cases of cancer costing about of Rp 1,413 billion, and 468 cases of stroke with a Rp 687 billion cost (Hafizd, 2016). This is only three out of the many diseases caused by cigarettes. From that, we can also imagine how much cost has been incurred, so it is no wonder that the treatment of diseases caused by smoking causes the budget of BPJS to become a deficit. In addition, Indonesia also needs to pursue a health insurance policy implemented in Thailand that emphasises additional financing for high-cost diseases that could prevent budget deficits (Jongudomsuk et al, 2015).

5 CONCLUSIONS

There is a dilemma to do with the tobacco policy in Indonesia; one side is favourable because of the high taxes and help towards the state revenue, and on the other side, it can bring a negative impact to public health. The negative health impact also makes the BPJS budget in deficit in the midst of Indonesia's efforts to realise universal health coverage. There needs to be an accurate review to resolve the tobacco policy dilemmas such as cigarette tax increments, tax revenue sharing for rehabilitative and curative services for smokers, and an agreement to include smoking diseases as a disease not covered by BPJS in order to avoid the deficit.

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Analysis of Implementation the Human Resource Management (HRM) to Improve Quality of Services in Hospital

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Keywords: Human resources management, Health service quality.

Abstract: Human Resources (HR) is one of the central and strategic positions in a health facility used to achieve organisational goals in performing health services. Therefore it is necessary to develop the Human Resources (HR) department to improve the quality of Human Resources (HR). This involves the quality and physical skills or non-physical skills that can improve the quality of service to meet patient satisfaction. The purpose of this research study is to identification and analyze the implementation of Human Resources Management (HRM) to improve quality of services in hospitals. This research has used secondary data and the literature study method from journals: year 2002 - 2017 to get to know the implementation of Human Resource Management (HRM) and the improvement of quality service in hospitals. The results of this research show that the implementation of effective and efficient Human Resource Management can influence the improvement of staff performance which can, in turn, improve the quality of health services.

1 INTRODUCTION

Human resources have a strategic position among other resources in health facilities. A health facility should have qualified human resources, so health facilities need to undergo human resource development to improve the quality of their offered health services. Human Resource Management (HRM) is a vital management task in the health and other services sectors, where customers face challenges due to the performance of staff with experience and in relation to quality performance (Howard et al., 2006). In addition, Human Resource Management (HRM) plays an active and vital role in successful health sector reforms. The main objective of Human Resource Management is to improve organisational performance. Human Resource Management (HRM) is the process by which to connect the human resources function to the strategic goals of the organisation to improve performance. The studies have concluded that HRM is a management practice that is necessary by way of human resources policies and practices that will be connected to the organisation's goals (Bratton and Gold, 2007).

Human Resource Management (HRM) is a planned approach to manage people effectively for

performance by way of a flexible and attentive management style so that the staff will be motivated, developed and managed in such a way that they can provide the best for the department (Agarwal et al., 2011). Human Resource Management is involved in the development of individual employee talents and plays a role in implementing programs that enhance cooperation and communication among employees that impact on organisational development. Therefore, planning and managing human resources in the hospital setting is the key to providing qualified health services according to the needs of patients.

The goal of Human Resource Management (HRM) is the recruitment, maintenance, and development of competent personnel and the creation of a growing health care organisation. The management of human resources in the hospital setting is very important to enable the improvement of the quality of providing effective and efficient health services to achieve patient satisfaction. Health care quality is, for the most part, characterised in two ways: technical quality and socio-cultural quality. Technical quality refers to the impact that the health services available can have on the health conditions of a given population. Socio-cultural quality measures the level of adequacy of the services and the ability to satisfy patient

expectations (Kirby, 2002). This paper aims to analyse the impact of Human Resource Management (HRM) when seeking to improve the quality of services in hospitals, which has an impact on patient satisfaction.

2 METHODS

The method used in this research is literature study. The literature used by researchers is sourced from six research journals from year 2002 up to 2017 and other sources related to the Management of Human Resources (HRM) and the quality of health services in the Hospital. The keyword that used by the researchers is Human Resource Management (HRM), quality service in health care and patient satisfaction. Researchers use the results of research from various journals to link and analyze the impact of Human Resource Management (HRM) to improve quality of health services in hospitals so as to improve patient satisfaction.

3 RESULTS

A study entitled "HRM and the Management of Clinicians within the National Health Service (NHS)" by Marie et al., (2007) aimed to explore the issues related to Human Resource Management (HRM) in health care, namely the resource management of doctors in the National Health Service (NHS). The results of the research was that Human Resource Management (HRM) has an important role in the management of doctors in the hospital setting so doctors should make sure that the health service of a patient and patient care is effective and efficient. In addition, qualified, highly motivated, competent and trained medical personnel are essential to the success of the National Health reforms and in relation to the delivery of health services, both for the patients and health reforms. The study shows that Human Resource Management is essential in delivering effective and efficient health services in health facilities.

Rosemary Lucas (2002) conducted a research study entitled "Fragments of HRM in hospitality? Evidence from the 1998 workplace employee relations survey." The study was conducted to verify the rehabilitation of the health sector in the UK from the perspective of human resource management and to assess the dimensions of human resources related to the rehabilitation of the health system and the

establishment of the new health sector. This study shows the importance of Human Resource Management (HRM) in the success or failure of the health sector. The study emphasises the importance of employee performance and how to attract medical professionals to the health sector to improve the quality of the offered health services.

A study entitled "Effects of HRM on Client Satisfaction in Nursing and Care for the Elderly" by Ott and Dijk (2005) aimed to analyse the implementation of Human Resources Management to increase employee satisfaction, thereby increasing patient satisfaction.

The researchers distinguished seven activities in HRM as follows:

- a. Personal development plan.
- b. Additional work-related training for the last two years.
- c. A review of job performance over the last two years.
- d. Regular department meetings (at least monthly).
- e. Protocol in case of labour shortage.
- f. Predictable work schedule.
- g. The managerial style of leadership is transparent and supportive.

The results obtained from the research study indicate that Human Resource Management (HRM) affects job satisfaction and patient satisfaction in the health service. In addition, the following results were obtained:

- a. The correlation between Human Resource Management (HRM) and patient satisfaction is generally quite low. The satisfaction of the employees of the organisation is the trigger that increases patient satisfaction.
- b. Training related to the job has no relationship with job satisfaction, but work-related training has a positive relationship with patient satisfaction due to better trained employees being able to provide better quality health care.
- c. The leadership style of managers in the health service has a significant relationship with job satisfaction and patient satisfaction.
- d. The study entitled "The Effect of Human Resource Practices on Employee Performance in Hospitals: A Systematic Review" by Gile and Philipos (2013) showed that the practice of Human Resource Management (HRM) and organisational factors has a significant effect on the performance of employees in the hospital environment. In addition, the practice of Human Resource Management (HRM) is regarded as processes in relation to developing people and

employment plans in an organisation. Employee performance is supported by the good organisational structure, strategy and suitability of human resource utilisation. Good Human Resource Management can affect the quality of the health services in the hospital setting. Managerial practices generally relate to financial, material and non-material, such as Human Resources (HR) being considered as actors in the structural dimension that affects employee performance in providing quality health services. Non-material aspects are related to the practice of human resources as a management person or as a High-Performance Work Systems (HPWP).

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The study entitled "The Impact of Human Resources Management on Quality Services of Healthcare Organizations" by Rajendra and Nupur (2017) shows the following results:

Table 1: ANOVA Test Organizational Commitment

| Perceived Organizational Performance | | | | | |
|--------------------------------------|----------------|----|-------------|-------|------|
| | Sum of Squares | Df | Mean Square | F Sig | Sig |
| Between Groups | 19.82 | 38 | .522 | | |
| Within Groups | 18.2 | 14 | 1.3 | 4.015 | .034 |
| Total | 38.02 | 26 | | | |

The table above shows that there is a statistically significant relationship ($0.034 < 0.05$) between Human Resource Management and the business efficiency that employees recognise about the quality of service. According to the results of the correlation, there is a positive relationship between human resource management in health services and the service quality of employees. The results show that along with the increase of human resource management training, the amount of recognition of the employees who give the best service quality also increased. According to the Pearson Correlation analysis, there is a strong positive relationship.

4 DISCUSSION

The results of the reviews from 6 journals year 2002 – 2017 shows that the implementation of Human Resource Management (HRM) can improve employee performance when it comes to providing effective and efficient health services so as to improve the quality of health services in hospitals. Human Resources Management (HRM) in the hospital has an important role in determining the success or failure of that Hospital in the development of higher quality organisation systems to improve the quality of health services. It is also supported by the results of the research that good Human Resource Management (HRM) in the hospital setting can impact on increasing employee satisfaction so that it can trigger patient satisfaction in the health services provided.

Human Resource Management (HRM) is an approach towards the management of people based on the following fundamental principles (Peter Drucker, 1959):

- a. Human resource management is concerned with integration by getting all of the members of the organisation involved so that they may work together with a sense of common purpose
- b. Human resource policies of the organisation should be fair to all. They should make a major contribution to the achievements of an organisation's objectives as well as providing a conducive atmosphere of working to the employees so that their output is at a maximum.
- c. Human resources are the most important assets, and their tactful management is the key to the success of an organisation. The culture and values of an organisation exert enormous influence on the organisation. Therefore, organisational values and culture should be

accepted and acted upon by all in the organisation.

Based on these fundamental principles, it can be seen that Human Resources Management (HRM) is the foremost initial asset in an organisation, especially the hospital setting. The findings of the various journals discussed above are in the line with the fundamental principles of HRM which show that an effective Human Resources Management (HRM) in a hospital will create a harmonious relationship between superiors and subordinates so as to create a good organisational climate. The Human Resources (HR) in the hospital will perform better in the offered health services when achieving their organisational goals.

Human Resource Management (HRM) strategy is necessary to improve the ability of the hospital in providing qualified health services and to provide patients with safety according to the Standard Operational Procedures (SOP) set by the Hospital. It requires the leader of the Hospital who is competent and responsible to continuously improve the condition of the personnel in the Human Resources Management (HRM) department in the organisation. An effective management department must direct the vision and effort of all managers towards a common goal (Peter Drucker, 1959). Human Resource managers require a potential position in the organisation so that they can contribute towards the strategic planning and methods of effective organisational approaches in accordance with the organisations' objectives (Friedman, 2009).

According to Niles (2013), Human Resource Management (HRM) has an important role to play in healthcare organisations. Human Resources can be linked to the operational activities of a health service. The role of Human Resource Management (HRM) in hospitals is an analysis of employment, the organisation, the use of labour, measurements and performance appraisals of the workforce, the application of reward systems for employees, the growth of professional workers, and the maintenance of labour.

Aspects of organisational behaviour and managerial practices in the hospital setting involve non-human activities and human resources. Aspects of the structures and processes within the organisation are important factors for improving the quality of the health services provided by employees to the patients. Organisational factors and Human Resources Management (HRM) have a significant effect on the performance of employees in the hospital environment. In addition, the Human

Resource Management (HRM) practice is considered to be the process of managing work and people in organisations. The high quality of the health care performance of service organisations depends on the employee performance supported by the organisational structure, strategy, people management and the utilisation of the required organisational resources (Gile, 2013).

Human Resource Management (HRM) is essential to enable the delivery of effective and efficient health services and to achieve patient satisfaction. Human Resource Management (HRM) has a strong impact on the quality of health care, and has a strong role in achieving the goals of health organisations. Human Resource Management (HRM) in hospitals emphasises developing the performance of hospital staff through periodic training to improve the quality of the offered health services, as well as strong, highly motivated and trained medical professions which can affect the success of national health reform. The practice of human resource management is so important in the health sector that modern hospitals should have an alternative approach to running a good and qualified Human Resource Management (HRM) department. Human Resource Management in hospitals should have clear strategic direction and clear objectives to improve the management of employees and staff in the hospital so as to improve performance and to achieve quality health service targets.

5 CONCLUSIONS

Human Resource Management (HRM) is one of the strategic positions in health management, especially in hospitals. It plays a dynamic and crucial role in the success of health reforms. Human Resource Management (HRM) is considered to be a vital factor in hospitals. Today, the human factor is regarded as a unique strategic source and the designer of key executive systems of the organisational processes involved because human resources are perceived as being a major asset among the organisational production factors so as to produce qualified output. It can be concluded that an effective and efficient Human Resource Management (HRM) in hospitals can improve the quality of the health services provided by the employees to the patient. Human Resource Management (HRM) can affect the improvement of employee performance in the hospital so that it can, in turn, impact on improving the quality of health services. Therefore, the hospital needs to practice

Human Resource Management (HRM) in accordance with the strategic plan that has been done involving all managers in carrying out the detailed Human Resource Management (HRM) functions, so as to achieve the goals of the organisation well. In addition, there should be an evaluation of the Human Resource Management (HRM) system consistently.

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Implementing the Tobacco Control Policies Properly and Correctly

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Keywords: Tobacco policy, Tobacco control, Non-smoking area, Cigarettes.

Abstract: Tobacco control, if not implemented, can be a health problem both in developed countries and in developing countries like Indonesia. The number of cases of citizens who consume cigarettes is very large and this can adversely affect health to the point of causing premature death. Tobacco control policies in Indonesia should be optimised and further enforced, including further details on the Regional Regulations on Non-Smoking Areas (KTR) and the prohibition of the advertising and promotion of cigarettes. This includes the empowerment of people who love the latest information which can be about the dangers of cigarette content, the impact of cigarette content that can cause damage to the health of the body and encouraging the movement of people to the creation of an Indonesia free from smoke. This will minimise the citizens of Indonesia who consume cigarettes. Later, they will understand that their health is more important and more will think to apply the existence of good tobacco control.

1 INTRODUCTION

Indonesia has a very high prevalence of smoking in the community, most of which became active smokers from an early age and continued through to adulthood. Active smokers from year to year has increased more than ever, and not only men. More women are now among the many who have become active smokers. This can be bad for the health, which involves an increased risk of death. The Global Youth Tobacco Survey states that the population of Indonesia 15 years and over who has been smoked has an annual increase of 34.2% in 2007 and increased in 2013 by 36.2% until 2014 reaches 50.6% of active smokers 15 years and over. Tobacco control, if not implemented, can be a health problem both in developed countries and in developing countries like Indonesia. The Government issued a Joint Regulation with the Minister of Health and Minister of Home Affairs No.188 / Menkes / PB / I / 2011. 7 Year 2011 About No Smoking Area Guidelines. A No Smoking Area (KTR) is a place or room where it is prohibited to engage in smoking activities and to promote or sell tobacco products. No Smoking Areas (KTR) are one way to control and reduce the bad habit of smoking in public places. In Surabaya, the Regulation of Non-Cigarette Regions in some areas has been implemented but many have not achieved

implementation. According to Perda No.5 of 2008 on Non-Smoking Areas states that non-smoking area facilities include health facilities, teaching and learning places, arenas where there are children's activities, places of worship and public transportation. Non-compliance with established non-smoking regional regulations can be a major problem that will impact public health, especially the increasing prevalence of active smokers. The purpose of this research study is to get more information about the implementation of the No Smoking Regions Policy (KTR) in Indonesia, especially in Surabaya.

2 METHODS

The type of research methodology used in this study is descriptive using a quantitative approach which is intended to describe and analyse the implementation of the regulations to do with cigarette areas. This article has also used methods of research analysis and reporting. The data collection was conducted by using data articles, journals, and books that have been published later on in the analysis by the author.

3 RESULTS AND DISCUSSION

3.1 Non-Smoking Area Regulations that are not yet equally distributed in Indonesia

The enactment of Regulations for Non-Smoking Areas is very important and influential for the future. It can minimise the number of active smokers who smoke in various places that do not think about their surrounding conditions, which can adversely affect the health of active smokers and passive smokers alike. According to the data from Indonesia Health Profile 2012, pusdatin Kemenkes RI 2013, it states that there are still many provinces that have not implemented the Regulation of No Smoking Areas. It is important to keep in mind that if there are no policies, then the number of active smokers in Indonesia will increase year to year. Non-Cigarette Regional Regulations should be further enforced in various areas that have not established a Joint Regulation with the Minister of Health and Minister of Home Affairs No.188/Menkes/PB/I/2011.7 to do with No Smoking Area guidelines.

3.2 Areas Without Cigarettes that are not Effective

From several research results that have been analysed and presented by the researcher, it can be concluded that the implementation of regulations for Non-Smoking Areas is still not running effectively yet. The implementation of Perda No.5/2008 for Non Smoking Area and Limited Area Smoking in the Joyoboyo Terminal area of Surabaya City issued by Surabaya City Government has not yet been fully achieved. From the results of this research, it proves that there are still many who have not implemented the regulations properly. There need to be firmness from the Government to put more emphasis on the severe sanctions that will be enforced on people who violate the regulation of No Smoking Areas so the violation of the regulation is not a preferable or neutral action.

3.3 Low compliance with the Rules

Indonesian society has a low standard when it comes to complying with regulations provided by the Government. Lots of rules have been established, not only the Regulation of Regions without Smoking, but are still violated. This is due to the lack of strict sanctions from society and a lack of

knowledge. One example is a researcher named Iswanti who examines compliance with smoking regulations in Surabaya. Supervision on the implementation of Local Regulation No.5 / 2008 concerning Non-Smoking Area and Limited Area Smoking in Joyoboyo terminal of Surabaya City is not done as stated in Regulation No.5 / 2008. Law enforcers also never sanction against perpetrators of violation of Regulation No.5 / 2008, especially in Joyoboyo terminal of Surabaya City. Although the UPTD terminal Joyoboyo Surabaya City has tried as much as possible, but still found many smokers who smoke free in the terminal Joyoboyo Surabaya. It can be concluded that the awareness and compliance of community law in Surabaya Joyoboyo terminal is still low.

From the results of Reno Renaldi's research analysis in 2013, there is a significant relationship between the implementation of KTR policy and the knowledge of KTR policy. The researcher also stated the results of the data analysis obtained from society which was influenced by environment associations who, at risk, were 17 times more likely not to execute KTR policy. This research is in accordance with results of the research conducted by Puswitasari in 2012 stating the existence of a relationship between the influences of the environment with the level of compliance. An analysis of the results of research from both sides has previously been in conformity with Imelda's research in 2012, stating the relationship between cigarette attitudes and KTR policies with the participation of non-smoking areas.

3.4 Cigarette Advertisement Ignored

Society in Indonesia, especially in Surabaya, indicates that many are indifferent to the ad campaigns that have been made by related parties. Many people actually understand about the content or meaning of the content contained in the ad. But they are indifferent because no one forbids if smoking does harm to public health. It needs a new marketing strategy or ad campaign that generates more attention.

4 CONCLUSIONS

The implementation of non-smoking areas in Indonesia, especially in Surabaya, has not fully run optimally as a whole because the Regulation of No Smoking Area is not evenly distributed in Indonesia and there is less community for existing regulations.

There needs to be firm action in the form of sanctions for those who violate the Regulation of No Smoking Areas. Related parties can create promotions or enforce the latest model of tobacco control on Non-Smoking Areas (KTR). Most Indonesians love the latest information with the latest technology involved; this could be utilised. This will minimise the number of citizens in Indonesia who consume cigarettes. Those who gradually follow the process will come to understand that health is more important and more will begin to apply good tobacco control and encourage the movement of society to create an Indonesia that is free from smoke.

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Health Care Financing in Developing Countries: Major Challenges

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Keywords: Effective, Efficient, Health financing, Challenges.

Abstract: A basic function of government is to provide an effective and efficient health care service. The elements of a health care system are resource inputting, management, organisation and financial support. These elements as a determining factor of good service provision. On the other hand, health care financing is an issue being faced by development countries. The aim of health care financing is to mobilise resources for health and to improve access to effective and efficient service. This article has reviewed the available literature related to health care financing in developing countries. The major challenge of health care financing includes financial constraints, the inefficient allocation of health sector resources, and a lack of management capacity. In order to achieve effective and efficient health care financing, this article has concluded by recommending that there should be developments in health economics, civil service and public sector reforms, as well as developments in financing the social sector, and managed-market health care reforms.

1 INTRODUCTION

A basic function of government is to provide effective and efficient health care service for all citizens. For an effective and efficient health care service to work, it must be well-funded. The fund must be safe and protected from cheating and fraud. In a developing country, the funding of a health care service is a challenge. The health sector has an important role in the development of a country.

Health care financing are the strategies involved in paying for health care needs. The three functions of health care financing are revenue collection from various sources, the pooling of funds and the spread of risks across larger population groups. This is as well as the allocation or use of funds to purchase the health service. The objectives of health care financing are to make funding available, to ensure choice when it comes to cost effective interventions, to set appropriate financial incentives for providers and to ensure that all individuals have access to effective public health and personal health care.

As has been mentioned above, the health sector has an important role in the development of a country, so there is a relationship between health and the economy of a country. There must be a balance of expenditures between the health sector and other sectors. There are two broad sources of health care

financing; public sources and private sources. Public sources include general tax revenue, indirect taxes incorporated into the selling price of goods or services, taxes on lotteries and betting, domestic and international deficit financing, external grants, and social insurance. Private sources include households, employers, private prepaid health insurance plans, donations, and voluntary organisations or non-governmental organisations. The funds are usually processed by financing agents before reaching the health service providers. Some of the agents in health care financing involve the people of the country as patients, providers like hospitals, governments as a professional association, and the purchase of care like that offered by insurance agencies.

2 METHODS

This article has used a narrative review method. A narrative review involves selected studies that are compared and summarised on the basis of the author's experience, existing theories and models. The results on a qualitative rather than a quantitative level. The method of searching the literature in this article is by search some keyword in the internet. Some keyword used are health finance, health

financing, and health challenges. The objective of this article is an issue review. An issue review is the investigation of an issue in a specific field of research. A narrative review also collects and analyses data from studies that are included in the review. The existing data is used as the material to discuss related issues. In this article, the author wanted to know about the issues and challenges faced by developing countries related to health care financing. This article contains health care financing, issues, challenges, and solutions in some developing countries.

3 RESULTS

3.1 Health Care Finance in Nigeria

The main financial sources of health sector in Nigeria are the three tiers of government (Federal State and Local Government), public general revenue accumulated through various forms of taxation, health insurance institutions, the private sector, donors, and mutual health organisations. There are some policies and strategies applied in Nigeria to ensure that the health care sector have adequate financial sources. These policies are to ensure the government allocates and effectively manages fund in the health care sector. Nigeria's policies and plans include the National Health policy, the Health Financing policy, the National Health Bill, and the National Strategic Health Development Plan 2010-2015. The National Health Policy aimed to strengthen the national health system that it would be able to provide effective, efficient, quality, accessible and affordable health services that will improve the health status of Nigeria.

There are multiple health care financing options in Nigeria:

a. Tax Revenue

Tax revenue is a health financing system where the main source of health care expenditure cost comes from government revenues. Public health facilities are financed by public tax revenue. The Gross Domestic Product (GDP) in Nigeria is the most important determinant of health cost allocation. Nigeria spends less than 5% of their GDP on health and annual per capita. This health spending is less than the US\$ 35 proposed by the Commission on Macroeconomics and Health (FRN, 2006).

b. Out of Pocket Payment

Out of pocket payments are payments by the patients directly to a health care service provider without reimbursement. The charges for the health care services are referred to as user fees. Private health spending accounts for about 64% of total health expenditures and could be more than US\$ 23 per capita. Out of pocket payments are the highest proportion of health expenditure in Nigeria.

c. Donor Funding

Donor funding is external agencies and non-governmental organisations such as the World Health Organization, World Bank, and United Nations Children Fund which provide funding for health care. The contribution of donor funding is increasing in the Nigerian health sector. But, it still accounts for a small proportion of public expenditures.

d. Health Insurance

Health insurance entitles insured persons and their dependents the benefit of a prescribed, good quality and cost effective health service as set out by the insurance. Capitation is paid monthly to the health centres from the pooled funds. Community-based Health Insurance is referred to as a mechanism whereby households in a community finance or co-finance the current or capital costs associated with a given set of health services, thereby also having some involvement in the management of the community financing scheme and the organisation of the health service. The common characteristics, however, are that they operate on a non-profit basis and apply the basic principles of social health insurance.

e. Exemption

Exemption is a financial strategy where vulnerable members of the community (mostly toddlers and pregnant women) are exempt from paying for health care services.

Nigeria still facing some challenges related to public health care financing, such as:

- a. Inadequate political commitment to health causing poor funding of health in general, and primary health care in particular.
- b. Gaps in the area of stewardship and governance caused by the lack of clarity on the role of government at all levels in relation to health care financing.
- c. Inadequate or the non-implementation of health policies that clearly spell out how funds are to be allocated and spent in the health sector.

- d. Governance issues with the NHIS and poor buy-in by the states that limits coverage.
- e. Dominance of the out of pocket payments presents the possibility of under or over supply of services depending on financial abilities.
- f. Non-exploitation of other sources of health financing.
- g. Several stakeholders acting independently and not in accordance with the government's policy thrust.

3.2 Health Care Finance in Bangladesh

The Government of Bangladesh vision for the health, nutrition and population sectors is to create conditions in which the people of Bangladesh have the opportunity to achieve and maintain the highest attainable level of health. The Ministry of Health and Family Welfare (MOHFW) provides health care and family planning services through a number of organisations, such as medical college hospitals, specialised hospitals, district hospitals, Upazila Health Complexes (UHC), Union Health and Family Welfare Centres (UHFWC), rural dispensaries and community clinics (CCs).

Health financing in Bangladesh is dominated by private out-of-pocket expenditure. Social and private insurance and official user fees in public facilities comprise a very small proportion of total health expenditure. The total expenditure in Bangladesh is estimated at Taka 325.1 billion in 2012. Bangladesh spends too little resources on health care. The total health expenditure of GDP increased only slightly from 3.3% to 3.5% between 2007 and 2012, which increased of less than 1% in a decade.

Households paying fees are the main source of healthcare financing in Bangladesh which accounts for 63% of the total health expenditures by 2012. The expenditure on health varied widely in various administrative divisions in Bangladesh. It is clear that there is a significant regional difference in health expenditure in Bangladesh.

The MOHFW receives funds from the Ministry of Finance (MoF) and the development partners, and allocates funds to health facilities at different levels. In Bangladesh, the government prepares two types of budget; a revenue budget and a development budget. The revenue budget is intended to meet regular expenditures while the development budget includes project-related allocations for development spending. The revenue budget is larger, comprising nearly three-quarters of the total budget. Both budgets contain capital and recurrent spending.

The challenges faced in health sector are:

- a. Ensure universal access to basic healthcare and provide services of an acceptable quality
- b. Improvement in nutritional status, especially of mothers and children
- c. Prevention and control of major communicable and non-communicable diseases
- d. Supply and distribution of essential drugs and vaccines
- e. Survival and healthy development of children
- f. The health and welfare of women
- g. Reduce the financial burden on households due to increasing health care costs

3.3 Health Care Finance in Indonesia

Health financing in Indonesia is complicated by decentralisation because the direct payment of salaries and capital costs by all levels of government. This clearly impacts on the hospital reimbursement schedules used by insurers. Although the concept at first appears simple, the districts are responsible for implementing the health services. The complexity of the flow of funds makes for an intricate, inequitable, inefficient, and fragmented set of financial flows. A study indicates that many poor districts are receiving much higher levels of funding than previously, but they have been unable to spend the funds because of local absorptive capacity constraints.

Indonesia has one of the lowest amounts of total and government health spending according to the share of GDP and the GDP spent on health (NHA report, 2013). Social security and health financing can be measured by the size of the health expenditure by the public sector. The development of the health sector is dependent on the financing scheme of the universal health coverage system.

On the other hand, health insurance participation remains low in Indonesia. The government estimated that in 2008, formal health insurance covered only 48% of the population. At the beginning of BPJS in January 1, 2014, the coverage under BPJS was a little more than 112 million people. In the first 60 days, there were an additional 790,000 people registering to BPJS from the informal sector. BPJS has set the target that in 2020, all populations must be covered by BPJS.

4 DISCUSSION

Based on the description of the three countries, the problems faced are almost same. There are low levels of health financing, uneven health services,

corruption, and much more. The three countries are facing similar problems because the three countries stated above are developing countries. Developing countries are countries whose welfare levels are still low. On other aspects such as economy and development, they have variation.

The demand for health will increase with time. People want the best health care services. This is a big challenge for the governments to create conditions desired by the community. Health care services are close to health financing. Each country has its own financing system and sources of financing and problems.

In Nigeria, the government must explore and refine others' sources of financing that are efficient, equitable, fair and sustainable. Per capita, health spending should increase to \$60 to provide a minimum range of services. Better mind-sets and behaviour, pay-for-performance bonuses, incentive programs and training will motivate health workers to deliver high-quality care efficiently. The implementation of health financing and actions needs to be monitored and evaluated periodically.

The government of Bangladesh needs to expand the tax base to generate more revenues and at the same time explore ways to generate additional resources for health. Bangladesh should prioritize health and allocate a much greater proportion of its budget for health care. Bangladesh also needs to invest in improving the infrastructural facilities of the health system. Social health insurance can be initiated as a financing mechanism with the objectives of strengthening financial risk protection, and extending health services and population coverage with the final goal to achieve universal coverage.

The largest challenge faced by Indonesia is uneven when it comes to the funding in many districts. The government must simplify the funds flow for them to be evenly distributed. The other challenge is participations of health insurance remains low. The Indonesian government is committed to introducing universal health coverage (UHC) by 2019 to cover the projected population of 257.5 million. The government needs to focus greater attention in the design and to strengthen engagements with local government, civil society and other stakeholders to better support public trust in the sustainability of the system.

Developing country also faced the number of older person. The number of older is expected increase from 249 million to 690 million between 2000 and 2030. The elderly are at high risk for disease and disability. So, the developing country

must prepare for urgent demand relate to aging population. Chronic disease makes up the world's burden of disease. The challenge for developing countries is reorient health sectors toward managing chronic disease and the special needs of elderly. These countries should build a prevention way and some program to delay the chronic disease, enhance care for the chronic disease that plague elderly populations, and improve quality of life for the elderly population.

5 CONCLUSION

The method of health care financing is different for every country. Health is vital to the development of the country, so there is a need for adequate funding for health sector. An overview of the reviewed literature showed that in developing countries, a greater percentage of health care financing comes from out-of-pocket payments. Developing countries' major challenge to do with health care financing includes financial constraints, the inefficient allocation of health sector resources, and a lack of management capacity. In order to achieve effective and efficient health care financing, it is recommended that there should be developments in health economics, civil service and public sector reforms, including developments in the financial and social sector, and managed-market health care reforms.

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The Influence of Indonesia National Health Insurance Program's PROLANIS to Controlling Patient with Diabetes Mellitus Type 2

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Keywords: Indonesia, National health insurance, Controlling, Patient with Diabetes Mellitus Type 2.

Abstract: Diabetes mellitus type 2 is a chronic disease caused by resistance to insulin that is often associated with an unhealthy lifestyle. Diabetes mellitus type 2 has serious disease complications if it's not controlled from the outset. These complications include coronary heart disease, stroke and others disease. Therefore, it needs appropriate handling and control for people with type 2 diabetes mellitus in order not to suffer from complications. In the National Health Insurance in Indonesia called JKN, there is a chronic disease management program known as PROLANIS, which also manages diabetes mellitus type 2 preventively and promotively. The purpose of this research is to find whether the PROLANIS program in JKN runs effectively in controlling patient with type 2 diabetes mellitus to avoid complications. The method used in this research is literature study by reviewing articles and scientific journals related to the PROLANIS program. The results obtained in several articles and scientific journals say that with the PROLANIS program it can control some of the clinical diagnostic tests of patients' diabetes mellitus type 2 so that no complications arise and the quality of life increases. But the continuity of some activity isn't good enough, as caused by low attendance of participants. The conclusion in this research is that the PROLANIS program can control patient with diabetes mellitus type 2 to be better and stable so that the risk to experience complications becomes less, but that there is need of some effort to maintaining membership of PROLANIS to keep it stable.

1 INTRODUCTION

Diabetes mellitus type 2 is a metabolic disorder disease caused by the presence of insulin resistance in the body so that glucose in the blood can't be converted into energy and eventually leads to hyperglycemia conditions or high glucose levels in the blood. Diabetes mellitus type 2 is one of the most recognized degenerative diseases worldwide because of the ever-increasing number of cases over the decades. According to WHO data, the estimated population of diabetes mellitus in the world in 2014 is 422 million in the adult group. The number increased fourfold compared to 1980, which was about 108 million in the adult group. Increased incidence of diabetes mellitus is closely related to the increase in overweight and obesity rates and other diabetes mellitus risk factors. Global cases of death from diabetes mellitus and its complications in 2012 reached 3.7 million cases. Of the 3.7 million

deaths, many occurred in low-income countries and middle-income countries compared with high-income countries. Complications caused by diabetes mellitus include heart attack, stroke, and kidney failure, amputation of the feet, impairment and loss of vision, and damage to the nerves. Complications of diabetes mellitus are very serious and require control efforts so that these complications can be prevented.

In addition to preventing the occurrence of complications in patients, such control efforts can also reduce the burden of the very large medical costs of these complications. In Indonesia, there is a health insurance program called *Jaminan Kesehatan Nasional*, or more commonly JKN. JKN is a health insurance program organized by the *Badan Penyelenggaran Jaminan Sosial* (BPJS). JKN has a model such as insurance, whereby participants pay a premium each month, and, if participants are treated or visit health facilities, medical expenses will be paid by BPJS by claim method. With the existence

of JKN, the people of Indonesia can be guaranteed in the treatment or visits to the health facility, because there is no need to reimburse, except for certain expenses which are not covered by BPJS. Based on data from BPJS, claims on cases of diabetes mellitus and its complications in 2015 reached 3.27 trillion rupias. The amount of costs incurred associated with diabetes mellitus and its complications require control efforts so that expenditures do not continue to swell. BPJS, as the organizer of health insurance, has made efforts to control the complication of diabetes mellitus disease by designing a program called PROLANIS. PROLANIS, or Chronic Disease Management Program, is an integrated healthcare system by promotive and preventive efforts in controlling patient with chronic diseases such as type 2 diabetes mellitus and hypertension. The aim of the PROLANIS program is promotive and preventive and is expected to prevent complications caused by type 2 diabetes mellitus and hypertension. In knowing whether the goal of the PROLANIS program is achieved or not, it is necessary to monitor and evaluate. To date, there has been no publication in the electronic media by BPJS related to the monitoring and evaluation of PROLANIS programs. Nevertheless, there are several research journals that examine the effectiveness of PROLANIS programs in various regions of Indonesia. From the background, researchers want to know more about the effectiveness of PROLANIS program, especially in controlling patient with diabetes mellitus type 2 and its complications in Indonesia.

2 METHOD

In this study, the research method used is descriptive. In the descriptive research method, researchers describe the effectiveness of the PROLANIS program in controlling patient with diabetes mellitus type 2 and its complications. Data are obtained through literature study by reviewing the journals and scientific articles that examine the effectiveness of the PROLANIS program related to diabetes mellitus type 2 disease. The data obtained will be reviewed and analysed and concluded to determine whether the implementation of PROLANIS program is effective or not.

3 RESULT

In BPJS, there is no publication of monitoring and evaluation of PROLANIS program, so it is not known whether the PROLANIS program has been effective or not. However, there are several scientific journals that discuss the effectiveness of PROLANIS programs in several regions of Indonesia. In the scientific article *Analysis of Implementation of Chronic Disease Management Program (PROLANIS) on Family Doctor PT ASKES in Palembang City in 2013* by Assupina, Misnaniarti and Rahmiwati, it explained that the PROLANIS program in Palembang City has been well implemented (Assupina, Misnaniarti and Rahmiwati, 2013). From the various activities that are part of the PROLANIS program, there are some that have not run optimally (Assupina, Misnaniarti and Rahmiwati, 2013). These include 1) HBA1C examination, 2) home visit, 3) the establishment of clubs, and 4) sports together (Assupina, Misnaniarti and Rahmiwati, 2013). The following picture of the activity checklist table on the PROLANIS program was conducted by family doctor PT ASKES in Palembang City.

Table 1: Activities Checklist in Family Doctor PT ASKES in Palembang City (Assupina, Misnaniarti and Rahmiwati, 2013)

| Name of Activity | Informant | | | |
|--|-----------|---|---|---|
| | 4 | 5 | 6 | 7 |
| Health Consultation | √ | √ | √ | √ |
| GDP/ GDPP, BMI, and Blood Pressure's Check | √ | √ | √ | √ |
| HBA1C's Check | - | √ | - | - |
| Rapid Reverral Drug Services | √ | √ | √ | √ |
| Monitoring Health Status Routinely | √ | √ | √ | √ |
| Home visit | √ | √ | - | - |
| Club's Forming | √ | √ | - | - |
| Health Education | √ | √ | √ | √ |
| Doing Exercise Together | √ | √ | - | - |
| Reminder | √ | √ | √ | √ |

Some activities have not run optimally due to internal and external factors in the PROLANIS program, such as in the formation of a club, where,

because of the the constraints of a busy doctor, participants not willing to be involved, or there is no location to gather (Assupina, Misnaniarti and Rahmiwati, 2013).

In terms of membership, the PROLANIS program, especially for type 2 diabetes mellitus, increased participants from the original 263 to 285 participants (Assupina, Misnaniarti and Rahmiwati, 2013). Related to monitoring and evaluation, this has been going well wherein the reporting from family doctors to PT. ASKES Palembang branch and regional branch is always on time (Assupina, Misnaniarti and Rahmiwati, 2013). The provider in this case is PT. ASKES which also routinely monitors family doctors (Assupina, Misnaniarti and Rahmiwati, 2013).

In the research article *The Integration of Preventative Program Disease Diabetes Mellitus Type 2 PT. Askes (Persero) to the Badan Penyelenggara Jaminan Nasional Kesehatan (BPJS Kesehatan)*, Idris (2014) explained that membership of the PROLANIS program has increased rapidly, but the sustainability is very low (Idros, 2014). Based on membership data in the PROLANIS program 2010-2013 period, PROLANIS for type 2 diabetes mellitus had 311 participants in January and 1702 participants in December.2 In 2011, there was an increase of 3122 participants (Idris, 2014). In 2012, there was a rapid increase, in which participants reached 96,897 participants (Idris, 2014). In 2013, membership increased to 100,302 participants (Idris, 2014). However, the participation of high PROLANIS programs is not accompanied by good program sustainability. PROLANIS program visit rate is very low and always decreases every year (Idris, 2014). In 2010, from the 311 participants in January, participants who visited for the PROLANIS program were just 187 participants or only 60.13% (Idris, 2014). In 2012, from 96,897 participants, those who visited were only 3,515 participants or just 3.63% (Idris, 2014).

From the other aspect, the level of health of participants experiences fluctuations (Idris, 2014) whereby there is an increase in the examination of the achievement of fasting blood glucose examination target (in 2010 by 10% to 16.9% in 2012), post-prandial blood glucose (in 2010 by 13.3% to 23.2% in 2012), and body mass index (2010 to 26.7% to 32% in 2012) (Idris, 2014). On HbA1C examination, there was a drastic reduction in the achievement of targets, from 62.1% in 2010 to 1.2% in 2012 (Idris, 2014). Below is a graph of achievement targets related to the health level

examination of PROLANIS program participants in 2010-2012.

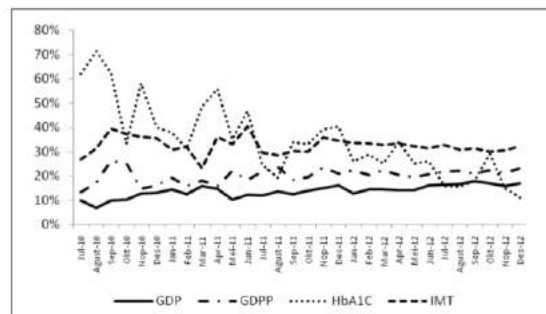


Figure 2: Graph of Achievement of Target Related Inspection of Health Level Participants PROLANIS Program Year 2010-2012 (Idris, 2014).

In terms of cost, once tested, the correlation is found that the more participants visit the PROLANIS program, the lower the costs to be incurred in the hospital (Idris, 2014). As for the effectiveness of PROLANIS program itself, after the correlation is tested it is seen that the reduction of costs to be incurred in the hospital due to effective PROLANIS program occurs after 2-3 years of implementation of the PROLANIS program (Idris, 2014).

4 DISCUSSION

PROLANIS is a chronic disease control program organized by BPJS. The PROLANIS program has the purpose of encouraging JKN participants who have chronic diseases, in this case type 2 diabetes mellitus and hypertension, to have a good quality of life (BPJS, 2015). The goal is measured by 75% of participants who visit first level fasces and have good results in specific examinations according to clinical guidance of the program PROLANIS (BPJS, 2015). In the PROLANIS program there are several activities: 1) consultation/ educational activities, 2) home visit, 3) reminder, 4) club activity, and 5) health status monitoring (BPJS, 2015). Consultation activities are conducted on the basis of the agreement of participants with primary healthcare (BPJS, 2015). In this case, it is expected that a minimum of primary healthcare is the forming of one club/ group for education to be implemented (BPJS, 2015). The reminder activity is an activity to remind the related participants of the consultation schedule to the first level fasces that he chooses (BPJS, 2015). The home visit activity is a visit to the participant's home to provide self-health and environment-related education to the participants

and their families (BPJS, 2015). Home visit activities are conducted when new participants are registered, absent for three consecutive times, physical examination is not good, and post-hospitalization (BPJS, 2015).

From the BPJS, especially the primary service management department, there has been no publication on the Internet related to the monitoring and evaluation of the PROLANIS program, so not everyone knows the effectiveness of the PROLANIS program. However, in the several scientific journals discussing the effectiveness of the PROLANIS program, it is considered that the PROLANIS program has not been run properly. This is evident in the lack of some activities, such as the formation of clubs for education and other group activities (Assupina, Misnaniarti and Rahmiwati, 2013). In addition, the rapidly increasing membership of PROLANIS programs is not followed by the continuity of participants in following the activities of the PROLANIS program (Idris, 2014).

According to research by Swastini, D.A, Putri S.A, Rudiarta N.M, Wiryanthini I.A.D (2016), patient with hypertension which using JKN, diastolic blood pressure decreased significantly. The patient do outpatient treatment in hospital around six month with the help of JKN. Another literature study by Della P.S, Mirtha T.L (2016), noted there's connection between the successes of blood pressure control with health insurance participation. Patient who don't have health insurance increase the risk of uncontrolled blood pressure. With health insurance which one of them are JKN, patient can get treatment to control their blood pressure and prevent complication without worried about high cost.

Of the various problems, the BPJS, especially the primary service management department, should make efforts of continuity so that participants who have signed up always follow the activities on the PROLANIS program. Such endeavours are not necessarily by devising new endeavours, but can also utilize old efforts through reminders. In addition to SMS, reminders may also be done through social media on the Internet owned by participants. In this modern era, people have started to become Internet literate and utilize it effectively. Social media on the Internet that may be used include the LINE application, WhatsApp, etc. Another possible effort is to add facilities and facilities for optimizing activities. As with educational activities, it is possible for participants to be given a snack so that participants are happy and interested to participate, or to also provide games or role-play so that participants do not get bored with the education provided. Maintaining the continuity of participants in following the various activities in PROLANIS program, especially related to controlling patient

with type 2 diabetes mellitus, will impact on improving the quality of the program.

5 CONCLUSIONS

PROLANIS is an effort undertaken by BPJS to control chronic diseases, which, in this case, is type 2 diabetes mellitus. There is no publication by BPJS on the Internet related to the monitoring and evaluation of the PROLANIS program. However, there are several scientific journals that have examined the effectiveness of PROLANIS programs. From these journals, it was found out that the PROLANIS program is able to improve health examination to be better, but it is not balanced with the continuity of activities and low participated on the PROLANIS program. It is necessary to keep participants in the activities of PROLANIS programs, such as by reminding through social media on the Internet or add some facilities such as snacks or games and doing role-play so that participants are interested to continue to follow the activities in PROLANIS program, especially related to diabetes mellitus type 2.

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The Influence of Non Smoking Area Policy on the Proportion of Active Smokers in Student Groups

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Keywords: Non smoking area policy, Active smoker, Students, School, Tobacco control.

Abstract: Cigarettes contain harmful chemicals such as tar, nicotine and formalin. These chemicals can be a risk factor for lung cancer, coronary heart disease and other chronic diseases. The prevalence of active smokers is increasing every year in Indonesia. Teenagers contribute to the considerable cigarette consumption and 1 in 4 teenagers become active smokers. Therefore, people need to be protected from the hazards of cigarette smoke in the environment. The non-smoking area policy aims to reduce the number of smokers and to realise the potential of healthy air. The policy has seven targets; one of them is an educational institution. The purpose of this study was to explain the impact of non-smoking area policy on the proportion of active smokers in teenage groups in the school environment. This study was conducted using the descriptive method. The data was collected from a secondary data source. The results showed that the proportion of active smokers in junior and senior high school students following the enactment of the non-smoking area policy has increased mainly in male students. In addition, active smokers who are junior high school students located in districts and cities alike have increased in number. The proportion of smokers who are high school students located in districts and cities has tended to decrease since the policy implementation.

1 INTRODUCTION

Cigarettes contain 4,000 components that are hazardous chemicals. These chemicals can be toxic or change the nature of the body's cells in to becoming malignant. There are 43 chemicals in cigarettes that can cause cancer such as tar, nicotine and carbon monoxide (Depkes RI, 2013b). Some chemicals should not be used in cigarettes such as arsenic as used in pesticides, toluene in paints, formaldehyde in corpse preservatives, and benzene used in addition to fuel oil (Depkes RI, 2017). One of the substances that causes a person to become addicted to cigarette consumption is nicotine. The addiction of a smoker is not only physical, but it is also psychological in nature.

Indonesia is the fifth highest cigarette consuming country in the world of 215 billion (WHO, 2017). The number of Indonesians in 2011 who smoked was as many as 59.9 billion (34.8%) (WHO, 2012). The proportion of active smokers who smoked daily and were aged >10 years experienced an increase of 0.6% in 2007 & 2013 (Depkes RI, 2013a).

Indonesian teenagers aged <19 years old becoming new smokers amounting to 16.4 million per year in the period 1995-2013 (Menkes RI, 2016). 1 in 4 Indonesian adolescents become active smokers who smoke every day (BNN, 2017). The high number of adult smokers is of particular concern as they are at risk of chronic disease later on in life.

A smoker is at risk of suffering from various chronic degenerative diseases such as chronic obstructive pulmonary disease, pulmonary tumours, mouth and throat tumours, stroke and coronary heart disease. In 2013, lung, bronchial and tracheal lung disease had the most prevalent cigarette disease in Indonesia. Cerebrovascular disease, ischemic heart disease and tuberculosis are the three most common causes of death from smoking (Menkes RI, 2016). Various diseases appear in line with the increase in the number of cigarettes consumed.

One of the government's efforts to protect people from exposure to tobacco smoke that is dangerous is through the policy of having area without any smoking. The definition of a non-smoking area is a non-smoking area or a place that does not produce, sell or advertise tobacco products (Presiden RI,

2012). The legal basis governing the non-smoking area is UU no. 36 year 2009 about health and PP no. 109 year 2012 about securing materials containing addictive ingredients such as tobacco products. The public spaces targeted by non-smoking areas include health care, teaching and learning, children's playgrounds, places of worship, public transport, workplaces etc.

The school environment is one of the target non-smoking areas where the area is smoke-free, and there are no cigarette products or cigarette advertisements. The purpose of non-smoking area is to reduce the number of smokers. Target areas without cigarettes in schools include school leaders, teachers, students, and other employees at the school. The non-smoking area policy is expected to create a 100% non-smoking learning area (Depkes RI, 2010).

The policy about non-smoking area has been going on for nine years and school has become one of its targets. Therefore, this study aims to explain the impact of the non-smoking area application on the proportion of active smokers in the student group.

2 METHOD

This study using descriptive method that will describe a situation objectively. The type of data used is secondary data. The data analysis was done by comparing the prevalence of smoking in 2006 and 2016 in students from BNN. The data comes from students who are in junior high and high school. Furthermore, the results of the analysis are also supported by the exploration of other research results with related themes.

3 RESULT

The table below shows the results of a survey of cigarette consumption by the National Narcotics Agency (BNN) on students in 18 provinces of Indonesia. Table 1 shows that the proportion of active smokers who are junior high school students has increased in 2000-2016 by 5%. The proportion of high school students who smoke has decreased from 33% to 31%.

Table 1: The proportion of active smokers in junior and senior high school students in 2006 and 2016 (%)

| Students | Year | |
|--------------------|------|------|
| | 2006 | 2016 |
| Junior High School | 22 | 27 |
| Senior High School | 33 | 31 |

Source : BNN, 2017

In Table 2, it can be seen that the distribution of active smokers by sex has a difference evident within the results. Male junior high school students experienced a significant increase of 44.8%. The female SMP smokers decreased from 21.5% to 4.6%. Similarly with the high school students, male high school smokers experienced a significant increase of 49.2% while female high school female smokers decreased by 26.8%.

Table 2: The proportion of active smokers in junior and senior high school students in 2006 and 2016 by sex (%)

| Sex | Junior High School | | Senior High School | |
|--------|--------------------|------|--------------------|------|
| | 2006 | 2016 | 2006 | 2016 |
| Male | 4,7 | 49,5 | 11,6 | 60,8 |
| Female | 21,5 | 4,6 | 32,7 | 5,9 |

Source : BNN, 2017

The data in Table 3 shows that there is a difference between active smokers in junior and senior high school students in cities and districts. Junior high school students in the city experienced an increase of 7.8% and in the district also experienced an increase of 3.6%. The proportion of smokers in high school students in the city decreased by 2.6% and districts decreased by 0.8%.

Table 3: The proportion of active smokers in junior and senior high school students in 2006 and 2016 by location (%)

| Location | Junior High School | | Senior High School | |
|----------|--------------------|------|--------------------|------|
| | 2006 | 2016 | 2006 | 2016 |
| City | 20,1 | 27,9 | 33,1 | 31,7 |
| District | 23,2 | 26,8 | 32,1 | 31,3 |

Source : BNN, 2017

4 DISCUSSION

The Government of Indonesia has instructed on the policy making of non-smoking areas since the issuance of UU no. 36 tahun 2009 on the health mandate to the local government in order to implement areas without smoking in their respective regions. Schools are one of the areas that must apply the area without smoking policy and students have become one of the targets. Students are expected not to become new active smokers and to assist in reducing the smoking rates among adolescents.

Based on the table presented, the proportion of active smokers among junior high school students has increased after the implementation of the non-smoking area policy. This is in contrast to high school students who showed a 2% decline rate in the number of active smokers after the implementation of a non-smoking area policy. The facts show that junior high school adolescents are an increasingly widespread target of the tobacco industry. The tobacco industry proved that it has expanded its marketing to an early age of only 10-14 years (Afiati, 2015). In addition, junior high school is also a vulnerable age group because it is in a critical period of searching for their identity. Cigarettes are considered to be a symbol of maturity and coolness by teenage groups (BNN, 2017).

The proportion of smokers in junior and senior high school students of the male sex tends to increase considerably. Junior and senior high school students of the female gender decreased after the implementation of the policy of non-smoking areas. The difference in the proportion of smoking is because men smoke more than women, which can be caused by stress factors. How stress is dealt with in men tends to lead to negative things such as smoking while women only tend to react with feelings of anxiety. In addition, cigarettes are also used as a social tool to forge friendships with other men around them (Afiati, 2015).

Active smokers in the junior high school student context in both cities and districts alike has increased after the adoption of the non-smoking area policy. High school students who are in the city or districts have decreased the proportion of active smokers. The proportion of active smokers in junior high school students increased as the age of 10-14 years old has become the dominant first age of starting to smoking (Afiati, 2015). At that age, teenagers start trying to smoke because they want to learn due to peer pressure (Rachmat, Thaha and Syafar, 2013).

Judging from the implementation of the non-smoking area policy, schools that have been smoke-free and areas that are without cigarette advertisements in Indonesia total only 90 (Yayasan Lentera Anak, 2017). Tens of thousands of other junior and senior high schools have not implemented a comprehensive or consistent non-smoking area policy in the school environment. Factors that hamper the implementation of a non-smoking area policy in some schools includes socialisation from the local government to the school not being optimal. There is no special team to oversee the implementation of an area without cigarettes, the availability of facilities and infrastructure of non-smoking areas is not sufficient, and the school's commitment in the form of sanctions to the offenders is still low (Argameli, 2017 dan Panjaitan, 2015). The optimal application of cigarette smoking areas in every school is actually very important for better growth and development in the younger generation. This is evidenced by research that explains that adolescents in schools with non-smoking areas have a 3.2 times better chance of having a positive attitude and are 2.6 times more likely to quit smoking than teenagers in schools that have not implemented an area without smoking (Rachmat, Thaha and Syafar, 2013).

5 CONCLUSIONS

The results showed that the proportion of active smokers in junior and senior high school students following the enactment of a non-smoking area policy has increased, mainly in the male students. In addition, active smokers in relation to the junior high school students located in districts and cities alike has also increased in number. The proportion of smokers of high school student age located in the districts and cities has tended to decrease.

The increase in the proportion of active smokers in students following non-smoking area policy was due to less intensive dissemination of non-smoking area policy, no special team of non-smoking area policy, and lack of facilities or supporting infrastructure. In addition, further research is needed on the causes of an oncrease in the proportion of active smokers among adolescents.

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Marketing Process of Agricultural Tobacco Products Effects on Tobacco Farmer Economy

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Keywords: Tobacco, Marketing, Availability, Needs, Problems.

Abstract: Indonesia has fertile soil which can be overgrown many variety of plants for staple food and other commodities such as tobacco to meet the needs of the population. This study aims to describe the process of buying and selling of tobacco products in Indonesia, the farmer's efforts in overcoming problems in the marketing process of tobacco farming in an area. This research is a descriptive research. Collecting data are from literature study, journal, and statistic secondary data. The results showed that the marketing process of tobacco farming has not directly to farmer, so there will be a fluctuation price which can inflict a financial lost the farmer. Qualitative and quantitative of tobacco products is influenced by season, modals, pests and diseases, asymmetric knowledge.

1 INTRODUCTION

Indonesia is an agrarian country; not only is rice grown as a staple food, but also other commodities such as tobacco are grown to meet the needs of the population. It is known from the Ministry of Agriculture of the Republic of Indonesia that the land area of tobacco plantations in 2015 reached 209,095 Ha, with productivity going up and down each year.

Tobacco plants belong to the Plantae Division, Class Dicotyledonaea, Order Personatae, Family Solanaceae, Sub Famili Nicotianae, Genus Nicotianae, Species *Nicotiana tabacum* L. According to Imam, the problem of tobacco plantation results is currently not realising the need for a healthy competent climate and the quality and amount of tobacco that is not as much as is needed.

Tobacco in Indonesia has ups and downs in relation to supply availability from year to year. The problems that arise cause many tobacco farmers to feel the profit-loss of living on the tobacco plantation. Therefore, it is necessary to analyse the problem of the fluctuation in the tobacco plantation results.

The environment of tobacco farming for example heat, nicotine exposure, and biological factors can cause health illness, example Green Tobacco Sickness (GTS), heat illness, etc.

2 METHODS

The method used is the descriptive research method using secondary data analysis. The secondary data was obtained through a literature study, i.e. journals, regulations and reports of the secondary statistics data.

3 RESULT AND DISCUSSION

3.1 The marketing process of tobacco products.

Tobacco farmers sell their crops to middlemen, factories and companies. The presence of companies in a tobacco producing area is very helpful to facilitate the sale of tobacco products from the farmers to go on to be processed and processed into finished goods. Many multi-national tobacco companies in Indonesia obtain tobacco through direct contracts with farmers in the open market.

According to Fuad, in the marketing of tobacco products in Madura, there is a coordinated relationship between the factory warehouse and the local government, but the local government cannot provide policy instructions to the factory warehouse. The factory has a contractual relationship with the

skipper as a tobacco supplier. Skippers have an arm who supply the tobacco called middleman. Farmers sell the tobacco freely to the wholesalers who offer the highest prices.

The process of determining the selling price of tobacco to the factory is based on the estimated cost of production by the farmers. There are also farmers who do not cooperate with the factory who do not take part in determining the sale price of tobacco, therefore many of these farmers lose out because they cannot bargain if the factory-determined price is less profitable for the farmers. The asymmetric knowledge also leads to a loss of selling price for the farmers. The majority of farmers do not have warehouses for their tobacco products, so the farmers always sell their tobacco quickly despite the low prices (Oryza A, 2015).

3.2 Fluctuation of production, productivity and the areas of tobacco plantation from 2014-2016

Productivity, production amount, and the plantation areas each year has changed. Many factors can affect the quality and quantity of the tobacco plantation's products.

Table 1: Area of Tobacco Plantation from 2014-2016

| Year | Area of Tobacco Farm (Ha) |
|------|---------------------------|
| 2014 | 215.865 |
| 2015 | 209.095 |
| 2016 | 206.337 |

Note: 2016 data is still temporary.

Source: Ministry of Agriculture, 2013-2017.

Table 2: Production of Tobacco Plantation from 2014-2016

| Tahun | Tobacco Product (ton) |
|-------|-----------------------|
| 2014 | 198.301 |
| 2015 | 193.790 |
| 2016 | 196.154 |

Note: 2016 data is still temporary.

Source: Ministry of Agriculture, 2013-2017

Table 3: Productivity of Tobacco Plantation from 2014-2016

| Year | Tobacco Production Productivity (Kg/Ha) |
|------|---|
| 2014 | 947 |
| 2015 | 946 |
| 2016 | 989 |

Note: 2016 data is still temporary.

Source: Ministry of Agriculture. Area of Tobacco Plant by Province in Indonesia, 2013-2017

3.3 Problems with the marketing process of tobacco plantation products

3.3.1 Uncertain climate change

Tobacco plants are plants that can only be produced in certain areas. Tobacco plants can grow in areas that have a rainfall of approximately 2000mm/year. The appropriate air temperature is 21o-32oC with a pH between 5-6. The characteristics of the land favoured by tobacco plants is soil that is loose, easy to bind with water and with good air circulation so as to improve drainage. The best altitude is between 200-3000 masl.

The existence of climate change from the rainy season to the dry season or vice versa is not very influential for the quality and quantity of tobacco plantation products, especially in the rainy season. According to Abdus's research, until now, tobacco farming still relied on chemical pesticides as a way of controlling pests and diseases. The inappropriate use of chemical pesticides can cause harmful residual effects, in addition to being an expensive cost.

3.3.2 Tobacco plantation's modal

Efforts to meet the required financial capital, the farmers cover it by taking loans from banks, cooperatives, friends, and relatives. Most banks refuse to lend to agricultural businesses because of their uncertain nature (Oryza A, 2015).

3.3.3 Pests and diseases

Pests and diseases are one of the causes of the decline in the quantity and quality of tobacco plantation products. Biological disorders that attack tobacco plants can spread to other crops in a plantation area until the tobacco dies and reduces the farmer's harvest.

Types of pests that attack tobacco plants are londrak (*Thrips parvispinus*), grayak worm (*Spodoptera litura F.*), caterpillar tobacco (*Helicoverpa armigera*), peach aphid (*Myzus persicae*), caterpillar (*Agrotis ipsilon*), borer shoot (*Heliothis sp*), nematode (*Meloydogyne sp*), and aphids (*Aphis sp*, *Thrips sp*, *Bemisia sp*). The types of diseases in tobacco plants are charred stems (Damping off), lanas, patik leaves, brown spots, leaf rot, and some viruses, such as the Tobacco Virus Mozaic (TVM), Pseudomozaik, and Marble.

3.3.4 Farmer's knowledge

The ability of farmers in managing tobacco is considered to not be optimal. For example, in the technical provision of chemical pesticides that are not appropriate, poor procedures can cause the targeted pests to become immune. Farmers are still not wise in relation to managing pests and diseases because of their ignorance about how to eradicate pests and diseases. This is due to a lack of knowledge and training.

Moreover, if there is child labour, it is a family tradition to help the household economy as a tobacco farmer, even if they have not received any education or training related to pests, diseases, and the dangers of nicotine and chemical pesticides. Such ignorance will have an impact on the health and safety of farmers.

4 CONCLUSION

The results showed that the marketing process of the tobacco plantation products that still pass through the middlemen to reach the factory is the cause of the ups and downs of tobacco selling prices. Nicotine exposure from tobacco leaves can cause nicotine poisoning or Green Tobacco Sickness (GTS).

The existence of an uncertain climate, pests and diseases, large financial capital, and the low knowledge of farmers are the factors involved in the price fluctuations, the amount of tobacco production that causes the farmers' income to be ascertained routinely or certainly every harvest season, also occupational health hazards.

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Effect of the Burden Incurred by Tobacco-Defective Patients on Lost Productivity

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Keywords: Cigarette, Disability, Productivity, Burden, Motivation.

Abstract: The economic and health burden of the tobacco community is increasingly burdensome for low- and middle-income countries, including Indonesia, compared to high-income countries. The total losses due to cigarette consumption in 2013 reached Rp 378.75 trillion. The amount is derived from the loss of cigarette purchases of Rp 138 trillion, the loss of productivity due to disease, disability and premature death at a young age of Rp 235.4 trillion, and medical expenses due to tobacco-related illness of Rp. 5.35 trillion. The purpose of this study was to determine the effect of the load burden caused by tobacco defect patients on lost productivity. The method used is that of a literature study. This study found: Disability poses psychological burdens related to motivation; people with disabilities have low motivation and have an effect on decreasing productivity. Conclusion: a decrease in productivity that will increase the burden for others.

1 INTRODUCTION

Tobacco is known to have killed nearly 6 million people per year, 5 million of whom are smokers and former smokers (Indonesian Ministry of Health, 2010). The data shows that most smokers are in low- and middle-income countries. Every year, the number of smokers continues to increase and is followed by smokers in the younger age group (Direktorat PTPM, 2012). Indonesia is the third largest cigarette consuming country in the world as well as the fifth largest tobacco leaf producer in the world (GATS, 2011). The Global Adult Tobacco Survey results showed that cigarette consumption in Indonesia in 2008 reached 225,000 billion cigarettes (Muchijidin, 2009). The survey results also showed that the number of tobacco users in the form of cigarettes and other forms covers about 36% of the total population of Indonesia. It is also known that the largest cigarette users come from the lower income levels of society. Not only is this from a low economic point of view, but cigarette users also have a low level of knowledge about the dangers of smoking.

The increase in cigarette consumption each year causes quite a lot of losses, not only in relation to health but also in terms of the economy. One of the

major losses Indonesia has to endure is the growing number of smokers at an increasingly young age (GATS, 2011). This will indirectly affect the productivity of society, as well as the excessive consumption of cigarettes causing disease to the point of disability. According to the WHO, cigarettes are known to be the main cause of the high mortality rates of cardiovascular disease after hypertension. According to Balitbangkes' 2010 data, cigarette expenditure from cigarettes reached Rp 245.41 trillion, including cigarette purchases from the community of 138 trillion, loss of productivity due to disability at a young age of Rp 105.3 trillion, and medical expenses of Rp 2.11 trillion. Hospitalisation costs due to smoking-related illnesses amounted to Rp 1.85 trillion and smoking-related outpatient costs amounted to Rp 0.26 trillion (Kosen, 2012). Another disadvantage is the disruption of productivity due to illness, disability, and premature death at a young age to the cost of Rp 235.4 trillion. Judging from the loss of productivity, especially in patients with disabilities, this study was conducted to determine the impact of the burden on the disabled patients due to the loss of productivity.

2 METHODS

This study used the descriptive research method within a literature study design. A literature study is a method of research done by collecting data from various sources related to the topic of the research. This research data comes from journals, and other scientific articles which are then analysed further.

3 RESULTS

3.1 Disability and Burden of Disability

Disability in Kamus Besar Bahasa Indonesia includes 1) deficiencies that cause the value or quality to be not as good or to be less than perfect (contained in body, mind, or morals); 2) blisters [damage, stains] that cause the condition to be less good (less perfect); 3) blemish, disgrace; 4) not (less) perfect.^[8] It can be inferred that disability is a condition that manifests as a physical or mental disorder that can interfere with a person when it comes to performing their day-to-day activities normally. Disability is one factor that can affect one's productivity. People with disabilities will have a lower productivity value compared to someone who is not disabled.

Cigarettes are one of the risk factors of various diseases that can cause disability, and also death. The form of disability caused by cigarettes is mostly in the form of physical disability. Disability caused by cigarettes does not appear directly but as an effect of the health problems that arise due to the consumption of cigarettes in the long term. According to the CDC (the Center for Disease Control and Prevention), cigarettes harm organs in the body. Smoking habits have been shown to be associated with approximately 25 different types of disease in various organs of the human body, such as: mouth cancer, oesophageal cancer, cancer of the pharynx and/or larynx, lung cancer, pancreatic cancer, bladder cancer and vascular disease. Smoking habits are known to also affect the eyes and the reproductive system, so the risk of disability in smokers will be higher.

Disease caused by cigarettes causes a person to be unable to work and increases the cost to be paid for treatment. When in a sick condition, the person will lose productivity so that their needs become unfulfilled. The disruption of health creates a lot of burdens, including the burden of costs to be borne by the patient due to medical costs to be incurred.

People with disabilities usually have a low economic condition because they cannot work and this can be a psychological burden for the sufferer. Psychological burden has a huge impact on the development of a person. A person can lose motivation because they feel that they cannot produce something to meet their needs and to achieve their life goals.

Table 1: Total Medical Costs of Tobacco Related Diseases, Indonesia 2013

| Disease | Total cases | Cost per episode | Total cost (Rp) |
|--|-------------|------------------|-------------------|
| Low Birth Weight babies | 216.050 | 6.185.362 | 1.336.347.460.100 |
| Tumor of Mouth and Throat | 6.670 | 3.733.141 | 24.900.050.470 |
| Neoplasm of Esophagus | 1.710 | 3.733.141 | 6.383.671.110 |
| Neoplasm of Stomach | 10.440 | 3.733.141 | 38.973.992.040 |
| Neoplasm of Liver | 13.400 | 3.733.141 | 50.024.089.400 |
| Neoplasm of Pancreas | 2.910 | 3.733.141 | 10.863.440 |
| Neoplasm of Lung, Bronchus and Trachea | 54.300 | 3.733.141 | 202.709.556.300 |
| Neoplasm of Cervix | 28.940 | 3.733.141 | 108.037.100.540 |
| Neoplasm of Ovary | 7.690 | 3.733.141 | 28.707.854.290 |
| Neoplasm of Gall Bladder | 10.160 | 3.733.141 | 1.106.933.657.050 |
| Coronary Heart Disease | 183.950 | 6.017.579 | 1.118.707.241.880 |
| Cerebrovascular Disease/Stroke | 144.780 | 7.726.946 | 1.118.707.241.880 |
| Chronic Obstructive Pulmonary Disease | 248.310 | 4.551.951 | 1.294.165.188.810 |
| Total | | | 5.352.829.437.990 |

Source: www.cheps.or.id (CSO Workshop Minister of Health RI: Cigarettes Prices : The Dilemma of Development & Quality of Life, Jakarta 2016)

3.2 Productivity

According to Kamus Besar Bahasa in Indonesia, productivity is the ability to produce something, also known as production power, or *keproduktifan*. It can be concluded that it is due to the productivity of a person to produce something to the maximum. Productivity is a description of a person's health condition; if the body is not in a healthy condition then productivity cannot be achieved to the maximum level. Disability is a condition that prevents a person from becoming more productive. If the disability is sufficiently severe, then one can become entirely unproductive. People who are sick from smoking are the ones who lose their productivity. Cigarettes cause their working time to be lost due to care, and not only that, but some of them cannot return to work because of the organs that cannot function again. Most sick smokers are those in the productive age group, and so the biggest disadvantage caused by cigarettes is the factor of productivity.

Table 2: Total DALYs Loss due to Tobacco, by Disease and Sex, Indonesia

| Disease | Total DALYs Loss | Male | Female |
|--|------------------|-----------|-----------|
| Low Birth Weight babies | 2.274.200 | 1.249.520 | 1.024.680 |
| Tumor of Mouth and Throat | 828.340 | 418.300 | 410.040 |
| Neoplasm of Esophagus | 152.998 | 89.888 | 63.110 |
| Neoplasm of Stomach | 65.500 | 34.990 | 30.510 |
| Neoplasm of Liver | 148.360 | 75.260 | 73.090 |
| Neoplasm of Pancreas | 49.560 | 30.100 | 19.460 |
| Neoplasm of Lung, Bronchus and Trachea | 403,16 | 383,62 | 19,54 |
| Neoplasm of Cervix | 312.555 | -- | 312.555 |
| Neoplasm of Ovary | 175.513 | -- | 175.513 |
| Neoplasm of Gall Bladder | 218.511 | 129.013 | 89.497 |
| Coronary Heart Disease | 204.349 | 127.612 | 76.736 |
| Cerebrovascular Disease/Stroke | 847.740 | 777.085 | 783.031 |
| Chronic | 901.744 | 669.943 | 231.801 |

| Disease | Total DALYs Loss | Male | Female |
|-------------------------------|------------------|-----------|-----------|
| Obstructive Pulmonary Disease | | | |
| Total | 6,179,773 | 3,602,095 | 3,290,043 |

Source: www.chepps.or.id (CSO Workshop Ministry of Health RI: Cigarettes Prices : The Dilemma of Development & Quality of Life, Jakarta 2016)

3.3 The impact of the burden on productivity

Disability is a condition that can cause a burden on the sufferer. The burden can be psychological and social. The psychological burden has a greater impact on a person with disabilities because it may affect their development and desire to achieve their life goals. Because of the limited circumstances, a person may lose their motivation to produce something that is beneficial to himself and others. Motivation is a state in which a person encourages the desire of other individuals to perform certain activities to achieve their goals. Motivation is an important aspect of life, because motivation is an impulse that is in a person before he or she does something.

The psychological burden of a disabled patient with regards to one's motivation to meet their needs and to achieve their goals is difficult to do. Based on the theory of the motivation process (Hasibuan), a disabled person is inhibited in being able to do something oriented to their life's purpose as the above cycle can not run properly due to the disability. Therefore, people with disabilities have lower motivation. Various studies show that motivation has an effect on productivity, so low motivation leads to decreased productivity in patients with disabilities.

4 DISCUSSION

Based on table 1 the medical costs incurred for tobacco-related illnesses have a substantial number of cases with most diseases are chronic obstructive pulmonary disease as many as 284,310 cases, while the largest medical costs to be spent are for low birth weight babies and chronic obstructive pulmonary disease. Based on these data it is known that all tobacco-related diseases cause a substantial burden of medical expenses that prove that tobacco is at risk for increasing poverty rates, especially for those who

have been ill because of tobacco consumption. Based on table 2 total DALYs Loss due to tobacco is high enough when viewed based on productivity disease is the highest loss due to low birth weight babies, whereas if viewed by sex the productivity loss is greater in male gender. From the data it is known that men lose more productivity, while most men are workers. Especially those who cannot return to work will be burdened with sickness or disability.

The psychological burden is a burden that must be borne by the disabled patients. The psychological burden is related to one's motivation to produce something useful. The limitations experienced by disabled patients make people with disabilities have low motivation when it comes to meeting the needs of life and achieving its goals. Low motivation is directly related to productivity, and with low motivation, disabled people will increasingly lose productivity and cause greater economic losses due to the burden that they transfer to others.

5 CONCLUSIONS

Tobacco-related illnesses cause considerable medical costs to the sufferer and the high value of productivity lost due to illness or disability. Moreover disability poses also a psychological burden associated with the motivation to meet their needs. In disabled patients, these limitations are the cause of low motivation and affect their productivity, and productivity subsequently decreases. The losses incurred due to the productivity lost will be a burden for others.

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Analysis of Factors Inhibiting the Community to be the National Health Insurance Participants (*Jaminan Kesehatan Nasional Indonesia*)

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Keywords: *Jaminan kesehatan nasional*, Health insurance, Membership, Community, Inhibiting factors.

Abstract: Health is a basic need of society. Both low and upper-middle class people are required to meet their health needs. However, many people still are not able to access the health services available. Therefore, the Indonesian Government has launched a compulsive health insurance programme named JKN (*Jaminan Kesehatan Nasional*). This programme aims to improve the access of the whole community to the available health services, but there are many people who still have not yet registered as participants. The purpose of this study is to see what factors are preventing people from becoming JKN participants through previous study literatures from textbooks, program evaluations, and previous research studies. The results show that there are several inhibiting factors for the community members to register themselves as JKN participants, including internal factors such as education level, occupation, amount of income, residence, and external factors such as the administrative process, easiness of access to the health services, workforce situation, the influence of others, and so on.

1 INTRODUCTION

The National Health Insurance Program (*Jaminan Kesehatan Nasional* or JKN), which may be referred to as Social Health Insurance in Indonesia, is a program under the Social Security Administering Agency (*Badan Penyelenggara Jaminan Sosial* or BPJS) as a manifestation of the enactment of Law No. 40 of 2004 on the National Health Insurance System. The first program run through Healthy Indonesia Card aims to meet the needs of the community as one of the indicators of improving the quality of life, namely the increasing degree of public health. BPJS is a legal entity formed to organise the social security program, which is a transformation of PT Askes as it was before January 1st, 2014.

Social insurance is a compulsory program which collects the participants' contributions in order to provide protection to the participants from the socioeconomic risks that affect them and/or their family members (UU SJSN No.40 of 2004).

The National Social Security System is the procedure of the implementation of the Social

Security program by *Badan Penyelenggara Jaminan Sosial* (BPJS) of Health and BPJS of Labour. Social Security is a form of social protection to ensure that all people are able to fulfil their basic needs.

JKN membership itself is mandatory, with the intended participants having to register in the JKN program including foreigners who have worked at least 6 (six) months in Indonesia, who have paid their dues.

According to JKN's manual starting on January 1st, 2014, JKN participants are health insurance program participants who are transferred to the JKN program. They are Jamkesmas (PBI JKN) program participants, members of the TNI/PNS within the Ministry of Defence and their families, members of Polri/PNS within Polri and members of his family (PPU), PT Askes participants, and JPK Jamsostek participants which in total is estimated to be 110.4 million people (43.78% of the population).

Up to August 2017, the JKN program participants throughout Indonesia has reached 180,735,289 inhabitants out of the 237.6 million total population of Indonesia. This figure is considered to be a large number considering it

already consists of more than half of the people of Indonesia. It also indicates the enthusiasm of the community itself by having evidence of them participating in the success of the government program.

The participation rate of the community in the membership of JKN apparently still cannot be said to be the maximum, considering that JKN has a compulsory membership and should be able to cover the entirety of society. By the end of 2016, the target of the membership set by BPJS could not be fulfilled. Out of the 188 million targeted citizens registered with the Health Insurance program National-Healthy Indonesia Card (JKN-KIS), only 171.67 million participated in JKN-KIS; 91% of the target. This can be a problem because the Government has already set up the goals that 95% of the Indonesian citizenship has been targeted to participate in JKN-KIS by January 1st, 2019. *BPJS Kesehatan* only has two years until that date to add around 80 million residents as new participants so that the membership targets can be achieved.

The achievement of the JKN membership targets has a high level of importance in order to see in the success of the JKN program. This is because the participants are one of the determinants of the direction in which the program will run.

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2 METHODS

The type of data used was secondary data, in which the data to be analysed in this study is data derived from the literature that discusses the researched topic such as the data from government agencies, scientific articles, textbooks, journals, and previous research studies. The author composed this paper by using 9 various sources. These sources include some articles that could be found on scientific sites by inputting the exacts keywords, government regulations, previous study that published on public health journals, etc.

The data analysis technique used in this research study was started by analysing the most relevant research results until reaching the least relevant. It can also be done by looking at the research time; based on sequence of the year of research, starting from the most recent research study and then progressing until the oldest research study. The analytical process is also continued by reading the summary of the literatures used and making notes of

the important sections that are relevant to the issues raised in the study. Any sources of information used in the literature studies should also be included to avoid any form of plagiarism if the information comes from the ideas of others.

3 RESULTS

Jaminan Kesehatan Nasional (JKN) participation in Indonesia cannot be separated from the government's goal to realize Universal health Coverage (UHC) that can provide comprehensive health services to all Indonesian people. DJSN has arranged a roadmap toward JKN and agreed that Universal Health Coverage will be achieved completely in the end of 2019, where every single citizens will have a health insurance and get the same medical benefits (DJSN, 2012).

Those ambitious plans have some targets to realize its objectives, that is:

1. All Health Insurance participants from Civil Employee, *Jamkesmas*, *Jamsostek*, Army/Police and partly *Jamkesda* totalling around 121.6 million people will be managed by *BPJS Kesehatan* as of January 1, 2014.
2. All of *Jamkesda* participants have joined as BPJS participants at the latest by the end of 2016.
3. Employers have been gradually registering their workers and their families to *BPJS Kesehatan* during the period 2014-2019.
4. Self-employed workers who earn income from their own businesses have registered membership to *BPJS Kesehatan* during the period 2014- 2019.
5. In 2019 no more workers are not registered in *BPJS Kesehatan*.
6. By the end of 2019 universal health coverage achieved. (TNP2K, 2015)

In achieving these targets to realize UHC, then *BPJS Kesehatan* requires a maximum effort in performing performance *BPJS Kesehatan* performance progress in realizing UHC that should be achieved by the end of 2019 can be seen in table 1 which shows the amount of participants JKN until August 2017.

The number of Indonesian citizens registered as JKN participants up to August 2017 has reached 180,735,289 people out of Indonesia's total population of 237.6 million people. Details of the type of membership that JKN has in 3 years of the program can be seen in the table below:

Table 1: Number of JKN participants according to the membership type

| Membership Types | Number of Participants |
|-------------------|------------------------|
| PBI APBN | 92.216.825 |
| PBI APBD | 17.371.580 |
| PPU-PNS | 13.683.735 |
| PPU-TNI | 1.571.034 |
| PPU-POLRI | 1.238.914 |
| PPU-BUMN | 1.360.945 |
| PPU-BMUD | 171.651 |
| PPU-Private | 24.868.339 |
| PPU-Self Employed | 23.215.895 |
| Non-Worker | 5.036.371 |
| Total | 180.735.289 |

Source: Number of Health Facilities and Participants (*BPJS Kesehatan*, 2017)

Based on the data showed above, it can be seen that some of the JKN participants are beneficiaries of contributions from APBN, and that the number of PPU and non-PNS membership is also quite low. According to the data from BPJS, efforts to increase JKN membership itself, to achieve the goal of Universal Health Coverage, have been implemented since the era of *Askes*, or before the transformation of *Askes* into *BPJS Kesehatan*. In order to achieve the 100% target by 2019, participants who can be upgraded are only wage-paying and self-employed groups. The participation of both groups continues to increase, including in Bali Province and Denpasar City, but to accelerate the achievement of universal coverage target is required maximum effort (Widiastuti et. al, 2015).

According to Bappenas' data, there are several factors causing the low coverage of non-PNS PPU membership, some of which are:

1. Business Entities' lack of trust in the quality of JKN services.
2. Business Entities in general already have other health insurance that are considered to be better than JKN.
3. The absence of sanctions and law enforcement for Business Entities who do not register as participants of *BPJS Kesehatan*.
4. The lack of marketing staff at the *BPJS Kesehatan* office. In every branch of *BPJS Kesehatan*, on average there are only 1-3 marketing staff, while the target to be achieved is very large.
5. Some Business Entities have their own sufficient healthcare.
6. The low commitment of Business Entities that belong to several foreign countries to join JKN.

Meanwhile, regardless of the type of membership of JKN, according to the monitoring and evaluation results of the *Dewan Jaminan Sosial Nasional* (DJSN), factors that underlie the low number of JKN membership consists of:

1. Many residents have not registered with JKN-KIS because they do not have social number (*Nomor Induk Kependudukan* or NIK) which is the main requirement of JKN-KIS registration.
2. Many people cannot afford JKN-KIS contributions.
3. The residents are rarely sick, and so they feel no need to register.
4. Not registered by the workplace of the citizens concerned.
5. BPJS Health services are poorly rated.
6. Residents already have private insurance. (Kepmenkes RI, 2013)

4 DISCUSSION

Health is a basic need of society which is also one of the welfare indicators of the community. Every layer of society, from the rich to the poor, from high to the lower class, deserves proper health care. Based on the principle of sustainable health development, the government reformed the national health system by requiring all citizens to become national health insurance participants in order to meet the needs of the community as one of the indicators improving the quality of life, namely the improvement of the country's overall health status.

Jaminan Kesehatan Nasional, in order to actualize Universal Health Coverage (UHC), should be held with well preparation. Although the Government has tried to provide the well-organized system, its undeniable that until now the system still burdened with many problem in Indonesia (Widjaja, 2014). It has been proved from the experience in other countries who want to achieve the UHC, that the process to accomplish the goal has several obstacles, especially when it has to reach certain segments of the population (TNP2K, 2015).

The implementation of JKN, which has been running for 3 years up to and including 2017, has a lot of comprehensive problems, including the participants, health facilities, government, through to BPJS itself. As described in the previous section, the community participation in JKN membership seems to still not be maximised even considering the nature of the compulsory membership and that it should be able to cover the entirety of society. The data has proven that the trend of the number of JKN

participants continues to decline over time. Especially in the community included in the non-civil wage recipient worker group (PPU non-PNS), the membership rate is still quite low. That is due to the lack of trust of the business entity towards the services provided by BPJS. In this case, the business entities usually have other insurance that is considered to provide a maximum service which they feel is better than BPJS.

In addition, the lack of socialisation of the BPJS employees also becomes one of the factors that affects why many people have not registered themselves as JKN participants. It will also relate to people's ignorance of what the benefits of JKN are, and what the sanctions are if they do not register, so therefore they will feel no need to register as participants. Residents who tend to be healthy or rarely ill will feel that they have no interest in the membership and that they would not benefit if they had it. Communities can also be influenced by the surrounding environment that may have a counter to the JKN system. This kind of mind-set should be able to be straightened by BPJS officers by conducting deep socialisation within the community.

Another factor is that many residents have not registered with JKN because they do not have a social number (NIK), which is the main requirement of JKN registration. Every citizen has a NIK listed on the family card, so this should not be a problem. In fact, many residents do not have a resident registration number due to various factors, one of which is that the population does not have a family card because it has not been updated, has been lost, and so on, or because it has been hampered by administrative processes in connection to difficult government agencies. The solution of this problem is the need for easier access for the public to obtain public administration services.

Finally, the factor inhibiting the community to become a member of JKN is the number of people unable to pay the JKN premium. The payment of premiums that each month must be done by the community based on their respective class is still a barrier. Some people still object to paying the premium every month according to the tariff that is pre-determined. To overcome this, the government has implemented a policy of beneficiaries of contributions for people who cannot afford the JKN premiums. Seeing the existence of underprivileged people who have not been covered in the membership of beneficiaries of contributions, it can be a correction for the government to further improve their performance in relation to equity, especially for the middle to lower classes in society.

5 CONCLUSIONS

1. The implementation of JKN still has a lot of comprehensive problems, including the participants, health facilities, government, and BPJS itself. In the terms of participation, the data has proven that the trend in the number of JKN participation continues to decline over time.
2. There are many factors that affect the lack of participation, such as that business entities cannot believe in the services provided by BPJS, they have another insurance that is better than BPJS, the lack of socialisation from the BPJS side, and so on.
3. Another factor is that many residents have not registered with JKN because they do not have a social number (NIK) which is the main requirement of JKN registration. One of cause is that the population segment does not have a family card because it has not been updated, has been lost, and so on, or because it has been hampered by administrative processes in connection with difficult government agencies.
4. The factors that also inhibiting the community to become a member of JKN are that some people still object to paying the premium every month according to the tariff of the premium pre-determined by their class.
5. In order to resolve the problems above, the government has given some solutions, such as implementing a policy of beneficiaries of contributions for people who cannot afford JKN premiums.
6. The achievement of the JKN membership targets has a high level of importance in order to see in the success of the JKN program.

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Evaluation of Indonesian Economic Condition Relating to the Excise and Tax from Tobacco and Cigarettes to Health Financing in National Health Insurance Program

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Keywords: Indonesian health economic, Tobacco control, Excise and tax, Health financing, National health insurance.

Abstract: The Indonesian economic is largely supported by excise and taxes from tobacco and cigarettes. The number of tobacco companies in Indonesia, as well as the high consumption of cigarettes causes problems, especially in the health sector. The purpose of this study is to analyse the economic conditions of Indonesia through tobacco taxes and tobacco companies, and the evaluation of the health costs incurred in relation to medical expenses and losses caused by cigarette consumption in the National Health Insurance program. This study will also seek to provide advice in the form of an alternative. The methodology used in this research was a literature study. In 2015, based on the data from the Ministry of Financing of the Republic of Indonesia, cigarettes are the largest contributor of excise revenue at 96 percent. In addition, the results of the National Health Insurance Performance Accountability Report 2015 shows that health financing issued in the National Health Insurance program is widely used for catastrophic diseases with the most causes being due to cigarette consumption. It shows that the income derived from tobacco and cigarette excise and taxes is not proportional to the losses borne by the National Health Insurance program.

1 INTRODUCTION

Indonesia is one of the largest tobacco-producing countries with a good level of quality. Therefore, one of the pillars of the economic condition in Indonesia comes from tobacco excises and taxes. High tobacco production results in the high availability of tobacco. It makes people have to think about how to process it and what goods can be produced from agricultural products in the form of tobacco. The high need and demand for cigarettes for daily consumption supports the high production of cigarettes. This is further supported by the idea that smoking is a part of Indonesian culture.

Until now, cigarettes are one of the best-selling tobacco products sold in the market. Although currently, the government has been circulating cigarette packs with various images that show the negative impact caused by cigarette consumption. The demand for cigarettes, despite this, is still high. Cigarettes indirectly have two levies, namely tobacco excise and cigarette tax. Increased cigarette prices will also be one source of income for the

State, one of them by increasing the tobacco excises and cigarette taxes. The 10% increase in tobacco excises can reduce cigarette consumption by 1-3% and increase state revenues by 7-9% (Ahsan, et al, 2012).

The high consumption of cigarettes in Indonesia sooner or later will have an impact on the emergence of smoking-related diseases. The health financing system in Indonesia that started using National Health Insurance to provide health insurance for the entire population will certainly feel the impact as well. The treatment of diseases caused by cigarettes is not small, nor is it cheap. This is due to prolonged treatment period. Many diseases have one of the factors as being smoking. Although cigarettes are not the only factors in the various diseases that are responsible for the National Health Insurance program, cigarettes remain a weighting factor for many catastrophic diseases which can exacerbate the burden of health financing for National Health Insurance.

2 METHODS

The research method used in this paper was that of a literature study. The literature study data has been obtained from Data Riskesdas 2013, Ministry of Finance Data 2015 and 2016, National Health Insurance Performance Accountability Report 2015, and other relevant data. The researchers used a variety of sources to analyse and compare the state revenue gains derived from tobacco and cigarettes excises and taxes (economic sector) with the health financing for diseases caused by cigarette consumption (health sector). The results of the analysis found from the literature study will be developed for the formulation of alternative solutions. The formulation of alternative solutions is based on the results of the problem analysis and literature studies on similar issues obtained through journals or articles. The formulation of alternative solutions has been done by paying attention to various other factors that allow for different applications in Indonesia.

3 RESULTS

In 2015, based on the data from the Ministry of Finance, Republic of Indonesia, cigarettes are the largest contributor of tobacco excise revenue with a contribution of 96 percent, with a value of Rp 139.5 trillion out of a total state revenue of Rp 144.6 trillion (Kementerian Keuangan RI, 2015). However, in 2016, there was a decline in tobacco excise revenue that made tax revenue in the first quarter of 2016 down 67 percent from tax revenue in the first quarter of 2015, equivalent to Rp 7.9 trillion from Rp 24.1 trillion (Kementerian Keuangan RI, 2016). However, the financing that must be covered through the National Health Insurance program related to the impact of cigarette consumption is also high. The Riskesdas Data of 2013 stated that in the population aged 15 years and over, 64.9 percent of men and 2.1 percent of women still smoke cigarettes in 2013, with the average number of cigarettes smoked being about 12.3 cigarettes (Badan Penelitian dan Pengembangan Kesehatan KEMENKES RI, 2013). In addition, the results of the National Health Insurance Performance Accountability Report 2015 showed that health financing issued in the National Health Insurance program is widely used for catastrophic diseases with the most causes being due to cigarette consumption (Kementerian Keuangan RI, 2016).

Posts related to dilemmas and the economy because of the high excise and taxes on tobacco and cigarettes with public health aspects, mainly related to the financing of health issued by the government, has been widely studied. However, from some literature found, there has been no clear formulation of any solutions and no clear steps to address the problems. In the United States, for example, efforts have been made to address the issue of tobacco problems by increasing tobacco taxes (Bader, P., Boisclair, D., & Ferrence, R., 2011). A significant increase in tobacco tax is a highly effective tobacco control strategy and leads to significant improvements in public health (Chaloupka, F. J., Yurekli, A., & Fong, G. T., 2012). In addition to rising cigarette taxes, the United States government from 1964 to 2014 has been doing a lot of intervention to change the public image of cigarettes (Cummings, et al, 2014). US government made efforts with legislation to smoke in public places, cigarette counter-marketing campaigns in the mass media (Cummings, et al, 2014). California and Australia are aggressively implementing anti-smoking campaigns in the mass media, setting up anti-smoking school programs, SHS policies, and youth access relationships to cigarettes (Pierce, et al, 2012).

Tobacco is a supporting commodity of the Indonesian economy and an asset of the state. Tobacco can be processed into a product that has a higher selling value than cigarettes, and has a lower negative side to health compared with cigarettes. In several studies conducted on tobacco processing, one of them showed the result that tobacco can be used as raw material for making biofuel. Biofuels are solid, liquid or gaseous fuels that are produced from biomass (Webb, A. & Coates, D., 2012). The biomass or organic matter that is converted in to biofuels may include food crops, dedicated bioenergy crops, agricultural residues, wood/forestry waste and by-products, animal manure and algae (Webb, A. & Coates, D., 2012). The commercialisation of biofuel production with tobacco raw materials is considered as a potential for the long term (Maisashvili, A., L. Bryant, H., & W. Richardson, J, 2015).

4 DISCUSSION

The various data sets that have been presented in the previous discussion shows that the economy in Indonesia is very dependent on the income derived from the excises and taxes from tobacco and

cigarettes. The magnitude of natural products in Indonesia such as tobacco, with good quality and relatively cheaper prices, is one of the factors that make tobacco become the main attraction and one of the most popular export commodities that contributes so much revenue to the country.

The condition of people who still lack an understanding of the diversification of tobacco processed products, as well as the habit of processing tobacco into cigarettes that has existed since ancient times, makes the paradigm of society about tobacco and cigarettes form in to two pathways of thought that cannot be fully separated. The habit of the previous community to smoke has carried over to the present day. Up until now, in accordance with the previous discussion, it can be seen that there are still many Indonesians who smoke. The age groups range from children to the elderly who still have a high rate of smokers within them. It is not surprising if the current trend of disease in Indonesia. This is supported by an increasingly unhealthy lifestyle among the Indonesian population.

Health financing from APBN allocated to National Health Insurance is still lacking, although Indonesia has high excises and taxes revenue from tobacco and cigarettes. The high incidence rate of catastrophic disease in the Indonesian population, especially in the population that has been registered in National Health Insurance, has resulted in increasing health financing that must be issued by the government. Catastrophic disease is a high-cost disease and the complications can be life threatening (Departemen Kesehatan RI, 2014). Smoking habits and the accidental inhalation of cigarettes smoke will increase the risk of catastrophic illnesses such as hypertension, stroke, coronary heart disease, diabetes mellitus, and others. At present, the high amount of health funding in the National Health Insurance program in the group of catastrophic illnesses is increasing. The amount of health financing required is not proportional to the amount of budget provided for the National Health Insurance program.

Tobacco is a potential commodity to be used in a variety of products that can be useful for humans, compared to just being produced into cigarettes. Many things can be explored from tobacco, one of them being biofuel. Biofuel has the potential to serve as a large-scale industry commodity. In addition, the selling value of biofuel produced is higher than that of cigarettes. It is one of the added values that can replace the mainstream cigarette price commodity of tobacco. In addition, the number of tobacco farmers

in Indonesia will also be absorbed by the harvest to become the raw material of this biofuel, if cigarette production must begin to be reduced. The application of biofuels en-masse needs to be studied in more depth for there to be better planning

Steps that can be taken by the government to be able to overcome the dilemma of the country's economic resilience and the health effects caused by cigarettes include:

1. The government may increase tobacco excises and cigarette taxes in order to reduce cigarette consumption and increase state revenues, although the long-term impact of cigarette consumption in Indonesia will also likely cause catastrophic diseases caused by cigarettes. Therefore, the amount of tax and excise needs to be calculated more thoroughly.
2. The government may allocate funds for health financing to National Health Insurance, especially for catastrophic diseases, with a scale relevant to the expenditure incurred for catastrophic diseases caused by cigarettes.
3. The government can plan alternative tobacco processing as one of the mainstay commodities besides cigarettes. It is expected that this will be able to reduce the number of cigarettes produced and still be able to sustain the stability of the Indonesian economy. If proceeding on alternative preparations in the form of biofuels, the government can start to develop biofuels on a large scale. Biofuel is a non-fossil alternative fuel, which can be made easily. The idea was made with the aim to keep room for the economic sector for tobacco commodities, while maintaining the stability of the Indonesian economy but not negatively impacting the health of the people in Indonesia.
4. The government provides regulations on smoking restrictions in public places with clear and firm sanctions.
5. Mobilize anti-smoking campaigns in the mass media, and provide education on the impacts of health, social, financial, and productivity aspects.
6. Establish school programs that are anti-smoking as well as restricting access for young people to cigarettes.
7. The government may tighten the claims financing requirements for cigarette-borne illness. Governments may create regulations that make people with catastrophic diseases seeking to make a claim have a medical test first, such as using pulse oximetry, performed at a prescribed health facility. The results of these examinations which will be the determinant of whether or not

the received claims are submitted. Before that, the government should also prepare what facilities are being targeted and the types of health checks used as well as other technical preparations. Thus, minimising the gap for cheating.

5 CONCLUSION

The state revenue derived from the excise and tax of tobacco and cigarettes is huge, having become one of the main sources of income for Indonesia. However, on the other hand, the health financing that must be issued by the government through the National Health Insurance program to cover the health services for diseases caused by cigarette is very large, especially as most diseases caused by cigarettes are catastrophic diseases which require prolonged maintenance and greater costs. It can be said that the current condition of the Indonesian economy between the state revenues derived from the taxes and excise of the tobacco and cigarette commodities is not comparable with the expenses to be borne to meet the needs of the state-borne illnesses by the National Health Insurance program. The ideas that can be proposed to deal with the problem contain several points, namely:

1. The government can increase tobacco and cigarette taxes.
2. The government can allocate benefits from tobacco and cigarette taxes to NHI.
3. The government can plan an alternative as the main export commodity, in addition to cigarettes.
4. The government can provides clear rules about smoking bans in public places.
5. The government can be more intensively anti-smoking campaign and education through mass media.
6. The government can creates programs that can reduce youth access to cigarettes.
7. Governments can implement short-term strategies by allocating funds for health financing in the National Health Insurance program, especially for catastrophic diseases with relevant quantities.
8. The government can tighten the claims financing requirements for cigarette-borne illnesses.

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Health Financing Management Patterns Influence in Making Health Policy Decisions

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Abstract: Current health reforms regarding financing systems and health management patterns are still at issue and socioeconomic imbalances in access to healthcare continue to grow throughout the region. These uneven development are characterized by the difficulty of local government in providing medical services in sectors of the wider community, which causes the community also difficulties in accessing optimal health services. This report is based on an in-depth analysis of healthcare-related funds in public institutions. Respondents were asked to answer a series of questions related to health financing which enables the achievement of legislative developments in policy making. The literature study is also used to reinforce this report. Cost awareness is slowly evolving. A narrative and synthesis review is conducted, including providing an accurate and comprehensive description of the current extent and legislative framework. Policymakers will benefit substantially from health-based economic decision-making to address increasing difficulties in funding and provide the best medical care on the market with the increasing demand for health services.

1 INTRODUCTION

Almost all countries of the world are facing difficult challenges and choices in financing their health systems. Simultaneously, macroeconomics, demographics and fiscal limitations limit the extent to which governments can simply allocate more public income for health. Combinations of upward pressure on costs and the limited ability of the government to increase purchasing power for countries requires consideration of reforms to the way their health systems are financed. This gives direction whereby reforms should seek to encourage the system. Thus, the proposed policy objective is also a criterion for indicating how the impact of reforms on the health financing system can be assessed.

A conceptual framework for analysing national health finance organizations system is used to describe the function and policies associated with all health financing system, regardless of the model or label used to classify it. The use of such descriptive frameworks is crucial to tailor analysis with specific considerations of reform in the context of a particular country, because of the method of health

financing. The system that is currently structured provides the starting point from which any reforms begin. The descriptive framework is also based on the 2000 world health report, which identifies health financing as one of the four functions of the health system. Health financing refers to the “function of a health system concerned with the mobilization, accumulation and allocation of money to cover the health needs of the people, individually and collectively, in the health system. The health financing system consists of several sub functions and policy – income collection, pooling, service purchases and benefits policies and the obligations of patient cost sharing. One of the important concepts described here is health. The financing system does not act on its own in affecting the intermediate and final goals.

Coordinated policies and implementations throughout the health system function are essential to achieve the desired result. Effective decision-making at various levels is a prerequisite for high performance in healthcare and it is, therefore, important to understand the factors that shape these decisions so that implementation of the policy will produce the best results and with policies related to the health system can provide funds and provide

appropriate financial incentives to service providers to ensure that individuals can have access to effective public health and personal healthcare.

2 METHOD

This research uses a study of supporting literature. A total of 15 articles from international journals are systematically reviewed to determine the factors that determine system financing and health policy decisions. By reviewing the results of international journals, it is expected to provide an overview of the issues of health financing system and policy decisions that impact on the equitable distribution of health services in the community.

3 RESULT

One of the priorities of health reform is improving and distributing quality services to communities in remote and island areas through their various action plans. The formulation of this action plan is expected to meet the basic health services needs so that people in remote areas and islands will be guaranteed health. Health policy in Boundary and Disadvantaged Areas (DTPK) is an integral part of Indonesia's health development plan policy on public health. Currently, the cost of funding and health in Indonesia is still far behind compared with neighboring countries, although adjusted for per capita income level. This report provides an overview of health finance management patterns that influence policy decision-making in the progress to achieve health services across the areas. The pattern of health financing management is the management of health financing which not only pools sufficient funds for health, but also considers how people use the necessary health service without the risk of severe financial difficulties so as to meet the individual and collective health needs of the health system.

Based on literature studies, the WHO outlines that the reforms implemented should focus on their impact on the population and the system as a whole. With the first principle, all health financing systems (other than pure out-of-pocket payments) are insurance systems, and operate in accordance to according to requirements (i.e. financial capital, access equity, etc.). If someone requires healthcare, they should not have to go through long and difficult requirements. Reforms should be policy-oriented and the descriptive framework is used as a

"checklist" to ensure that the reform instruments are aligned with the stated objectives. Therefore, promoting efficiency does not imply a narrow focus on budget cuts.

In addition to other literature, which states that, in ensuring financial protection for balanced health, no households contribute to or cause health costs that go down and cannot cope with poverty (ILO / STEP, 2002). Achieving adequate levels of financial protection and promoting equity in the health financing system requires maximized upfront payments for "insurable" health risks (risks associated with large and unpredictable costs); achieving the greatest possible pooling of health risks in a population, thus facilitating the redistribution between high- and low-risk individuals and ensuring equity in healthcare systems and developing purchasing arrangements that promote the delivery of quality services efficiently and evenly so that all regions can experience services that meet their needs.

Ensuring financial protection and promoting equality requires specific government action. The focus of health policy makers states that minimizing health service inequalities is the goal of health policy itself, but the Government's commitment to that goal is lacking; therefore, there needs to be a clearer action so that the Government can strengthen its commitment to health improvement services. Based on several health studies dealing with inequalities indicating that large disparities in health and health care use among the poorest and most vulnerable and wealthy citizens living in urban areas are caused by one of the factors that health cost are not reached by the poor, have difficulty accessing health services. It's therefore necessary to ensure that a financing policy ensures access to the required services can simultaneously protect people from severe financial consequences for paying.

4 DISCUSSION

Based on the above, results indicate that financing factors play an important role in shaping decisions and even policy interventions for health services for cost-ridden communities. Health financing is defined as an increase of revenue collection to pay for the operation of the health system. It has three functions: collection of revenues from various sources, fundraising and risk dissemination to all of the larger population groups, and the allocation or use of funds to purchase services from public and private healthcare providers. The purpose of health

financing is to maintain and improve human welfare. At the extreme, without the necessary funds, no health workers would be employed and no health promotion or prevention would take place. However, financing is much more than simply generating funds. To understand the nature of the indicators that can be used to monitor and evaluate health system financing requires explicit assessment of what it is expected to achieve. Instead, it suggests a broad approach to ensuring that whatever is issued for health results in the greatest returns, in terms of policy progress, so as to improve treatment performance.

The health financing policy here is a guide for decision-makers in which service providers can respond appropriately to signals generated by the financing system. While health services justice is something whereby health services and resources should be distributed according to their needs and not because of the community's ability to pay for health services, it has been argued that recent healthcare reforms regarding financing systems and health management patterns are still a problem. Socioeconomic imbalances in access to healthcare continue to expand throughout the region, especially for remote areas. There is a significant gap between treatments that touch the poor and remote and those for people in urban areas and there needs to be the existence of financial protection from the cost of disease provided by the community through a mechanism of private insurance that cannot be reached by remote communities in particular. This means that the capacity of the paying poor must be no higher than the rich because it is related to solidarity aimed at justice. These factors not only affect the proportion of the poor, but also increase the cost of healthcare and hamper productivity and economic growth in the region.

Health policy here is needed because, with the existence of a strong health policy, the health service gap between rural and urban will not have a too significant difference. In addition, financing policy must grapple with questions of how to raise funds equitably, which usually implies a degree of progressiveness (whereby the rich contribute a higher proportion of their income than the poor).

Based on several studies it's found that each country needs to develop a clear and pro-poor health financing policy and a comprehensive health financing strategic plan with a clear road map. The strategic plan should contain policy interventions aimed at strengthening the health financing function. The key policy challenge is to ensure that health

financing instruments are aligned with one another with the goals to be achieved.

Governments have an important role in health policy decisions, so the Government should be able to realize policies that look at the actual situation to avoid differences and be fair in providing health services in both urban and remote areas. As we know, local people actually need health services that are more adequate and not complicated in their financing system and this may be the main factor people do not choose the existing health services. Moreover, with a World Bank study finding substantial inequalities in the use of healthcare proving to play a role in health policy, it remains inaccessible to reach all urban populations from urban to remote villages. Citizens now need and apply more health services.

This suggests that policymakers should be able to respond systematically and comprehensively, including some changes in health financing systems and strategies to reform health service delivery and to strengthen coordination between health and social care so that there will be no significant returning gaps. Therefore, the impact of Indonesia's health financing system on the use of services should be addressed with financial objectives. The contribution of health financing policies should be more about how financing is used for health systems. Therefore, there must be justice in the use or utilization of health services as an objective call for justice in distribution.

5 CONCLUSIONS

Today's society tends to need and demand more health services, while the current funding and health costs in Indonesia are still far behind compared with neighbouring countries. The financing factor or health funding plays an important role in shaping decisions and even policy interventions, so that health services can be reached by people in remote areas. This report uses the literature review method so as to get a clear picture of the health financing management pattern that influences policy making which can represent Indonesia in improving the health of its people. Each country needs to develop clear and pro-poor health financing policies and comprehensive health financing strategic plans as well as Indonesia.

Government has an important role in health policy decision-making so that it should be able to objectively make policies that look at the actual situation and also consider the financing system

balance, so that there is no difference and it can be fair in providing health services in both urban and remote areas. As another suggestion, several approaches can be used: firstly, using policy objectives to guide the direction of health of financing reforms; secondly, to understand the existing system in terms of functions and policies to establish the starting point from which reforms should begin; and, finally, to understand the fiscal and other contextual factors for set realistic limits in order that achievement of policy objectives is sustainable and reachable by policy.

This suggests that policymakers should be able to respond systematically and comprehensively including in some changes in the health financing system and strategies to reform the provision of health services and to strengthen coordination between health and social care so that there will be no significant gap in the utilization of health services.

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Strengthening Health Human Resources Planning Systems Through Partnership Programs as Efforts to Improve Strengthening National Health System

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Keywords: Human health resources, Partnership approach, Health system.

Abstract: The WHO (2006) stated that health workers can contribute to successful health development by up to 80%. There are still many health service facilities that do not have the number and quality of Human Resources that is in accordance with the regulations and standards of the Ministry of Health of the Republic of Indonesia. The Australian Indonesia Health System Strengthening Program (AIPHSS) is an approach to strengthening the national health system in accordance with the Ministry of Health program focusing on Human Resources. The purpose of this study is to describe *Pendidikan Jarak Jauh* (PJJ) Program one of the programs AIPHSS in an effort to strengthen the Human Resource Planning system in Indonesia. The design of this research is a case literature study. The data analysis method used was descriptive analysis. The results of the study are PJJ program descriptions and the scope of the evaluation: 1) The effectiveness of distance education programs; 2) the application of ODL learning; 3) the accessibility of the learning system; and 4) the critical success factors for the continuation of the program. Conclusions from the research are that distance education is considered to be the best solution for answering the challenge of improving the qualifications of the health personnel in Indonesia due to its geographical setting and the limited human resources in health care.

1 INTRODUCTION

Human Health Resources is collects various efforts in relation to planning, education and training that is integrated and supports the other sub-divisions, in order to achieve the highest degree of public health possible (SKN, 2009). In health human resources, there are 3 main elements, namely planning, education and training, and utilisation. Health HR Planning is a process of estimating the number of human resources based on the place, skill, and behaviour needed to provide the appropriate health services. The education and training of health personnel is the effort of health procurement in accordance with the type, quantity and qualifications that have been planned and the improvement of the staff's capabilities in accordance with the needs of health development. The utilisation of health personnel is the effort involved in the equitable utilisation of coaching and the supervision of health personnel (SKN, 2009). HRH implementation

should be implemented properly because, based on the WHO report in 2006, it stated that health workers can contribute in the success of health developments by up to 80%.

Recent conditions prove that the number and quality of human health resources available is still far from ideal. There are still many health service facilities and institutions such as Puskesmas, District Health Offices and Hospitals that do not have the number and quality of Human Resources according to the rules and standards of the Ministry of Health of the Republic of Indonesia (Head of Planning and Budget Bureau, 2013). A study conducted by Guspianto in 2010 discussed the related 'Analysis of Health Policy Needs Planning Scheduling Health Center in Muaro Jambi District' and concluded that the preparation of health human resource needs planning in relation to the documentation part of the annual routine activities of Muaro Jambi District Health Office. Another study by Budiman in 2006 with the title of 'Health Planning HR Planning in

Pangkalpinang City 2006-2010' concluded that health human resource planning is often done without proper planning processes. This happens because of limited human resources, unallocated funds for planning and human resource information systems that have not been developed properly. There are no standard work procedures, as well as inadequate facilities.

The fundamental objectives of the National Health System (SKN, 2012) are to improve the degree of public health and the degree of government responsiveness while ensuring equity in the contribution of financing for the fulfillment of the community expectations related to basic health services. Some of the above problems are a challenge for the preparation of the National Medium Term Development Plan (RPJMN) 2015-2019 for the sector of public health. In response to the existing conditions, the Indonesian Australian Program for the Strengthening of the Health System (AIPHSS) is a new approach to strengthening the national health system in line with the Ministry of Health of the Republic of Indonesia's programs that focus on the following four building blocks: Human Health Resources, Health Financing, Governance and Leadership and Service Delivery. Based on the background of the problem, the objective of this research is to describe Pendidikan Jarak Jauh Program one of the programs of AIPHSS in an effort to strengthen the Human Resource Planning system in Indonesia.

2 METHOD

The design of this research is case-based literature study. The reference theory obtained through the research in to the main literature study serves as the basic foundation of the research implementation. The methods of collecting the research data is the documentation method and literature study. The documentation method is a method used to search for documents or important data related to the research, while the literature study method collects data or sources related to the topics raised in the study. The type of data used by researchers is secondary data, obtained from journals, books, documentation, and the internet. The method of data analysis used was a descriptive analysis design to describe the facts followed by analysis.

3 RESULT

Related to the background that discusses the health human resources available, the results of this study will focus on one of the work programs of the health human resources component of Far Distance Education (PJJ) as an effort to access better facilities, to improve participation, and to improve the quality of human resource health. From the literature search that has been done, the researcher has not found any studies that examine and discuss AIPHSS and the PJJ Program. The literature has only been derived from official bulletin articles issued by the government. Therefore, the result of this research is only able to describe PJJ Program and the evaluation that needs to be done.

In 2013, distance education programs for nursing and midwifery were conducted by the health polytechnic college at Kupang, Samarinda and Sorong. The Australian Government, through the Australia-Indonesia Partnership for Health System Strengthening (AIPHSS), provided support for distance education programs in the NTT Province conducted in South-West Sumba (SBD) for courses in obstetrics and in East Flores for nursing. The program was conducted for two semesters with 87 students enrolled. To improve the quality of the program, AIPHSS - in cooperation with the Jakarta State University - conducted a formative evaluation carried out over 3 months (May - July 2015).

The scope of the evaluation included assessing the:

1. Effectiveness of distance education programs.
2. Applications of ODL learning.
3. Accessibility of the learning system.
4. Critical success factors for the continuation of the program.

These four assessment points were mapped within the scope of the six evaluation components: 1) Implementation management; 2) Lecturers; 3) Educational personnel; 4) Curriculum; 5) Method and learning media; 6) Evaluation of the learning outcomes.

4 DISCUSSION

Based on the results of the case studies that have been conducted related to the scope of the evaluation of the PJJ Program - one of the AIPHSS programs as an effort to strengthen human health resources, the program consists of 1) The effectiveness of distance education programs; 2) Application learning; 3)

Accessibility of learning system; and 4) critical success factors for program continuity. The explanations related to the scope of each evaluation are as follows:

1. *Effectiveness of distance education programs*

The implementation of the PJJ program is expected to be an effective way of overcoming the problems of quality human resources in Indonesia today. The concept of effectiveness in learning in the PJJ program includes several things. Among them is that the implementation of the delivery method of education is done flexibly, with good teaching materials and a powerful module that can enable self-learning. Learning by this method makes face-to-face meetings a support process only when the students have difficulty understanding the modules or teaching. This is done on the initiative of the students. This is because the weight of distance learning is independent learning 50%, 30% face to face and online 20%. The face-to-face learning methods undertaken by the tutor may include lectures, discussions and formative evaluations. Online learning is done in two ways: 1) teleconference and 2) email. Effectiveness in this program is an important point in order to achieve the program objectives.

2. *Process Quality and Its Impact on Health Services (Learning Applications)*

The program's implementation requires the students to have higher motivation and initiative compared to other students. High motivation and initiative in completing the learning will make the students better able to complete the evaluations and exam module. Associated with the impact of the implementation of the program is a variety of behavioural changes due to the program such as the initiative to form a learning group based on geographical proximity. This allows them to discuss concepts, complete joint tasks and to exchange information. In fact, this was often not only done with fellow students who are involved in the program but also their colleagues and doctors in the workplace. Another observed effect is the improvement in their communication skills with the patient. The additional knowledge gained during the program is considered to be a helpful source of information in answering the patient's questions. The evaluation process related to motivation and initiative and the process and

impact of the subsequent behavioural changes should be a concern.

3. *Online Learning Accessibility*

The beginning of the learning program begins with an introduction to and training in information technology as a learning medium that is accompanied by a guide book. In the training process, there is a phase of adjustment by the students. They assume that the use of the technology is more confusing, unfriendly or complicated. In addition, another access problem is bad internet access. This affects the ability to access websites, video conferences and other online learning materials. Skills in using online media and online systems need to be provided not only for the students but also lecturers and committees. Some students complain of difficulty in understanding the practical material presented using animations, videos and power point. This shows that the technique of delivering the material has not been mastered properly by the tutors and lecturers, and also the limited availability of learning media materials. Therefore, quality improvement is not only given to the students but also to tutors or lecturers who should get intensive training and repair the poor internet access.

4. *Determinants of Success and Prerequisites for Expansion*

The PJJ Program is a solution for health workers to be able to continue working while studying. Therefore in order for the learning system to run consistently, there are several areas that need to be improved in terms of:

- a. Program management; the different levels of experience between the tutors and students can actually be used to combine theory and practice during the classroom discussions. The tutors should have the skills to facilitate classes in adult education settings and make use of student experiences to strengthen the learning experience.
- b. Lecturers and educational staff; improving the academic standards of tutors through continuous training is required.
- c. Curriculum; some general subjects can be modified into one independent study subject that does not take a semester, and in which the evaluation can be given independently online when students have completed a module. The conversion system into a number

of credits based on student experience is necessary, in order to take into account their previous experience. This can shorten the duration of the program and can bring efficiency in relation to costs and increase the probability of replication in other areas.

- d. Instructional and media methods: tutors need to improve their creativity in creating innovative teaching methods (micro teaching). This innovation can better develop if there is regular discussion and sharing within the teaching team.

Indonesian Ministry of Health, 2013. Kabar AIPHSS Edisi III : Agustus 2013. Kementerian Kesehatan Republik Indonesia . Agustus 2013;Edisi III:1-4

5 CONCLUSIONS

Distance education programs are the best solution to answer the challenge of increasing the number of qualified health personnel in Indonesia, because of geographical location and the limited human resources in health care. Based on the results of the evaluation, there are several challenges in terms of implementation and teaching management. There are also some components that have been implemented well and give hope that the program can continue and be applied in other areas with similar characteristics. Distance education not only affects students positively, but also stimulates the emergence of community learning in the health field by encouraging discussion among friends who can facilitate knowledge transfer.

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Impact of Tobacco Control on Tobacco Farmers and State Revenue in Indonesia

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Keywords: Control, Country Income, Impact of Tobacco Control, Tobacco, Tobacco Farmers.

Abstract: According to the estate office (2002:1), it states that the notion of tobacco is as follows; the "tobacco plant known by the Latin name is *nicotiana tabacum*. It is one of the plantations that have important role for the national economy that is contributing to the state revenue through cigarette and foreign tax, and as one of the economic sources in the village in the form of smallholder plantation business". This study aims to add new insights related to the impact of tobacco control on tobacco farmers and the state revenue in Indonesia. The method used in the study was the qualitative methodology. The results obtained are from the employment aspect. The excise policy affects the sustainability of formal sector employment, consisting of 401,989 people, of which three quarters or 291,824 people are involved in the production of hand-rolled cigarettes which is a labour-intensive industry. When added to the informal sector, this policy impacts the lives of 2.3 million tobacco farmers, 1.5 million clove farmers, 600 thousand tobacco workers, and 1 million retailers. Based on this data, it can be concluded that the excise policy has an impact on the lives of more than 5.8 million people in Indonesia.

1 INTRODUCTION

The tobacco plant, which has the Latin name *Nicotiana tabacum*, has an important role in the economy and state development through tobacco taxes, and has become a common source of employment for society. Tobacco products are the result of processed tobacco leaves. They can be consumed by burning, sucking, and chewing. One of the most common products from tobacco are cigarettes.

Plants of *Nicotiana tabacum* produce various *nicotiana* by smoke which contains tar and nicotine. According to PPRI number 109 of 2012, "tar is a smoke condensate which is a total residue that produced when cigarettes are burned after nicotine and water are reduced, which is carcinogenic." Whereas, "nicotine is a substance, or *pyrrolidine* compound contained in *nicotiana tabacum*, *nicotiana rustica*, and other species or its addictive synthetic. It makes people who consume it become dependent," (Indonesia Government, 2012).

Over time, the consumption of cigarettes among children to adults has been increasing. Women are also no longer rare to find smoking. The habit or

addiction to smoking cigarettes is an effect of the environment and associations with addicted adolescents and adults.

The increase that occurs due to cigarette consumption can impact on productivity at an early age, and death (Data and Information Centre Ministry of Health RI, 2017). There is a burden on the economic, social, health, and environmental costs of society. If an active smoker smokes, then a lot of smoke is inhaled by passive smokers. It causes various diseases, especially for children and infants. Therefore, the control of tobacco has been done by raising cigarette taxes.

2 METHODS

The research used a qualitative approach by collecting secondary data, which is data that already exists. The purpose of this study is to gain insights into the impact of tobacco control on tobacco farmers and the country's income in Indonesia

3 RESULT AND DISCUSSIONS

3.1 Cigarette Consumption in Indonesia

The smoking prevalence in Indonesia is very high. It ranges from children to adults without filtering by way of sex (male or female) and occupation. Figure 1 shows the proportion of the population aged ≥ 10 years according to smoking habit and characteristics.

| Karakteristik | Perokok saat ini | |
|-----------------------|---------------------|-----------------------|
| | Perokok setiap hari | Perokok kadang-kadang |
| Kelompok umur (tahun) | | |
| 10-14 | 0,5 | 0,9 |
| 15-19 | 11,2 | 7,1 |
| 20-24 | 27,2 | 6,9 |
| 25-29 | 29,8 | 5,0 |
| 30-34 | 33,4 | 5,1 |
| 35-39 | 32,2 | 5,2 |
| 40-44 | 31,0 | 5,4 |
| 45-49 | 31,4 | 5,5 |
| 50-54 | 31,4 | 5,3 |
| 55-59 | 30,3 | 5,0 |
| 60-64 | 27,6 | 4,8 |
| 65+ | 21,7 | 5,1 |
| Jenis kelamin | | |
| Laki-laki | 47,5 | 9,2 |
| Perempuan | 1,1 | 0,8 |
| Pendidikan | | |
| Tidak sekolah | 19,7 | 3,1 |
| Tidak tamat SD | 18,3 | 3,2 |
| Tamat SD | 25,2 | 4,5 |
| Tamat SMP | 25,7 | 5,7 |
| Tamat SMA | 28,7 | 6,6 |
| Tamat D1-D3/PT | 18,9 | 5,6 |
| Pekerjaan | | |
| Tidak bekerja | 6,9 | 3,0 |
| Pegawai | 33,6 | 7,4 |
| Wiraswasta | 39,8 | 6,5 |
| Petani/nelayan/buruh | 44,5 | 6,9 |
| Lain-lain | 32,4 | 5,8 |

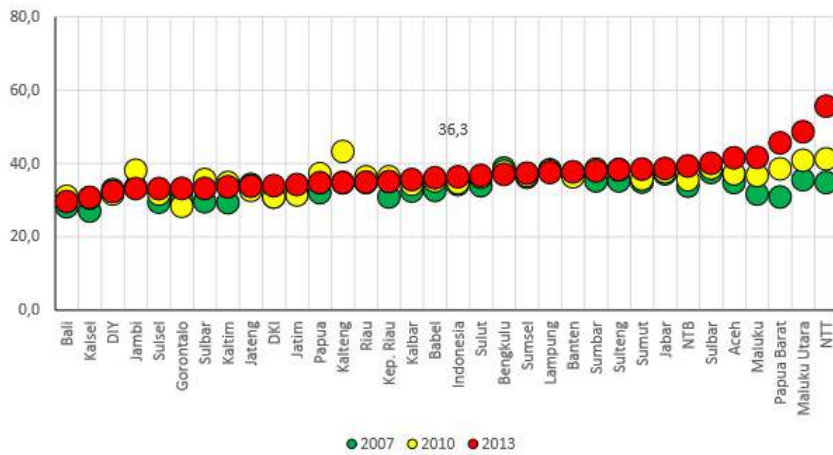
Source: Riskesdas 2013

Figure 1: Proportion of Population Aged ≥ 10 Years According to Smoking Habit and Characteristic of Indonesia 2013.

3.2 Agency for Health Research and Development

From the data, it can be concluded from the population data aged ≥ 10 years that everyday-active-smokers are primarily aged 30-34 years old (33.4%) and 35-39 years old (32.2%). The proportion of male smokers is more than female smokers (47.5%). The highest education level of cigarette consumers is that of a high-school graduate at 28.7%. For occupation,

44.5% are farmers, fishermen and labourers compared to other work groups. From the age of ≥ 15 years, there is some data that serves as evidence of inhaled and chewed tobacco consumption. According to Riskesdas in 2007, 2010, and 2013, the consumer tends to increase their consumption as they age. The results of 2007 amount to 34.2%, in 2010 of 34.7%, and in 2013 to 36.3%. The highest proportion in 2013 was in East Nusa Tenggara (55.6%).



Source: Riskesdas 2013, Agency for Health Research and Development

Figure 2: The Combined Data of Smokers of Suction and Chewing of Tobacco in the Age Group ≥15 Years

3.3 Cigarette Production

There are three types of cigarette production in Indonesia; SKM (Clove Cigarettes Machine), SKT (Hand Clove Cigarettes), and SPM (Cigarette White

Machine). From 2005 to 2010, the average result of SKM was 58%, SKT was 35%, and SPM was 7% every year.

| | 2005 | % | 2006 | % | 2007 | % | 2008 | % | 2009 | % | 2010 | % |
|--------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| a. SKM | 126,6 | 57,5 | 125,3 | 57,8 | 131,7 | 56,8 | 144,5 | 57,9 | 141,2 | 58,3 | 144,2 | 58,1 |
| b. SKT | 78,2 | 35,5 | 77,9 | 35,9 | 84,3 | 36,3 | 88,2 | 35,3 | 84,7 | 34,9 | 87,2 | 35,1 |
| c. SPM | 15,3 | 7,0 | 13,5 | 6,2 | 16,0 | 6,9 | 17,0 | 6,8 | 16,5 | 6,8 | 17,0 | 6,8 |
| | 220,1 | 100,0 | 216,7 | 100,0 | 232,0 | 100,0 | 249,7 | 100,0 | 242,4 | 100,0 | 248,4 | 100,0 |

Source: Ministry of Finance. Financial Note and RAPBN 2011

Figure 3: Production of Cigarettes by Type of Cigarettes, 2005-2010 (Billion Stems/ Year)

The consumption of cigarettes in Indonesia reached 36.6% of the population because the number of people who consume cigarettes will affect

cigarette production by way of supply and demand. Cigarette production increased from 1985 to 2010, which resulted in 269 billion cigarettes.

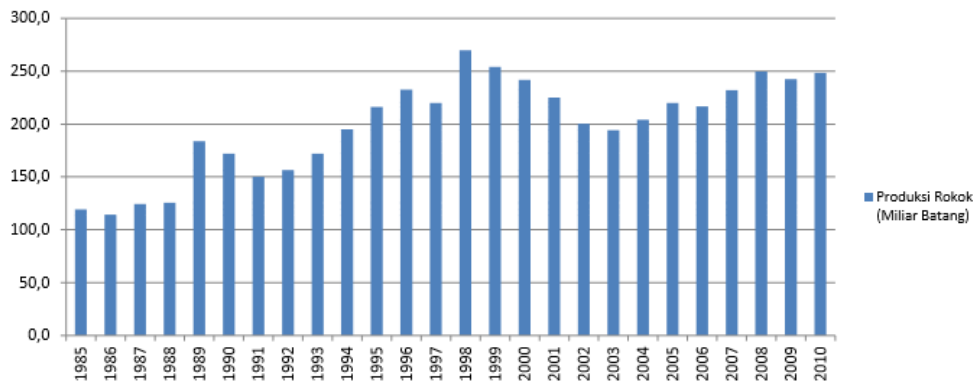


Figure 4: Trend of Cigarette Production Year 1985-2010 in Indonesia

3.4 Cigarette Control

The Law of the Republic of Indonesia number 39 2007 concerns the Amendment to Law Number 11, 1995. This relates to customs, which is the characteristic of goods subject to customs charges. Their consumption needs to be controlled. Its circulation needs to be supervised; it may have a negative impact on society or the environment, or its use requires the imposition of state levies for the sake of justice and equilibrium. Cigarette consumption can be reduced if the control of

cigarettes raises the customs tax. Consuming cigarettes continuously will have an impact on others, as well as the individual. It will lead to a lack of productivity, as many people will be less healthy, increasing the number of deaths. It could affect Indonesia’s overall state income.

In Figure 5, it can be seen that cigarette consumption decreased by 1-3% and increased the state income earned from cigarette taxes by 7-9%. Cigarette consumption leads to an increase in state income. The control of cigarettes, by raising the duty of 10%, will affect the state income.

| Study | % Consumption Decreased | % Revenue Increased |
|----------------------------------|-------------------------|---------------------|
| De Beyer and Yurekli, 2000 | 2,0 | 8,0 |
| Djutaharta et al, 2005 | 0,9 | 9,0 |
| Adioetomo et al, 2005 | 3,0 | 6,7 |
| Sunley, Yurekli, Chaloupka, 2000 | 2,4 | 7,4 |

Source: World Health Organization

Figure 5: Impact of 10% Excise Tariff Increase on Consumption and Revenue

Cigarettes are harmful to the health of the individual. The efforts to raise the taxes by 2016 requires careful consideration, such as labour, illegal cigarette distribution, tobacco farmers, and state income. Therefore, according to him, all aspects need to be considered when making a policy that relates to the price and customs to do with cigarettes. From the employment aspect, the customs policy also affects the sustainability of the formal sector employment of 401,989 people. Three quarters of people, or 291,824, are involved in the production of handmade cigarettes which are labour-intensive

industries. When added to the informal sector, this policy impacts 2.3 million tobacco farmers, 1.5 million clove farmers, 600 thousand tobacco workers, and 1 million retailers’ lives. Based on the available data, it can be concluded that the customs policy has a significant impact on 5.8 million Indonesians’ lives. This data is also supported by the LPEM UI study in 2013, which found that the customs policy affects more than 6 million people directly.

For 2017, the government issued a new customs policy by way of regulation by the Minister of

Finance number 147 / PMK.010 / 2016. In this new policy, the increased fare is 13.46% for White Cigarette Machine Tobacco (SPM) tobacco products, and the lowest is 0% for Cigarette Tobacco (Tobacco) with an average increased weight of 10.54%. In addition to the increased fare, the retail price (HJE) has also increased to an average of 12.26%. The main problem that must be considered to do with the increases is the control of production, labour, illegal cigarettes and tax receipts which the policy have been discussed from various stakeholders (Directorate General of Customs and Excise of the Ministry of Finance. 2016).

4 CONCLUSIONS

Cigarette control is done by raising the tax, so that people in Indonesia can limit their consumption of cigarettes. It is better to reach 1-3% because there are a lot of disadvantages in the economic, social, environmental aspects otherwise. The formal sector of employment consists of 401,989 people, which is three quarters of society or 291,824 people, who are involved in the production of hand-rolled cigarettes, which is a labour-intensive industry. When added to the informal sector, the policy impacts 2.3 million tobacco farmers, 1.5 million clove farmers, 600 thousand tobacco workers, and 1 million retailers' lives. Based on the data, it can be concluded that the customs policy has a significant impact on more than 5.8 million Indonesians' life.

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E-Hope Application as an Innovative System for Health Policy Evaluation: Possibilities and Challenges

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Keywords: National health insurance, Evaluation, Policy, Application.

Abstract: Health is one of the most important things in daily life. Health care facilities should provide maximum health services to improve public health status and be affordable to all citizens. National health insurance is one way to access health services. It is implemented as The Social Health Insurance Agency (Badan Penyelenggara Jaminan Kesehatan Nasional). However, there are still many complaints and management problems such as bureaucracy, registration and payment. Hence, national health insurance needs to be evaluated. The aim of this study is to create an application system that can measure the success of the associated policies. A literature study is the method which has been used in this study. There are three factors that can be used to measure the success of a policy. These are the degree of compliance, smoothness, lack of disruption, leading to the desired performance and impacts. e-Hope would be an innovative application system that contains the above factors to measure health policies. This system provided a forum to share, monitor, evaluate health national insurance policy for primary, secondary, tertiary health care, community, and government. Furthermore, the top alternative solutions will be displayed in the system. It can be used to suggest improvements for national health insurance.

1 INTRODUCTION

Health is an important thing in life. Health care services need to be improved and developed continually. Improving and developing health services should include developing health care facilities, strengthening the referral system, instituting accreditation and standards for medical care to maintain standards at health care service facilities, improving human resources in health care, developing the pharmaceutical and medical device sectors, drawing up standards and costs of health care rates, and introducing relevant regulations. Furthermore, health policies have to be obeyed by all of the health care facilities to maximise their services to the citizens.

Every citizen who live in Indonesia have to apply for National Health Insurance (NHI). This insurance is conducted based on social insurance principles, equity and includes promotive, preventive, curative and rehabilitative programmes. This insurance system is managed by Badan Penyelenggara Jaminan Kesehatan (BPJS). Team for the Acceleration of Poverty Reduction (2015) said that even though National Health Insurance (NHI) has to

be followed by all Indonesian citizens, but approximately 36.8 percent people do not yet have any form of health coverage. It includes those who work in the informal sector although they consume more than they earn. If they are sick, they will have lost their productivity and began a possible descent into poverty. It can be concluded that participation in National Health Insurance programmes still does not cover all of the people it intends to assist. The government makes sure that all people pay only a small proportion of their health care costs.

The National Health Insurance (NHI) Policy has to be evaluated in order to improve the implementation of the insurance system. There are three factors that can be used to measure policies. These three factors are the degree of compliance level, smoothness/lack of disruption to a policy or the smooth implementation of the functional routine leading to desired performance and the impact from leading performance and the desired implementation impact (Ripley and Franklin, 1986). Each factor has some indicators which can be used as a measurement of policy implementation.

These factors can be described below:

1. Degree of compliance level

Success must be measured by the level of compliance from the subordinates in the given bureaucracy or with a level of compliance to the part of the bureaucracy in general in relation to the special mandates contained in law. The compliance perspective only talks about bureaucratic behaviour.

2. Smoothness/Lack of disruption for any disruption to a policy or the smooth implementation of the functional routine

The existence of smoothness and lack of interference means that this perspective reminds us of what we have observed about policy implementation. Usually the success of the implementation will generally only be in the arena of distributive and competitive regulation.

3. Leads to desired performance

Successful implementation leads to the desired performance and impact of the program being analysed. First, there is no way around the fact that the desired outcome is not objective, and that the concept is neutral. Desire is associated with values held by one or more people. In some cases, almost all related sides may agree on the desired performance traits and the impact. In other cases, the actors tend to disagree. An analysis of the implementation should be conducted when there is a value conflict, to become more aware of the specifics of the conflict and to calculate the conflict itself. This means that the analyst can judge the success of several different value perspectives (including his own, as long as it is clearly labelled) at the same time. And, depending on the content of their perspective, the same program's implementation can be labelled a success from one perspective and a failure from another.

Second, program impact is a very complicated concept. There are different levels of impact, and impacts can take very time long time to appear. Consider development programs for local health centres, for example. Using or not using the patient as a measurement centre, this is just one direct example.

Policy is a law, regulation, procedure, administrative action, incentive or voluntary practice of governments and other institutions. Policies can influence complex systems that can improve the health and safety of population. Regulation is implemented at all levels. Policy evaluation applies evaluation principles and methods to examine the content, implementation or impact of a policy (CDC,2011)

Evaluation is the activity through which we can develop an understanding of the merit, worth, and utility of a policy. Policy evaluation uses a range of

research methods to systematically investigate the effectiveness of policy interventions, implementation and processes, and to determine their merit, worth, or value in terms of improving the social and economic conditions of the different stakeholders (CDC,2011)

The implementation of National Health Insurance (JKN) by BPJS has received many complaints from citizens. The citizens' have complained about bureaucracy, registration, a long queue system as well as payment-related problems. The aim of this study is to create an application system that can measure the success of policies.

2 METHOD

This study used a literature study as a research method. The data obtained has been presented descriptively so as to show the study underlying the idea. The results and studies have been further developed and applied. The techniques of collecting data are to do with information related to social health insurance, BPJS, barriers in BPJS and application systems. This information was obtained from various items of literature such as scientific journals, the internet and relevant publications. After doing the research and data collection, it will be explained further to solve the problems discussed. The issues discussed are barriers in the health insurance system in Indonesia, as well as the evaluation of the national health insurance system policies through applications.

3 RESULT

From the literature study that has been done, it is necessary to measure the success of health policies especially the National Health Insurance (NHI) Policy. One innovation that can be developed is to create an E-Hope (Health Insurance Policy Evaluation) application. This innovation is an idea or concept that can be developed. In addition, to measure a policy, this application must contain three indicators. The indicators used are the degree of compliance level, smoothness/lack of disruption for any disruption to performance and impact. Furthermore, this system is expected to be a suggestion for the government to help them to improve the implementation of NHI and other health insurance policies.

4 DISCUSSION

An evaluation is an activity that contains the consideration of the value of a phenomenon. Public policy evaluations are divided into two; namely the outcomes of public policy implementation that refer to the policy objectives and the process of public policy implementation (Mustopadidjaya, 2002). The process of public policy implementation refers to an evaluation based on implementation and technical guidelines. According to Team for the Acceleration of Poverty Reduction (2015), the government of Indonesia launched National Health Insurance (NHI) or known as Jaminan Kesehatan Nasional (JKN) in Indonesia, which aims to protect the Indonesian public from the shock of sudden health crises. NHI/JKN is being implemented in stages, intending to provide universal health coverage to the population by 2019.

The health insurance system in Indonesia needs to be evaluated to overcome the existing barriers and to increase the effectiveness of the program. National Health Insurance (NHI) can be used for using health services in health care facilities. In accordance with the research that had been conducted by Marisah (2016), participants of BPJS could choose first level health care facilities that are in cooperation with BPJS Health. In the implementation of National Health Insurance/Jaminan Kesehatan Nasional (NHI/JKN), there are many obstacles that have arisen. Besides that, a research that had been conducted by Putra (2014) mentioned the obstacles that existed during the implementation of NHI/JKN including the delayed disbursement of claims, the difference in the value of service tariffs, information technology that often experiences disturbance and a lack of human resources. This is in line with the research that had been conducted by Andita (2016), where the factor of delay in claims was a health insurance barrier.

An application system called e-Hope will be made to evaluate the national health insurance policy. The design of this application innovation idea is based on the Ripley and Franklin Theory which includes three aspects. There were some research that using Ripley and Franklin Theory. The research that had been conducted by Putra (2014) stated the successfulness of NHI/JKN policy implementation using Ripley and Franklin Theory. Another research that using that theory is a research that had been conducted by Subadi (2013). The successful of a policy will be easier if there is an application that provide measurement of policy evaluation. So, this application aims to measure the

success of a policy from three aspects. Those are degree compliance, smoothness/lack of disruption and impact.

In spite of evaluating policy, this application can also support the National Health Information System in the future. It needs both human resources and the facilities to support it. It also includes a procedure to run the application. A research that had been conducted by Isnawati et.al (2016) stated that there were many challenges about Health Information System from the input such as procedure and form; the process needed a dependable human resources and the good quality data as an output. The better input and process of health information system, the better outcome would be seen.

This application will need human resources, facilities to support it and a procedure to run the application. The internet will be used to access the application. Because of its function, it will make this application can be accessed or connected by thousands of computer networks worldwide. Besides that, this application system contains forums to share, monitor and evaluate that can be accessed by health experts or the leaders of the health care facilities in Indonesia. They have to fill in three aspects of the application.

The first aspect to be filled in is the degree of compliance. The fulfilment of the requirements becomes the first indicator to be seen in this aspect. This indicator looks at whether the health care facilities already have an MoU with BPJS so that it can manage both parties. The MoU itself refers to the Regulation of Indonesia Health Ministry No 28 2014 on Guidelines for Implementation of the National Health Insurance Program (Peraturan Menteri Kesehatan RI No 28 Tahun 2014 tentang Pedoman Pelaksanaan Program Jaminan Kesehatan Nasional). The MoU must contain health services, health care facilities that organise people, the benefits guaranteed in JKN and the procedures for obtaining health services in Advanced Healthcare Referral Facilities. The second indicator in compliance is claims reporting. The submitted claims must be verified by the BPJS as a verifier in order to verify the admittance of service responsibility. The health experts have to fill in the indicators by way of a checklist which has been made previously.

The second aspect is smoothness/lack of disruption. The current implementation of the routine functions can be seen from within the existing processes of the health services. The speed of the health services provided to the health care patients shall be made in accordance with MSS and

SOPs as established by the government. The health services provided are divided into two such as outpatients and inpatients. It can be seen from the checklist of each component of MSS whether the health care facilities have been fulfilled or not.

The last aspect is the desired impact. The desired impact is the end result to see whether the policy is appropriate or not. The first indicator is the level of patient satisfaction that can be seen from the existing complaint box or the pre-prepared questionnaire. The second is the income surplus for the health care facilities. In each health care facility, there will be seen the level of acceptance and expenditure during the health services. If a surplus is there, then it can be input in to this application. After these three aspects have been filled in, then can the success of the implementation of health insurance system policy can be seen. This system may be used by trained health personnel, administrations or third persons. There is a forum between health facilities which will mean sharing the obstacles that exist there. Each expert's solution will be shared. The most alternative solution to overcome the obstacles of NHI/JKN implementation will be shown so that the government or BPJS can use this application to see the obstacles that exist in each of the health care facilities and suggested solutions from the expert.

5 CONCLUSIONS

E-hope would be an innovation system idea that can evaluate health policies. This system provides a forum to share, monitor and evaluate national health insurance policies in all of the health care facilities. Furthermore, this system can be suggested to improve the national health insurance system and policy.

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Role of Tobacco Industries in the National Economy

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Keywords: Tobacco, Taxes, Industry.

Abstract: The tobacco industry widely covers the primary raw material sector including tobacco leaves, cloves and the cigarette processing sub-industries. The role of the tobacco commodity is prominent in the national economy as a source of state revenue from excise tax. The value of the tax revenues from year to year continues to increase. The increase in the tobacco excise tax is due to the policy of increasing the retail price of tobacco and thus, the cost of tobacco excise. The purpose of this study is to find out how big the influence of the tobacco industry is on the national economy. This paper uses analytical methods paired with a qualitative methodology. The results have concluded that the tobacco industry on the one side plays a role in the national economy and on the other hand, has a negative impact on public health and the environment. The government's assertiveness to protect people against the negative impact of cigarettes is needed through measures to increase cigarette prices, increase the cigarette taxes, and to further the cigarette promotion restrictions in cigarette advertisements and sponsorship activities involving young people. The conclusion is that the government should seek other solutions to improve the national economy aside from cigarette taxes.

1 INTRODUCTION

Tobacco is one of the agricultural commodities that has a high economic value, even aside from the products produced from processed tobacco. The development of the tobacco processing industry that has occurred in Indonesia is inseparable from the consumption of tobacco products. The demand for high-tobacco processed products is gives a boost to the tobacco processing industry because of the desire for continued production and the subsequent profits. The dependence of the tobacco processing industry on the domestic market makes the tobacco processing industry relatively stable, especially concerning the main raw materials used by the industry. The price of the raw materials, especially tobacco, is not affected by the price in the world market.

The small and medium scale elements of the cigarette industry can suffer losses due to the decrease in cigarette consumption by the community due to FCTC regulations (Framework Convention on Tobacco Control). These regulations aim to protect the current and future generations from the health, social, environmental, and economic consequences of tobacco consumption and exposure to second-hand smoke. Not only does the tobacco

industry have a negative impact, but so does the tobacco farming sector as the main provider of cigarette production input. The phenomenon of the tobacco processing industry is interesting to examine in relation to how its role in the economy comes face to face with health issues in Indonesia.

2 METHODS

The methods in this study were the qualitative approach, executed by collecting secondary data, i.e. data obtained from an agency related to the research focus. The purpose of this research study was to know how big the influence of tobacco industry in relation to the national economy. This is as well as the economic impact of the tobacco processing industry on other sectors of the economy.

3 RESULT

3.1 The Tobacco Industry to the Indonesia's Economy

The tobacco industry in relation to Indonesia's economy is very influential. In Figure 1, the income

of farmers per hectare in the central cigarette industry and their income from tobacco has amounted to Rp 48 million. The average income of most tobacco farmers in 2012 amounted to Rp 57 million and in 2013, this amounted to Rp 54 million.

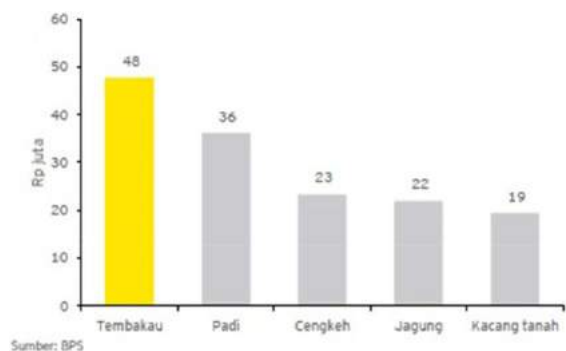


Figure 1: Income of farmers per hectare in cigarette industry centre in 2013

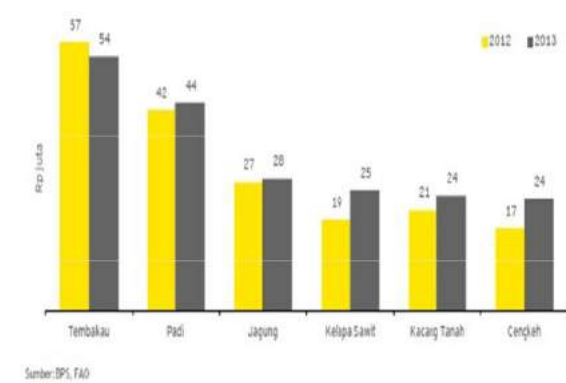


Figure 2: Farmers' income (Rp million / ha) - national average

3.2 Growth of cigarette industry in Indonesia.

The average annual growth of cigarette sales is estimated to be 5.4% over the last 6 years (2009-2014). It is estimated that the value of cigarette sales reached 276 trillion in 2014, of which 113 trillion was excise. The average growth rate of cigarette sales is 14.6% higher than other industries. This has increased the average price of cigarettes per year (2009-2014) by 8.7%.



Figure 3: Cigarette sales (2009-2014)

3.3 Contribution of cigarette industry to tax revenue

Indonesia's tobacco industry through CHT (Excise on Tobacco Products) for the last 5 years has accounted for an average of 9.2% of the total tax revenue or Rp 443 trillion in the period 2010-2014. This makes excise tax one of the main contributors towards state income from taxes. 9.8% of the total tax revenue in 2014 came from tobacco taxes. The highest excise increase occurred in 2012 by 23.6%.

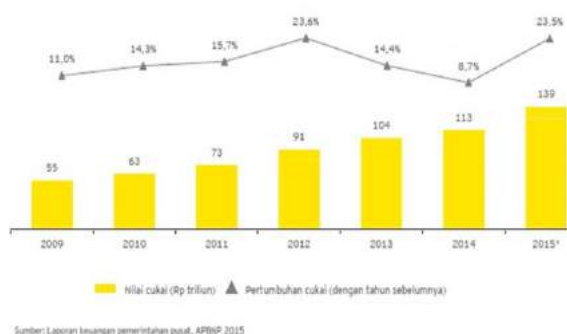


Figure 4: Excise and growth

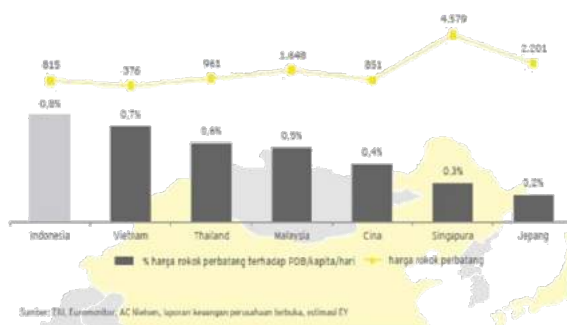


Figure 5: Comparison of cigarette prices with other countries.

The estimated value of the contribution of the tobacco industry to traditional traders in 2014 amounted to Rp 206 trillion. Meanwhile, sales of cigarettes to the total sales value of FMCG in 2014 reached 43.7%. (Figure 6)

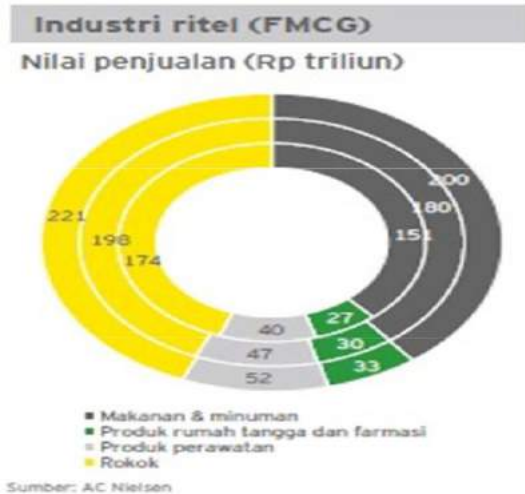


Figure 6: Total sales value of FMCG

4 DISCUSSION

Some of the phenomena associated with the tobacco sector and tobacco industry in Indonesia are 1) that the tobacco production has declined an average of 5.98% per year, 2) that the consumption of cigarettes increases with population and income, 3) that the tobacco and cigarette industry sector accounts for about 7% of domestic revenues, but exhausts more than the foreign exchange, 4) dislikes the absorptive sector of labour in other sectors, which is a considerable multiplier output of the sector and 5) that the tobacco sector has a strong thrust against the downstream sectors, and the cigarette industry sector strongly pushes the downstream sector (Hadi and Friyanto, 2008).

The large number of cigarette excise taxes as a source of state income has become a pro-contra debate over the call for tobacco farmers to switch to other farm enterprises on the land that is owned. As a raw material for the tobacco industry, the need for tobacco will probably never cease, so there must be a development effort to open up new avenues. In addition to these direct economic benefits, the indirect economic benefits are also very large in the retail sector, associated with kiosks, and the upstream industries of cigarettes such as paper mill auxiliary materials and others. In the process of

developing tobacco cultivation, there is the fertilizer industry, pesticides, herbicides, and others. The restriction and cessation of tobacco plantations will have a chain impact on the tobacco industry, other component suppliers from different industries, industrial workers, wholesalers and retailers who will all suffer huge losses.

5 CONCLUSION

In Indonesia, the tobacco industry is faced with a difficult situation. On one side, it plays a role in the national economy and on the other side, it has a negative impact on public health and the environment. The role of tobacco in the national economy can be seen from the contributions of the cigarette industry towards the tax revenue of Indonesia.

Indonesia is a country that serves as a cigarette market for national and global cigarette producers, due to its large population, high population growth rate, and population participation rate, especially in relation to young smokers. Indonesia's cigarette industry is mostly owned by large and foreign investors, so that the value added is enjoyed by the big and foreign investors, while the Indonesian people only receive the negative impacts from cigarettes.

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Evaluation of Health Worker Availability in Remote Areas

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Keywords: Distribution, Health worker, Remote area.

Abstract: The problem of quantity and distribution of health personnel is a health policy problem that is often faced in remote areas. Health development is an effort to fulfil the basic rights of the people, namely the right to access health services. One of them with the distribution of health workers were evenly certain locations in. Indonesia is one of 57 countries experiencing World Health Human Resources crisis in the world. Health crisis is increasingly felt in remote areas resulting in the development of Indonesian dwarfs as a whole. This condition is exacerbated by the low retention of health workers in the region. The purpose of this study was to evaluate the inequality of distribution of health workers in remote areas. This research uses qualitative design with descriptive analysis approach. The imbalance of health personnel is caused by the demand and supply that do not go hand in hand. Therefore, to improve the distribution of health workers in remote areas, there needs to be policy support from the government, including compulsory work with adequate infrastructure support. Incentives both financial and non-financial should also be considered as an effort to improve access to health workers in remote areas.

1 INTRODUCTION

Human Resources is the key to the success of an organization because the quality of the organization's products is influenced by the quality and productivity of its human resources and the thing that must now be realized is that human resources is the highest asset of influence, because the level of benefits from other resources both financial and non financially depend on the level of effectiveness of human resource utilization (Azwar, 1996).

The implementation of health development refers to the National Health System with 6 sub-systems. Among them is the human resources (HR) health subsystem with the aim of making available competent health human resources as needed, distributed fairly and equitably and optimally utilised in supporting the implementation of health development and as the main element supporting other health sub-systems. Health Resources refer to someone who actively works in the field of health, whether they are educated in formal health or not. Certain types require authority in executing various health efforts. Health Resources play the role of planner, mobiliser and also as the executor of

ongoing health developments (Indonesia Ministry of Health, 2009).

The availability of health human resources should be evenly distributed in all areas in Indonesia, especially in the area of 3T (Disadvantaged, Leading and Outermost). The Agency for Development and Empowerment of Health Human Resources has included 143 districts / cities included in the 3T (Disadvantaged, Leading and Outermost). According to Indonesia's health profile in 2016, the distribution of health workers in the Regencies / Municipalities of Disadvantaged, Leading and Outermost Regions, there is still an unequal distribution of health personnel. There are some health facilities that do not have certain specifications of health worker in their areas. Areas that include 3T are the provinces of West Sumatra, South Sumatra, Bengkulu, Lampung, Central Kalimantan, South Kalimantan, East Kalimantan, North Sulawesi, Central Sulawesi, South Sulawesi, Southeast Sulawesi Maluku and West Papua. Most still do not have specialist dentists (Agency for Development and Empowerment of Health Human Resources, 2017). Almost all districts belonging to the 3T areas do not yet have traditional health workers. The distribution of unequal health

personnel means that the area has a low level of health status.

2 METHODS

The research type was qualitative with a literature study approach involving secondary data collection. The type of research conducted was descriptive. The descriptive analysis was used to analyse the data by describing phenomenon and events. The main purpose of qualitative research is to understand the phenomenon or social phenomena by giving a clear description in the form of a series of words. Secondary data collection was obtained through journals and sites that discuss the topic of health personnel equality.

3 RESULT

The data on the number of health human resources utilised in Puskesmas in the 3T (Disadvantaged, Leading and Outermost) Areas was obtained from the recapitulation conducted by the Agency for Development and Empowerment of Health Human Resources. The availability of Health Human Resources in 143 districts / municipalities of 3T was quite varied. Some areas still do not have traditional health personnel, clinical psychologists and other specialist health workers.

The government has made a strategic plan to increase the number, type, quality and even distribution of health personnel. In the performance plan, various indicators have been set. In order to support the achievement of the targeted outcome indicators, one of the activities to be undertaken is the Planning and Utilisation of Health Human Resources which can be seen in Table 1.

Table 1: Targets and Performance Indicators Performance of Center for Planning and Utilisation of Health Human Resources 2015 & 2016

| Number of health personnel utilized in Health Care Facility | | | | |
|---|-----------|--------------|-----------|--------------|
| Baseline (2014) | Year 2015 | | Year 2016 | |
| | Target | Achievements | Target | Achievements |
| - | 950 | 3.572 | 20.600 | 4.987 |

Source: Report on the Performance Accountability of Government Agencies 2016

Table 1 explains that the indicator of the number of health personnel used in health care facilities by 2015 has reached the target while in 2016 it has not reached the target set. In 2015 the government set a target of 950 and has been reached of 3,572. while in 2016 the government set a target of 20,600 and achievement of only 4,987. This affects the distribution of health workers, especially in remote areas. Increased efforts to achieve these targets continue to be undertaken by local governments by implementing several work programs that can address the problem. Unequal distribution of health workers in remote areas can be caused by many factors. This report will also evaluate the inequality of distribution of health workers in remote areas. This analysis is based on a review of journals and other scientific papers discussing the distribution of health workers in remote areas.

4 DISCUSSIONS

Equality of medical personnel in rural areas has been a challenge for the Indonesian government. Several innovative policies have been identified that can help improve the distribution of health workers geographically. By combining all teams that work together and complement each other, it will be an appropriate strategy to improve effective health services in rural and remote areas. Indonesia needs to define its health personnel in a manner that is more in line with changing state health needs. The difficulty in attracting and maintaining health workers to rural and remote areas is a common problem in much of Asia and elsewhere. Based on international experience, WHO has developed 16 recommendations to improve the distribution of health workers. These 16 recommendations are grouped into four broad headings: policy interventions; education; regulatory environment; financial incentives and professional and personal support.

Distribution of health workers who are still not evenly distributed, especially in rural areas in general the degree of public health is much lower than other regions. This in addition to impact on the health sector will also impact on social conditions and economic conditions. Several factors are suspected to be the cause of unequal distribution of health workers includes environmental conditions, income and motivation.

In Indonesia there are already some areas that have programs to improve the fulfilment of the needs of medical personnel. In Raja Ampat, for example, to meet the needs of the village midwife,

the Morotai Regional Government of North Maluku will provide scholarships for 15 women's sons of the female high school / high school graduates who are married, not more than 30 years old, have the blessing of their families and husbands devote himself in the village as a village midwife (each village 2 people), and pass the selection. In this case, the local government cooperates with one of the private obstetric academies in Tobelo. The students of D3 Midwifery get full scholarship from APBD.

The Government of Indonesia has used several programs to increase the availability of medical personnel in rural and remote areas. The program includes higher financial incentives and shorter contract periods for rural and remote posts, recruitment based on ethnicity and location programs and internships. The distribution of health workers to remote and rural areas has increased. Maintaining health workers is a priority of the Indonesian government. As a result, MOH has implemented several policies:

1. Scholarships to improve the level of education (training of medical specialists, public health midwives, and nursing specialists / medical specialist assistants).

2. Encourage local governments to use the Special Allocation Fund from the central level to improve health facilities (including equipment and vehicles) and housing for health workers in very remote areas.

3. Career Opportunities: Upon completion of PTT services, staff have 3 options: (i) continue their education to become specialists; (ii) to become a civil servant (PNS) by taking civil servant examinations; or (iii) entry into the private sector. General Practitioners in very remote areas have a 90% chance of entering civil servants after completing their service; Public practitioners in remote areas have a 50% chance while those serving in regular areas only have 10% (Efendi, et al., 2012).

5 CONCLUSIONS

The availability of Human Resource Health is one of the most important things in the implementation of public health. Equality in the distribution of health personnel should be carried out so that all communities have the same degree of health. Inequality in relation to the number of health workers still occurs in various regions, especially in remote areas. The data on the number of health human resources utilized in the 3T (Disadvantaged, Leading and Outermost) Areas was obtained from the recapitulation conducted by the agency for the development and empowerment of health human

resources. The availability of Health Human Resources in the 143 districts / municipalities of 3T is quite varied. There are still some areas that do not have traditional health workers, clinical psychology and other health workers. The government continues to pursue various policies to address the issue.

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Evaluation of Childbirth Insurance Implementation for Reducing MMR and IMR in Dawarblandong Districts Mojokerto Regency

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Keyword: Maternity insurance, MMR and IMR.

Abstract: The government's efforts in reducing Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) need to be worked hard. The decline of MMR and IMR is one of the goals of national development in Indonesia. But MMR and IMR in Indonesia are still high, according to Indonesia Demographic and Health Survey (IDHS) in 2012 amounted to 359 per 100.000 live births. The majority of maternal and infant mortality occur in middle-income peoples due to economic inhibition and access. Thus, the government issued a Childbirth Insurance Program aimed at the poor to reduce MMR and IMR. This research uses descriptive type research method, with purposive sampling technique. Selected two respondents who are considered to provide results in accordance with this research are two Village Midwives. Data analysis use qualitative and explanative approach. The results of the research that the implementation of Childbirth Insurance in Dawarblandong Districts is in accordance with the Technical Guidelines of Childbirth Insurance in 2011. Data collection of Childbirth Insurance participants is evenly distributed because data collection is done in detail. The shortcomings in the implementation of Childbirth Insurance are less contribution from Head of Public Health Center, Village Head, and Head of Districts. MMR and IMR coverage declining in 2016 can prove that the implementation of Childbirth Insurance succeeded in reducing MMR and IMR.

1 INTRODUCTION

Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) became one of the important indicators in determining the health status of the community. Indonesia is the country with the highest Maternal Mortality Rate (MMR) in Southeast Asia. Indonesia Demographic and Health Survey (IDHS, 2012) reported that every 100,000 live births in Indonesia there are 359 mothers who died during childbirth. In the Millennium Development Goals (MDGs), maternal mortality is also one of the predetermined targets, that is improving maternal health where the target to be achieved by 2015 is reducing to $\frac{3}{4}$ the risk of maternal mortality. Maternal death is an event that can be caused by various things. The biggest cause of maternal death to date is bleeding (Indonesian Ministry of Health, 2014). Other causes such as history of disease, abortion, pregnant in old age and infection.

Indirectly, the low awareness of the community about the educational background, the health of pregnant women, the socio-economic of the family, and the community environment allegedly contributed to the increase of maternal mortality.

In addition, maternal mortality can also be attributed to 3 risk factors of delay (Three Late) and 4 risk factors too. In addition, maternal mortality can also be attributed to 3 risk factors for delays and 4 risk factors too. The risk factors for delay are family delay in making contact decisions with health personnel, delay in obtaining health service, and late referring. Whereas four too are too young / old age mother to decide to get pregnant, too often give birth, and too close distance between pregnancy / labor one with next (Mojokerto District Health Office, 2013). From several known factors, there is an important effort to decrease Mother Mortality Rate (MMR) is to increase public access to healthy delivery by providing easy financing for all pregnant women who do not have health insurance because MMR and IMR are the majority of the poor.

The Ministry of Health of the Republic of Indonesia launched a policy stipulated in the Childbirth Insurance Program in 2011. Childbirth Insurance is dedicated to assisting mothers with financial difficulties in accessing health services. Childbirth Insurance Program itself becomes priority program of Ministry of Health with budget year 2011 equal to 1,223 Trillion rupiahs. This program is designed to assist in the achievement of National Health Development Goals and Millennium Development Goals (MDGs) by 2015.

2 METHODS

This research is a descriptive research with qualitative approach. This research was conducted exactly in Districts of Dawarblandong Mojokerto Regency. Determination of respondents in the study was purposive sampling. Selected respondents are those who play a role in the implementation of the Childbirth Delivery Program at Dawarblandong Public Health Center, ie two midwives, one midwife as the coordinator of the Maternity Care Program and other midwives as representatives who know the implementation of the Maternity Insurance Program in the field. The data were collected through in-depth interviews using interview guides and secondary data obtained from Dawarblandong Primary Health Care's data. The data obtained are listed descriptively. Data analysis is done qualitatively and explanatively.

3 RESULT

3.1 Childbirth Insurance in Dawarblandong Districts

Childbirth Insurance in Dawarblandong Districts held since 2015. This program is required by the government not the desire of Dawarblandong Public Health Center to implement Childbirth Insurance. Since the implementation of Childbirth Insurance, Dawarblandong Public Health Center already understand about Childbirth Insurance, that is Program from government which is addressed to pregnant women especially for poor people used for Antenatal Care (ANC), maternity services, post-natal service and access to family planning services. For those who have other Health Insurance, cannot recorded as a participant Childbirth Insurance. Requirements to become a participant Childbirth

Insurance by showing ID Card, Family Identity, and Poor Certificate.

3.2 Implementation of Childbirth Insurance in Dawarblandong Districts

Preparation of the implementation of Childbirth Insurance is held a meeting with the Health Services of Mojokerto regency before socialized to the community. The meeting was represented by the program holder Mother and Child Health (MCH) Dawarblandong Districts. At the meeting discussed Childbirth Insurance targets, Childbirth Insurance claim, and the amount to be received by the maternity helper. After conducting an official meeting with the Health Service, then socialized to all health workers in Dawarblandong Districts including village midwives in all work areas. The task of the village midwife as the Childbirth Insurance implementing team is to socialize Childbirth Insurance to the community who is entitled to obtain Childbirth Insurance through Maternal & Child Health Centre or meetings held in the Village. Data collection to the people who are entitled to use Childbirth Insurance when Maternal & Child Health Centre activities take place or the community comes to the Village Maternity Post to meet the village midwife. Data entered to the Cohort Book.

The registered community of Childbirth Insurance may use it for ANC, childbirth and family planning by the village midwife. Afterwards the Village Midwife can make a claim by reporting to the Public Health Center by making a complete delivery report and proof of patient identity such as ID card and Family Identity. By Public Health Center reported to the Health Services by submitting reports from the Village Midwife. Childbirth Insurance is only able to bear for normal maternity, not for surgery (C-section). Obstacles that occur in the implementation of Childbirth Insurance Program in Dawarblandong Districts when data collecting there are some people do not have ID card or Family Identity.

3.3 Equity of Childbirth Insurance in Dawarblandong Districts

According to Minister Health Regulation in 2011 about the Technical Guidance of Childbirth Insurance that the Program implemented by the government in order to reduce the MMR and IMR.

The participation of Childbirth Insurance in Dawarblandong Districts has been equitable, especially for all poor people belonging to pregnant women, maternal mothers, postpartum and babies, except for people who have other insurance.

Implementation of Childbirth Insurance in Dawarblandong Districts for health worker have purpose and desire to strive for Dawarblandong Sub-district can be maternity with low cost for poor society safely and comfortably. Based on the Constitution of the Republic of Indonesia in 1945 article 27 paragraph (2) it says "every citizen shall have decent work and livelihood". Data collection is done in detail so that all communities can be registered as Childbirth Insurance participants. This is done in every village in Dawarblandong Districts. In Indonesia, various national development efforts have been made, one of them is health development. Thus equity in development needs to be revisited.

3.4 Evaluation of Childbirth Insurance

Every year at the Dawarblandong Public Health Center, an evaluation of the Childbirth Insurance Program is conducted for a year. The evaluation meeting was attended by Childbirth Insurance Program supporters such as Sub district Head, Urban Village Head, Head of Public Health Center and all Village Midwives. The purpose of the evaluation is to know the success of the Childbirth Insurance Program every year. Success has seen from the accuracy of the target. This means that with the Childbirth Insurance, the achievement of the MCH program has been successful.

3.5 MMR and IMR coverage

MMR and IMR coverage in Dawarblandong Districts in 2016 decreased, that's compared to the previous year. Utilization of Childbirth Insurance of Dawarblandong was done by participation really proven. The desire of the implementing team is the Village Midwife is also one of the supporters of Childbirth Insurance Program to improve health status by providing the best service for pregnant women.

4 DISCUSSION

To evaluate the implementation of Childbirth Insurance using the indicator of the success of Childbirth Insurance this contained in the Health

Minister Regulation 2011 about Guideline for the Technical Childbirth Insurance.

Health workers in Dawarblandong Districts have knowledge and understanding about Childbirth Insurance. It is in accordance with the Technical Guideline for Childbirth Insurance, that the Childbirth Insurance is an effort to ensure and protect the process of pregnancy, childbirth, postnatal and family planning. Childbirth Insurance in Dawarblandong Districts provide services as written in technical guidance covering Antenatal Care (ANC), childbirth help, postnatal care and family planning services, and newborn health services, including referral preparation service at the time of complications (pregnancy, childbirth, bleeding or childbed and infant newborn and family planning).

Childbirth Insurance Financing is an integral part of Public Health Assurance financing, so its management in Management Team/Health Office at Regency/City Level is not done separately for the first level service/basic service and for the advanced/referral service. The management of financing Public Health Assurance in the first level service/basic service is done by the Health Office. Claim Childbirth Insurance at Dawarblandong District conducted by midwives to Public Health Center. Based on technical guidelines of Childbirth Insurance, the management claimed by reporting the completeness of claims covering ID card, photocopy of service sheet in Mother and Child Health (MCH) book, pantograph, cohort book, and family planning note by birth attendant. Public Health Center reported to Health Office.

Socialization on Childbirth Insurance is done to all pregnant women especially poor people. Childbirth Insurance socialization by Public Health Center aims to provide information about Childbirth Insurance and benefits of Childbirth Insurance. That way there is no doubt for the community in following the Childbirth Insurance Program. Only the poor people are targeted by the Childbirth Insurance Program. From the informants are ensured that all the rightful people at Dawarblandong Districts become participants of Childbirth Insurance have entered Childbirth Insurance data.

One of the indicators to improve maternal health is the achievement of MMR and IMR decline which in the delivery process is assisted by trained health personnel. Childbirth workers in Dawarblandong Districts each Village has one midwife. According to Ministry of Health of the Republic of Indonesia in 2006 about Village Standby, in Indonesia for the whole region there is at least one village midwife to

help deliver the childbirth. The role of midwives is to provide services to the health of mother and child. Mother and Child Health (MCH) services include Antenatal Care (ANC), childbirth, postpartum services, and postnatal care (Ministry of Health of the Republic of Indonesia, 2013). The services provided by the village midwife to the Childbirth Insurance participants already covered the MCH program.

Claims process conducted by the Village Midwife in Dawarblandong District according to the technical guidance of labor. Such as telling the health Ministry of RI in the information of Birth Insurance that this labor claim does not have to be in the package (overall) but can be done separate claims, such as ANC alone, labor alone or PNC only.

There are no funding constraints and amounts received by the Village Midwife as a result of the provision of services using Mortality Insurance.

Coverage of MMR and IMR has declined since Asuransi Dawar in Dawarblandong district. IMR in 2016 of 0.04 per 100 live births, the rate is decreased when compared to infant mortality in the previous year. Thus, the decrease in MMR and IMR occurs in 2016.

5 CONCLUSION

Childbirth Insurance Program implemented in Dawarblandong Districts Mojokerto Regency has been implemented in accordance with the Technical guideline of Childbirth Insurance at regulation of health ministry in 2011 in terms of understanding of Childbirth Insurance, Childbirth Insurance goals and Childbirth Insurance utilization.

Implementation of Childbirth Insurance in Dawarblandong Districts is supported by hard work done by Childbirth Insurance executing team especially to officer of delivery helper that is midwife who have desire to succeed the program in work area of each midwife. However, there are a few shortcomings in the implementation, namely the lack of other stakeholder roles such as Head of Public Head Center, Head of Districts, and Village Head in the implementation of Childbirth Insurance Program.

The implementation of the Childbirth Insurance program in the field is also in accordance with the Technical Guidelines of Childbirth Insurance. Childbirth process is handled by birth attendant that is midwife. Birth attendant are well aware of the claim process and the evaluation of the Childbirth

Insurance program that is implemented yearly, but there needs to be an integrated monitoring program to improve performance. Childbirth Insurance in Dawarblandong Districts for membership is evenly distributed.

The successful implementation and equity of Childbirth Insurance in Dawarblandong Districts to decrease Maternal Mortality Rate and Infant Mortality has been successful with proven that the coverage of MMR and IMR in 2016 decreased from the previous year.

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Compliance Analysis of Hospital Health Promotion Standards at General Hospital of Haji Surabaya

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Keywords: Health promotion, PKRS, Standards, General Hospital Haji Surabaya.

Abstract: Health promotion is currently developing into a separate science in the field of public health. Health promotion can be done in several institutions, including the hospital environment. The hospital is one of the health facilities are included in the subsystem of health efforts. Whereas, the promotion of hospital health is a form of hospital efforts to improve the ability of patients and community groups to be independent in accelerating the healing, improving health, prevent health problems and develop health efforts. This research uses descriptive research design with qualitative approach to investigated compliance of Hospital Health Promotion implementation (PKRS) standards. This study was conducted at GENERAL HOSPITAL Haji Surabaya. Respondent in this research are chairman and secretary of Team PKRS. Results from the research that GENERAL HOSPITAL Haji Surabaya has been implementing Hospital Health Promotion good enough although there are still some PKRS standards not fulfilled. There are still some problems in the implementation of PKRS which is lack of number workers in unit PKRS, the incorporation of budget funds with other unit, lack of cooperation among internal hospitals and partnership with external parties.

1 INTRODUCTION

Nowadays health promotion has been developing into a separate science in the field of public health. Health promotion has always been equated with health education, never denied that health education is the part of health promotion. Health education and health promotion have the same goal of changing behaviour and the environment with various strategies, so that individuals or communities can improve health status.

WHO has done formulated a definition of health promotion, Health promotion is the process of enabling people to increase control over, and improve, their health to reach a state of complete physical, mental, and social, well-being, an individual or group must be able to identify and realize aspirations, to satisfy needs, and to change or cope with the environment (WHO, 1986).

Health promotion could be done in several instances, one of them is hospital, because hospital is one of the health facilities are included in the subsystem health efforts. As stated in the Standards for Hospital Health Promotion of the Year 2010,

issued by the Ministry of Health Republic of Indonesia, Hospital Health Promotion is an a effort to improve the ability of hospital patients, clients and community groups, so that patients can self-accelerate healing and rehabilitation, and self-sufficient in improving health, preventing health problems, develop resourced public health efforts, through learning from, by, for, and with them, their social and cultural fit, and sound public policy supported health (Indonesian Ministry of Health, 2010).

Expectations with those standards, the Hospital should make PKRS as one health care efforts policy, providing patient's right to obtain information about the prevention and treatment of related diseases, empowers community hospitals, create the safe, clean and healthy workplace, and has partnership to improve health service efforts.

One of the hospitals that has implemented this PKRS is general hospital of Haji Surabaya or can be called General Hospital Haji Surabaya, located in Manyar Kertoadi Street, Surabaya. General Hospital Haji is a hospital which in the auspices of East Java Provincial Government. Implementation of standards PKRS will find many obstacles. These

obstacles should be evaluated by the Hospital to improve the quality of health services both promotive and preventive. In this study, would investigated compliance of Hospital Health promotions standard in General Hospital Haji Surabaya.

2 METHODS

This research uses descriptive research design with a qualitative approach to describe the condition of the implementation of the Hospital Health Promotion (PKRS). The research was conducted at General Hospital Haji Surabaya, with the time of the research conducted in May 2017. Respondent in this research is the chairman and secretary of PKRS Team. Data were collected through in-depth interview with PKRS Team and from observation directly.

This research was done twice in data retrieval, Firstly by in-depth interview and Secondly with observation. Variables in this study is availability of management policy, the study of hospital needs, compliance of community empowerment in the hospital, availability of safe, clean and healthy workplace, and development of partnerships conducted by the hospital. So it would be able to describe the condition of the implementation of PKRS General Hospital Haji Surabaya, compared with standards set by the Ministry of Health in 2010.

3 RESULTS

3.1 Management Policy

General Hospital Haji Surabaya has a working unit of PKRS which is chaired by dr. Nuning Puspitaningrum, SpS. PKRS team composed by Bachelor of science in Public Health (SKM), nurses, and nutritionists, who each other has own job to do. The implementation of PKRS General Hospital Haji does not have special budget, but it still merges with another unit of Public Relations. The results are consistent with implementation at Hospital of Labuang Baji Makassar, which they do not have special budget related health promotion activity because budget funds are not given directly to the Installation PKMRS (Promosi Kesehatan Masyarakat Rumah Sakit) . To get budgets hospital health promotion efforts, the installation must submit a proposal of PKMRS the budget planning for the hospital directors to be processed, and if

approved, the new budget lowered to the installation PKMRS as the responsible hospital health promotion efforts (Manurung et al, 2015). In contrast to implementation at General Hospital of Haji Surabaya, in Bhayangkara Hospital Level II shows that unit PKRS have special budgeted from public service agency (BLU), although unit PKRS merger with public relation (Purba et al, 2016).

Every year General Hospital Haji has been planning the activities of PKRS on a regular basis. Socialization related PKRS has been given to the entire hospital community, like employees, patient, and family members of patients. General Hospital Haji provide training how to make an effective communication for serving patients or family patient, in improving the capacity and ability of health workers. The facilities used in the implementation of the already quite-complete for PKRS activities, as well as health promotion media in the form of leaflets were distributed to patients in socialization. But, in the implementation of monitoring and evaluation team PKRS still do not have a regular schedule. This section must be in two columns.

3.2 Community Needs Assessment Hospital

General Hospital Haji Surabaya has friendly health workers in providing services to both patients and families, they also use dialogue that can motivate patients when conducted counselling. Hospital officials are expected to apply smiles, greets, regards, graceful. There is a media flow of payments and administration at the information boards. In addition, health workers provide counselling to outpatients and inpatients. However, hospital does not provide bibliotherapy facilities for patients or hospital visitors.

3.3 Hospital Empowerment

General Hospital Haji Surabaya has officer who can answer all questions about disease experienced by patients, the drug should be consumed for healing process, and health services to be provided to the patient. In addition General Hospital Haji also provides facilities for patient consultation room. PKRS activities inside and outside the building, carried out every week in the form of joint exercises twice: elderly gymnastics and diabetes gymnastics. Although General Hospital Haji does not have a choir group, but General Hospital Haji has

entertainment facility for hospital visitors, a music station.

3.4 Safe, Clean and Healthy Workplace

The environment of General Hospital Haji Surabaya has already been clearly and cleanly. There are also no parts of the floor were cracked, the condition of the building has been well maintained. Not only the building, but other facilities such as waiting areas, tables, chairs and others are also well maintained. Evacuation path marks are already installed properly in every corner of the building and the availability of information boards containing health promotion media also can be seen in each floor, directions are also available at General Hospital Haji building.

In addition, General Hospital Haji has a green open space facilities in first floor area of General Hospital Haji, and equipped their trash can in appropriate with the needs of society General Hospital Haji Surabaya. In compliance with the health requirements in an office environment, General Hospital Haji Surabaya has a toilet with hand washing facilities. General Hospital Haji also provide facilities lactation corner of nursing mothers, which located on the second floor children's section and obstetrics and gynaecology poly.

3.5 Partnership

PKRS Team General Hospital Haji Surabaya currently haven't any partnership with LSM, ORMAS, or others. However, each year PKRS team conducts MOU with community health centre (Puskesmas) to supporting implementation of PKRS at General Hospital Haji Surabaya.

4 DISCUSSION

4.1 Management Policy

General Hospital Haji Surabaya already has a decree to support the implementation of PKRS activities. General Hospital Haji has always been providing socialization about importance of PKRS activities. But their implementation is still not got supported by all unit in General Hospital Haji Surabaya. So that the performance become less maximum, there are also seen like double job description in PKRS team, as well as budget funds PKRS activities are still incorporated in other unit.

This result are consistent with implementation at Hospital of Labuang Baji Makassar shows that health promotion personnel still less, and not all existing power ever training, because the hospital usually sent only the same person, as the result the implementation of Hospital Health Promotion not optimal (Manurung et al, 2015).

4.2 Community Needs Assessment Hospital

PKRS team of General Hospital Haji Surabaya conducting a carry out research community needs the hospital with a new approach to patients, so that the hospital can provide special treatment according to the needs of the patients. In addition, General Hospital Haji give training to officers related to personality in dressing, speaking, and routinely carry out socialization activities in the application of smiles, greets, regards, and graceful. Hopefully with the existence of these activities, the services provided by officers will become more optimal.

4.3 Hospital Empowerment

Gymnastics activities were done every week twice, firstly on Tuesday and secondly on Wednesday, as the gymnastics come from health workers who are experts about that. In addition, availability of music station (stage music) will make the hospital visitors become more comfortable, so that will encourage patients or visitors to the hospital become calmer in facing health problems experienced. The hospital also provides chance for visitors, or officers to participate by filling the music activities at the music station.

4.4 Safe, Clean and Healthy Workplace

The environment of General Hospital Haji Surabaya could be kept clean because the janitors always regularly cleaning trash and dirt. Hospital waste management have done by sanitation team of General Hospital Haji Surabaya. However, if the team was not able to cope with waste treatment at a certain volume, then it will be processed by RS Dr. Soetomo Surabaya. Availability of health promotion media also have role to increase awareness of all parties to maintain cleanliness, as well as security in the hospital environment.

4.5 Partnership

MOU conducted by team PKRS General Hospital Haji Surabaya with the primary health care (Puskemas), such as giving education and counselling to patient, also give services Comprehensive Emergency Obstetric Neonatal (PONEK) in General Hospital Haji Surabaya. It is a form of promotion efforts for reducing maternal and infant mortality. In hope that the babies and the mother who gave birth to babies who are born to be guaranteed safety.

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5 CONCLUSIONS

General Hospital Haji Surabaya has done health promotion good enough, but there is still some PKRS standard which still not fulfilled. Results from the research shows that some media health promotion, promotional activities, community empowerment, availability health service facilities, and community needs the hospital facilities are good enough. While the problem is budget funds which still incorporated with other unit, lack of number workers in unit PKRS, lack of cooperation among internal hospitals, and partnership with external parties. This problem may cause implementation of PKRS activity doesn't run optimally.

These findings have several implications. Firstly, it is important to uses Hospital Health Promotion standard. Secondly, PKRS activities important to improve the quality of health services both promotive and preventive. So that the problems encountered in PKRS activities should be evaluated immediately by Hospital management and PKRS team.

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Public Health in the Decentralization Era Towards Universal Coverage

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Keywords: Universal coverage, Decentralization, Health financing, Health services, Managed care.

Abstract: Every citizen has the right to have access to quality health services, at a reasonable cost. To ensure universal coverage, it is important for governments to take policy measures aimed at expanding pre-paid systems and reducing as quickly as possible dependence on out-of-pocket systems. The objectives of this research was to find the efficiency administrative, which is necessary to limit the number of insurance companies. This goal can be realized by developing a broader and fairer system of pre-effort financing through taxes, social health insurance, or a mixture of both systems. Through the positive elements of “managed care”, the government can establish regulatory and control mechanism on the demand side and the provision of health services, in order to control the cost, quality, access of health services for all citizens in Indonesia. For the long-term and well-performing insurance companies in managing insurance on a national scale continue to function as private and social health insurance managers in parallel with national health insurance (Jamkesmas) managed by the government. The government needs to strengthen the regulation on the financing side and the provision of services in the system of insurance, so that every citizen can actually access quality health services at affordable cost.

1 INTRODUCTION

Health is not viewed as a citizen’s right but also an investment capital that determines the productivity and economic growth of a country. Therefore the state is concerned that all its citizens are healthy ("health for all"), so there is a need to institutionalize universal health services. There are two fundamental issues for the realization of health services with mental health, namely how to finance health services for all citizens, and how to allocate health funds to provide health services effectively, efficiently and equitably.

The appropriate financing system for a country is a system capable of supporting achievement. Universal coverage is a health system in which every citizen has fair access to quality, promotive, preventive, curative and rehabilitative services, at a reasonable cost. Scope of the universe consists of two core elements: (1) Access to fair and quality health services for every citizen; and (2) Fire Protection of Communities Using Health Services (WHO, 2005).

Fair access to health services uses the principle of vertical justice. The principle of vertical justice, the contribution of citizens in health financing based on ability to pay (ability to pay), not based on health condition / pain of a person. With vertical justice, lower-income people pay lower cost than higher-income people for health service of the same quality. In other words, cost should not be an obstacle to getting required health care (needed care, necessary care) (Bhisma, 2011). This paper will further discuss the strategy (dual health care system) for the management of financing to achieve health care coverage in Indonesia.

2 METHODS

A scientific study should use systematic compilation techniques to facilitate the steps to be taken. Similarly, the authors conducted in this paper, the steps taken are through literature studies on reading journals and research results that deal with the insurance system and health financing. The data

obtained from this literature study can be used as a reference analysis to discuss innovation of health financing system in Indonesia.

3 RESULTS

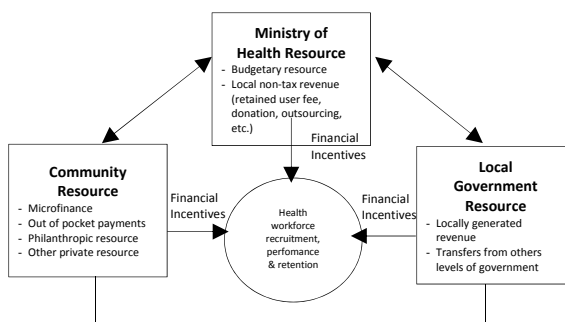
Universal Health Coverage (UHC) is defined as ensuring that all people have access to needed promotion, preventive, curative and rehabilitative health services, of sufficient quality to be effective, while also ensuring that people do not suffer financial hardship when paying for these services. Universal health coverage has therefore become a major goal for health reform in many countries (WHO, 2017).

The Indonesia's Universal Health Coverage/*Jaminan Kesehatan Nasional* (JKN) was launched on 1 January 2014 to initially cover around 120 M population who are already engaged in various social health insurance (SHI) schemes under one fund-management agency called Health-BPJS. The targeted all population coverage is around 250 M people to be covered by 2019. With the targeted coverage, JKN will be the world largest SHI (WHO, 2017). There are some JKN issues raised in this year include:

- a. Availability and equitable distribution of health services in outer islands to serve JKN members and overall quality of healthcare services
- b. Provider payment: issues with long time lags for government primary care facilities in receiving capitation payment due to regulation on decentralization; and low tariff set in INA-CBG prospective payment.
- c. Lack of JKN socialization activities for the people at large and coverage issues of people in the informal sectors.
- d. Assurance of sustainable financing towards UHC.

This paper looks at the potential for decentralization in Indonesia to lead to better health workforce recruitment, performance and retention in rural areas through the creation of additional revenue for the health sector; better use of existing financial resources; and creation of financial incentives for health workers. According to the rationale of decentralization, smaller local entities that have more autonomy and funds can better respond to local needs and may also better manage human resources. As explained in Fig. 1, decentralized health financing systems are built around one or more of the three main sources of health-care finance: ministry of health, local government and the

community. Where the decentralized health financing system relies on more than one source, the sources are seen to be interdependent (as indicated by two-headed arrows in Fig.1).



Source : WHO. Bulletin of The WHO. 2010

Figure. 1: Decentralized health financing and its links with the health workforce

Decentralization, where it involves the dispersion of human resource functions to the local (government, health-care delivery or community) level, is an especially challenging process as it is influenced by various institutional and contextual factors. Although financial resources are finite (but well accounted for under decentralization), decentralized health financing systems present opportunities to maximize resource availability and utilization. In particular, as shown in figure below, three prominent sources facilitate this purpose: (i) autonomy within the ministry of health or decentralization of health-care delivery, (ii) local or decentralized government resources, and (iii) community resources (WHO, 2010). This paper mainly focuses on strategy for achieving public health in the decentralization era towards universal coverage.

4 DISCUSSIONS

The dual financing system consists of two parallel components, namely health financing for the formal sector and the informal sector. The dual system has been applied to the universal coverage policy in Thailand since 2001 and has successfully achieved the goal of equitable healthcare financing, preventing catastrophic health spending and impoverishment due to out-of-pocket healthcare payments (Somkotra and Lagrada, 2008).

With a double-finance system, methods for the formal sector go as they have been through the Askes scheme, Jamsostek, and private health insurance. But the coverage of the insurance beneficiaries needs to be extended to include all family members, not just the workers concerned. The government needs to regulate the amount of premium and regulation of health service provision.

Informal sector health financing can be done through Jamkesmas and Jamkesda schemes, to finance the health services of workers in the informal sector, such as farmers, casual workers, small traders, self-employed, unemployed, poor families, near-poor families, almost non-poor families, others, and his family. To achieve universal coverage, quality health services must be accessible to all citizens, not only poor, but also non-poor.

The implications of the wish to extend coverage of Jamkesmas and Jamkesda schemes to all citizens require more funds than the APBN or APBD to finance the scheme. To do so requires the political will of the government and parliament to reallocate the state budget in such a way that there is sufficient budget to run the universal coverage scheme of health insurance. At the same time, it is necessary to extend the coverage of social health insurance (payroll tax-based insurance for workers in the formal sector). On the other hand, to control health costs, it is necessary to regulate demand-side health cost control, by applying co-payment to prevent moral hazard, even though poor and near-poor families need to be freed from co-payment.

Starting from 2014 Jamkesmas managed by the Social Security Management Agency (BPJS). In accordance with the "big law of law" JAMKESDA funds from each district and city will be more efficient if pooled on a provincial scale, thus making the risk of illness of the insurer to the average. The pooling of JAMKESDA funds from each regency / municipality at the provincial level is useful for the cost of health services divided by all JAMKESDA, thereby reducing the burden of certain district / municipality Jamkesda that have participants with greater relative risk of illness. Certainly need to avoid overlapping insurance protection. The coverage of Jamkesda insurance beneficiaries or the health care benefits package should be differentiated with Jamkesmas.

Funding at the provincial level is also useful to prevent disparities in the benefits of health services that can occur if Jamkesda is managed by each regency / city, in addition to the usefulness of insurance services can be used between regions (portability). The social insurance system

(mandatory) always requires community solidarity, solidarity and political commitment of district / city governments to be willing to collect JAMKESDA funds on a national scale.

Musrifah (2014) state that the forms of regulation and government intervention that health is through the creation of modern health institutions in line with the order of universal healthcare. The existence of direct local elections in Indonesia are very influential on public policy in health financing. National Health Insurance Program and the Health Insurance (Jamkesda) is an instrument of the State to make public welfare. When finished instrument state, the second program is often used by politicians to win the regional head elections (elections) or get legitimacy. Therefore it needs to be a synergy between the Central and Local Government relating to the health insurance policy. The most important thing in healthcare synergy between the Central and Local Government is the problem of financing. The poor and can not afford that contained in the Decree of the Regent/Mayor will be financed from the state budget, poor and can not afford beyond the quota are borne by the local government with a source of costs from the budget, financed the Workers' Group of the respective institutions (PNS, Asabri, Jamsostek) and group of individuals (the rich and very rich) pay for themselves and those who are not covered by the state budget and budgets.

In addition, it is important for BPJS to apply the positive elements of "managed care". BPJS needs to be obeyed by important and professional people in the field of providing managed health care services with insurance system. The government and BPJS apply regulatory on the demand side and the provision of health services, in order to control the cost, quality, and access of health services for all citizens. On the supply side, BPJS needs to apply quality control tools and health care costs, for example by the selection method, and deselection, to hospital, Puskesmas, and doctors, who provide service in the pre-effort scheme (Bhisma, 2011).

JKN new policy could be implemented as a whole, if it is consistent and commitment to the mandate of the Health Act which requires a minimum of 5% of the budget for health development. If the 2014 budget are difficult to change the implementation of at least JKN conducted early in 2016, after realizing the government's health budget by 5% of the total state budget. Step by step, local governments are also encouraged to commit to the health budget by 10% of the total budget. Thus universal health coverage will still be able to be achieved in 2019.

5 CONCLUSIONS

Every citizen has the right to have access to quality, promotive, preventive, curative and rehabilitative services, at a reasonable cost. Through the positive elements of “managed care”, the government can establish regulatory and control mechanism on the demand side and the provision of health services. To ensure universal coverage, with SJSN Law no. 4/2004, it is important for the government to take policy measures aimed at expanding the scope of pre-paid system and reducing as soon as possible reliance on out-of-pocket systems. With the characteristics of the majority of citizens working in the informal sector with uncertain income and some others formal, the goal can be realized by developing a wider and fairer system of pre-effort financing through general taxes and extending the coverage of payroll-tax (dual health care system).

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Analyzing *Kartu Indonesia Sehat*: A Review Based on Implementation Programs

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Keywords: Implementation, Program, *Kartu Indonesia Sehat*, Preventive effort.

Abstract: Quality and proportional health care is a dream for every Indonesian, because it is closely related to one aspect of basic human needs fulfilment. In addition, the commitment of the service providers, especially in the Sempaja Urban Village of Samarinda in supporting the implementation of government programs through *Kartu Indonesia Sehat* (KIS). The commitment is realized with the ease in the process of making KIS, but there are still some commitments that have not met patient satisfaction between service quality and KIS system offered to the community. In addition to commitment, community perceptions related to the KIS program to establish the health of the main thing for humans can be emphasized in the community that KIS is a health insurance that acts as a preventive effort. In the selection of Sempaja urban village of Samarinda on healthy card analysis Indonesia as one form of distribution of health programs outside Java Island.

1 INTRODUCTION

1.1 History of Development of Preventive Efforts in Indonesia

The development of public health in Indonesia is divided into three periods namely pre-independence era, the era of independence, and the development of health promotion in Indonesia. In the pre-independence era of 1851 preceded by the establishment of a school doctors in Batavia Java named STOVIA and in 1888 in Bandung established the centre of the Medical Laboratory. The next period is the era of independence. The era of independence is divided into pre-reform and post-reform. In pre-reformation in 1951 has been introduced the concept of Bandung plan. The concept is a service concept that combines curative and preventive services. Year 1967 The concept of Bandung plan continues to develop into the concept of Primary Health Care (*Puskesmas*) so that in 1968 the concept of *Puskesmas* formed on type A, B, C set in the national health work meeting. While in the post-reformation formed JPS-BK program for the poor citizen. Furthermore, the last period is the development of health promotion. At this time there has been a village community health development program, a professional improvement of personnel

through Health Educational Service (HES) program, there are UKS program in elementary school, the formation of *Posyandu* (Arif, 2016).

1.2 Social Health Insurance (*Jaminan Kesehatan Nasional-JKN*)

Social insurance is a mandatory collection mechanism of participants, which is useful to provide protection to participants for the socioeconomic risks that affect them and / or their family members (UU SJSN Number 40 Year 2004). The mechanism has procedures for the implementation of Social Security program by BPJS Health and BPJS Employment. While social security in question is a form of social protection to ensure all people in order to meet basic needs of decent community life.

So it can be concluded that Social Security Insurance (JKN) which is developing in Indonesia is part of National Social Security System (SJSN). Based on Law number 40 Year 2004 states that SJSN is conducted through a mandatory social health insurance mechanism. It is intended for all Indonesians to be covered under the insurance system and to meet basic public health needs⁵.

1.3 *Kartu Indonesia Sehat* Program

Health is the main thing and become one of the sectors that can affect the sustainability of other sectors. This is because the health must be met by the livelihood of many people in nation and state. In UU RI Number 36 Year 2009 states that health is a human right and one of the elements of welfare that must be realized in accordance with the ideals of the Indonesian nation. This statement can mean that everyone has equal rights in the effort to maintain and improve health degree, one of them through health services organized by the government based on non-discriminative, participatory and sustainable principles.

Health services that have been implemented by the government one of them is the existence of *Kartu Indonesia Sehat* (KIS). KIS is a card that has a function to provide health insurance to people who have a non-discriminatory principle in the handling of health. The principle of non-discrimination in the sense that the recipients of KIS do not require administrative difficulties for the poor in accessing the card although they do not have complete data and still get service at the first level or advanced if in an emergency, so that can be said KIS aims to lighten the burden the poor on health. In addition KIS will be given to members of National Health Insurance or *Jaminan Kesehatan Nasional* (JKN) so as not to shift the system JKN, while the implementation of KIS has been channelled to poor families who receive JKN dues as much as 86.4 people and still be covered by *Kartu Indonesia Sehat* (KIS).

2 METHODS

In this study using literature review that is with other research materials obtained from reference materials to be the basis of research activities by understanding the issues under study, including problems implements JKN-KIS Program in improving the welfare indicators of the community in terms of health.

3 RESULTS

In the process of making and administrative process *Kartu Indonesia Sehat* (KIS) in the administrative scope of South Sempaja Urban Office quite easy (Arif, 2016). The first thing to do is that participants are required to make a Social Insurance Card or *Kartu Perlindungan Sosial* (KPS). The process of

making KPS is by applying or get recommendation from the village leaders. After obtaining a cover letter or application file will be forwarded to the sub-district office for follow-up by the village and then the application file will be sent to Post Office. The purpose of sending the application file is to make 3 cards, one of which is making *Kartu Indonesia Sehat*.

One of the most important elements of KIS services is the provision of basic health services such as *Rawat Jalan Tingkat Pertama* (RJTP). Health services including RJTP have several substances including examination and treatment handled by general practitioners as well as by dentists, family planning services, maternal and child health and diagnostic services. The provision of some substances contained in the RJTP is also directly proportional to the supporting facilities that have been provided by the government in the scope of *Puskesmas* of South Sempaja Sub-district. This is evidenced by the supporting facilities in the form of *Puskesmas* rooms in accordance with their respective utilities and the provision of complete medical equipment. Supporting facilities in the form of the provision of room and complete medical equipment can be seen from some substance or poly contained in the scope of *Puskesmas* such as examination of dentist serves special action in dental patients only, contraception services and child and maternal health services include special services of mothers and children with diagnoses of certain diseases, as well as providing referral letters if the patient experiences an emergency and the ability and capacity beyond the scope of the *Puskesmas*. At the service of *Puskesmas* in South Sempaja Sub-district, it is proved that the application of KIS to RJTP has fulfilled the public welfare indicator with the RJTP implementation in accordance with the SPM.

The next section Emergency Unit service can be used by users of *Kartu Indonesia Sehat* (KIS) in times of emergency situations such as accident. On one of the informants KIS users tell the experience related to the emergency that had happened ie an accident. Handling emergencies can be rushed to the ER directly and get medical action in the form of wound care. In addition to medical treatment, other services are also given in the form of prescription drugs. In the statement can be seen that the Emergency Unit service on KIS users have been in accordance with the basics and act in accordance with applicable rules. This is in accordance with Indonesian Republic Law Number 36 Year 2009 section of health service article 53 that the implementation of health services should prioritize

the safety of patient's life compared to other interests so that it can be interpreted that the meaning of patient's life safety covering health services individuals and families for the healing process to restore health (Health Office, 2014).

4 DISCUSSION

Based on the description related to the implementation of KIS in South Sempaja Village Office and health service there is easy access to making Healthy Indonesia Card. Prospective KIS users only follow the path that has been determined by first requesting an application or later of introduction from the village device and then the introductory letter will be returned to the village office and immediately followed up by the authorities of the village. The ease of making the KIS or the system contained in the KIS program becomes a positive trend for health insurance providers in a country including Indonesia. This is apparent from the index of satisfaction of health insurance participants who fall into the high category that is equal to 78.9%. The achievement of the positive trend was also followed by the increase of JKN-KIS program participants to 156,790,287 million. This achievement is in line with the expectation of the Indonesian government targeting the increase of Indonesian society in JKN-KIS ownership by 2020. It is also proven by the government-funded free health guarantee fund in 2015 reaching 57.08 Trillion.

Implementation of health services is the provision of basic health services *Rawat Jalan Tingkat Pertama* (RJTP). Health services including RJTP have several substances including examination and treatment handled by general practitioners as well as by dentists, family planning services, maternal and child health and diagnostic services. It is also supported by the data that health insurance has cooperated with 19,969 Primary Health Care and 1,874 Hospital and with 2,813 Supporting Health Facilities such as pharmacies, optics and others. The provision of health facilities makes the existence of JKN-KIS can be utilized by the community in the process of restoring their health condition. Utilization of health services is seen from the amount of community visits as much as 100.62 million in the primary health care (*Puskesmas*, private doctors, primary clinics), 39.81 million advanced outpatient visits (Hospital Polyclinic) and 6.31 million inpatients advanced level (hospital).

At the achievement of the JKN-KIS era which is considered positive between the program objectives and the implementation system does not mean that JKN-KIS has been running in the right path or not have a negative trend for a repair. Some things that still occur in the JKN-KIS program that still cause dissatisfaction KIS participants such as long queue in general policemen, want to perform operations until related to the availability of competent health personnel and must meet operational standards. The problem must be improved immediately in order to maintain the positive trend of JKN-KIS service to better support the welfare of the community in terms of health.

The existence of the JKN-KIS program in addition to curative and rehabilitative efforts, also emphasizes promotive and preventive efforts. This has been supported by the provision of health-free funds amounting to 99.39 billion. Health service activities related to promotive and preventive efforts include health counselling, family planning, routine immunization, health screening for disease risk detection to prevent the continued impact of the risk of a particular disease. Nevertheless, the ownership of JKN-KIS slightly shifts the healthy paradigm to the sick paradigm. This is evidenced by the existence of data mentioning 6.31 million inpatient cases so that it can be said with the existence of JKN-KIS healthy behaviour for prevention before illness should still be cultivated and not true if JKN-KIS ownership make life behaviour becomes arbitrary regardless of health. Healthy paradigm must keep going straight with the aim of JKN-KIS program that is improving welfare indicator for society.

5 CONCLUSIONS

Quality and proportional health care is a dream for every Indonesian, because it is closely related to one aspect of basic human needs fulfilment. This is realized with the JKN-KIS Program with ease in the health care system. Nevertheless, the existence of JKN-KIS must also go straight with a healthy paradigm to realize the welfare improvement for the community.

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Analysis of Poverty Trap Due to Cigarette Consumption

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Keywords: Poverty trap, Cigarette, Consumption, Impact, low-income.

Abstract: There is an inextricable and pernicious analysis of poverty trap due to cigarette consumption. In many ways, consumption of cigarettes and poverty are part of the same vicious cycle. Across the globe, smoking is generally common among the poorest segment of the population. These groups, already under financial stress, have little disposable income to spend on cigarettes. Consumption of cigarette adds directly to financial stress. In lower-income countries, The World Health Organization estimates that as much as 10% of household income can be spent on cigarettes, leaving less money for food, education, housing and clothing. The aim of this paper is to analyse the poverty trap caused by the consumption of cigarettes. The method used in this research is qualitative analysis. The technique of data analysis is through literature review, data attachment and conclusion. In this paper, we understand how cigarette consumption could make a poverty trap.

1 INTRODUCTION

Poverty is a deficient condition which means being unable to fulfil basic living needs such as clothing, food, shelter, education and health and is caused by many factors. To measure poverty, the Central Bureau of Statistics (BPS) uses the concept of basic

needs approach. By using this approach, poverty is seen as an economic inability to meet the basic needs of food and non-food as measured by expenditure. In brief, Poor People are residents who have an average monthly per capita expenditure below the poverty line.



Figure 1: Poverty in Indonesia

The food poverty line (GKM) is the value of the expenditure needs of drinking food equalised with 2100 kilocalories per capita per day. According

to BPS data, records of 2011-2015 show the poverty line in Indonesia has increased every year.

Cigarettes are processed tobacco products, produced from *Nicotiana Tabacum* plants, *Nicotiana Rustica*, and other species or synthetics containing nicotine and tar with or without additives (Heryani, 2014). Cigarettes are advertised by some people as a reason to contribute to the country's economy. However, in fact, cigarettes actually contribute to poverty at the level of individuals, households and even countries. While the cigarette industry enjoys substantial margins, the poor smokers and their families suffer the burden of suffering from cigarette consumption, which makes it more difficult for them to get out of the poverty trap. According to The Tobacco Atlas 3rd edition (2009), the percentage of smokers in the population of the largest ASEAN countries is Indonesia (46.16%), Philippines (16.62%), Vietnam (14.11%), Myanmar (8.73%), Thailand (7.74%), Malaysia (2.90%), Cambodia (2.07%), Laos (1.23%), Singapore (0.39%) and Brunei (0.04%).

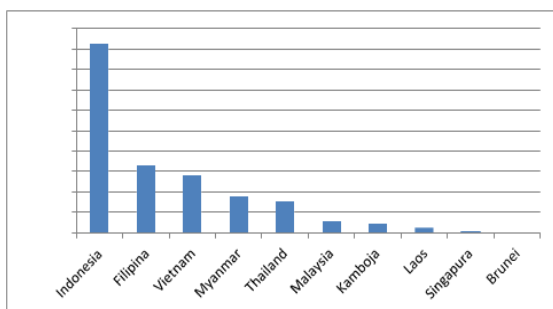


Figure 2: Percentage of Smokers in ASEAN

Various literatures have shown the negative impact of cigarette consumption on health. There are different kinds of cancer, cardiovascular (heart - vascular), lung disease and impotence among the many health problems caused by smoking. Cigarette consumption causes the deaths of more than 5 million people in the world each year or the equivalent of one death every six seconds. As many residents of developed countries have begun to quit smoking, the current development of cigarette use has shifted to epidemics in poor and middle-income countries, accounting for about 82% of total cigarette users in the world. Indonesia has a significant position in the cigarette atlas of the world because it has the third largest number of smokers in the world.

The impact of cigarette consumption has a broad dimension, not only on health aspects, but also on social and economic dimensions. This paper is intended to analyse the occurrence of poverty trap

caused by people's habit in consuming cigarettes. This study is expected to give an idea of how the consumption of cigarettes can lead to poverty traps with poor people becoming gradually poorer.

2 METHODS

The qualitative method is used in this research. The type of data used in this study is secondary data. The data are taken from existing sources that have been processed by a third party, within a certain time (at a point of time) that can describe the situation / activity at that time. This study is using literature review to find how the poverty trap is caused by the consumption of cigarettes. The data used in this study come from the Badan Pusat Statistik (BPS), publication files from the Ministry of Health Republic Indonesia, RISKESDAS and WHO. Other information comes from other literary studies in the form of scientific journals and textbooks.

3 RESULT

In this research, the researcher collected research results from various countries.

Table 1: Research and Policy Focus Related to Tobacco Control

| No | Country and Organisation | Research and Policy Focus |
|----|---|---|
| 1 | Argentina - Unión Antitabáquica Argentina | Researchers analyse the relationship between household spending on tobacco products in low-income families and the resources available for basic needs, such as food, health, education and utility services. The role that tobacco control policies could play in improving the health and quality of life of the poor populations was the main emphasis of advocacy activities. |
| 2 | Vietnam- HealthBridge Vietnam | Researchers identify Vietnam-specific evidence on the relationship between tobacco and poverty and, furthermore, to identify the current research gaps, to assess the actual impact of tobacco control policies on overall national employment. The implementation and |

| No | Country and Organisation | Research and Policy Focus |
|----|--|---|
| | | enforcement of various tobacco control measures was explored as means not only to improve public health, but also to reduce poverty. |
| 3 | Brazil-Aliança de Controle do Tabagismo (ACTbr) | The researchers discussed the lack of information available to key stakeholders involved in the development and enforcement of tobacco control policies related to tobacco production in Brazil, notably the National Program to Support Production Diversification in Tobacco Growing Areas for integrated sustainable rural development. In particular, the study addressed the beliefs and experiences of constraints faced and strategies implemented by small-scale farmers to reduce their economic dependence on tobacco through crop diversification and alternative livelihood schemes; then explored how this information best used to inform decision-making about to tobacco control. |
| 4 | Cameroon (individual researchers), Mali-Association de Lutte contre le Tabac, l'Alcool, et les Stupéfiants (ALUTAS) and Senegal Mouvement Anti-Tabac du Sénégal (MAT)5 | Researchers in each country sought to examine how expenditures on tobacco represented opportunity costs related to basic needs, particularly among the poor. Even though smoking rates in Sub-Saharan Africa are still lower than they are in other regions of the world, the significantly high rates of poverty in these countries, and the reality that more than half of the households are not able to afford their basic daily expenses, makes any tobacco expenditure an important contributor to poverty. Advocacy activities addressed not only the impact of tobacco expenditures on the current lives of the poor, but also on their future. |
| 5 | India-Voluntary Health Association of India (VHAI) | Researchers investigate the working conditions and socioeconomic and health issues associated with tobacco farming, bidi production and tendu leaf plucking to expose |

| No | Country and Organisation | Research and Policy Focus |
|----|---|---|
| | | tobacco industry myths promoting the safety and viability of tobacco employment. Because short-term policy measures will not solve financial problems for these workers, the researchers explored the inclusion of alternative income-generating activities into an all-inclusive programme of safer, sustainable alternative livelihoods for tobacco workers. |
| 6 | Indonesia-Center for Health Research, Universitas Indonesia | Researchers examined the relationship between household tobacco consumption and children health status among the poor to provide evidence to support the policy of tobacco control. The focus on negative child health impact of tobacco consumption is used to counter the government's reluctance to commit to tobacco control because of its belief in the profitable commercial aspects of tobacco production and sale. |
| 7 | Mexico-Instituto Nacional de Salud Pública (INSP) | Researchers analysed the financial impact of tobacco consumption on the ability of low-income households to afford basic needs. The focus of the advocacy efforts is how tobacco control policies could complement poverty reduction policies and strategies. |
| 8 | Peru-Comisión Nacional Permanente de Lucha Antitabaquica | Researchers examined household expenditures on tobacco and their effect on families' ability to afford basic needs; in particular they examined the negative impact of tobacco spending on households with children. In a country where one-third of the population is poor, and where the poorest households have the most children, fiscal policies that support effective tobacco control will contribute to the achievement of the Millennium Development Goals, a central government policy objective. |

4 DISCUSSION

The analysis of poverty trap due to cigarette consumption can be illustrated through the following chart:

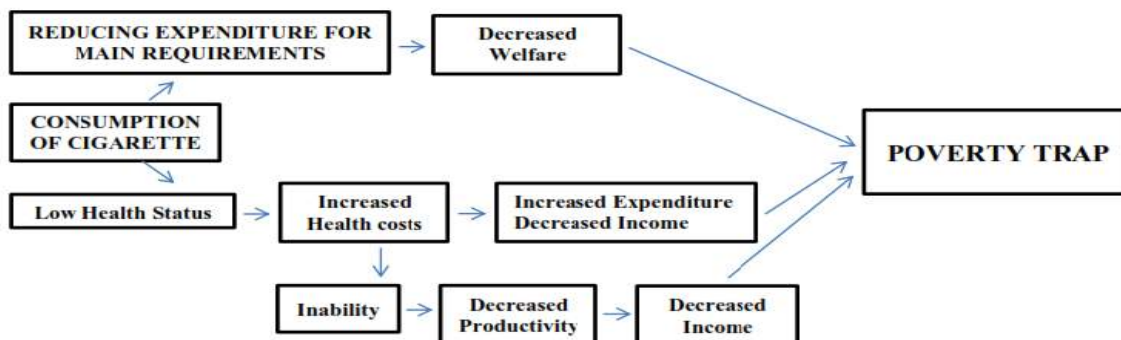


Figure 3: Poverty Trap and Cigarette Consumption

The occurrence of poverty trap caused by cigarette consumption can be illustrated through the following chart:

Table 2: Family allocation of expenditure

| Group of Goods | Percentage (%) | | |
|---------------------------|----------------|------------|----------------------|
| | Rural Area | Urban area | Rural and urban area |
| Grains (rice, etc) | 4.98 | 10.04 | 6.82 |
| Tubers | 0.38 | 0.80 | 0.53 |
| Fish / shrimp/squid/clams | 3.06 | 4.40 | 3.55 |
| Meat | 2.30 | 1.94 | 2.17 |
| Eggs and milk | 3.06 | 2.79 | 2.96 |
| Vegetables | 3.01 | 4.75 | 3.65 |
| Nuts | 0.97 | 1.30 | 1.09 |
| Fruits | 2.05 | 2.02 | 2.04 |
| Oil and coconut | 1.06 | 1.84 | 1.34 |
| Drink materials | 1.34 | 2.30 | 1.69 |
| Seasonings | 0.79 | 1.28 | 0.97 |
| Other consumption | 0.89 | 1.19 | 1.00 |
| Instant Food and Drink | 15.22 | 12.27 | 14.14 |
| Cigarettes | 5.45 | 8.91 | 6.72 |
| Total | 44.57 | 55.83 | 55.83 |

Consumption of cigarettes will cause the allocation of expenditure to buy basic family staple food to reduce. This is evidenced from the Central Bureau of Statistics data in 2016 which show that the average percentage of cigarettes per capita expenditure per month by category of goods occupies the third position of 6.72% after finished food and beverages (14.14%) in the first position and rice (6.82) in the second position. From the data,

it can be concluded that Indonesian society prioritises purchasing cigarettes compared to other staple foods containing protein, nutrients and vitamins that are useful for the body such as meat, fish, vegetables, fruits, tubers and so on. Household conditions with inadequate food intake and other basic necessities that are set aside for the purchase of cigarettes will cause the welfare of families to deteriorate. Thus, people are caught in poverty.

Consumption of cigarettes can cause low public health status. Smoking habits have been shown to be the cause of approximately 25 types of diseases that attack various organs of the human body. These diseases include mouth cancer, oesophagus, pharynx, larynx, lung, pancreas and bladder. Also found are chronic obstructive pulmonary disease and various other pulmonary diseases, namely disease of the blood vessels.

Consumption of cigarettes causes the death of more than five million people in the world each year or the equivalent of one death every six seconds. The suffering caused by cigarettes will cause the cost to finance the disease treatment to increase which will increase household expenditure. Cigarettes not only exacerbate the poverty of the users, but, in general, cause a huge financial burden for the country. At the national level, the costs incurred by tobacco use include increased health financing, loss of productivity as a result of illness and death of productive age, declining foreign exchange rates and environmental damage. The state bears the burden of health financing and enormous productivity loss as a result of illness and premature death from tobacco use. In developed countries, the annual health costs associated with tobacco use range from 6% and 15% of total healthcare costs. In

China, a study in the mid-1990s estimated direct and indirect health costs as a result of smoking was US \$6.5 billion per year. While, in Egypt, the direct annual cost of treatment for diseases caused by tobacco use is estimated at US \$545.5 million. If the trend of tobacco use is not decreased, it is estimated that 650 million people from the world population will now die from tobacco, and half will die in their productive age, losing 20 to 25 years of their lives. The occurrence of disease will lead to reduced revenue due to decreased productivity and accidents. Conversely, there is increased spending to treat diseases caused by cigarette consumption, which will further increase the occurrence of poverty.

5 CONCLUSION

Based on the data analysis by using qualitative method, it can be concluded that the poverty trap caused by cigarette consumption is illustrated in the behaviour of the people who prioritise cigarette purchase compared with the basic needs that can support their welfare. Consumption of cigarettes can lead to low health status due to the emergence of various diseases. Consequently, there is an increase in spending to finance the treatment of such diseases. The suffering will result in decreased productivity and even death. This incident causes costs to increase and income to decrease. Thus, there is a poverty trap.

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Tobacco Free Initiative (TFI) to Control Tobacco Economics and the Concerns of Governments about Taxes on Poor Smokers

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Keywords: Tobacco economics, Taxes, Poor smoker.

Abstract: Tobacco use is the leading preventable cause of death which kills more than 5 million people every year. It is predicted to kill more than 8 million by 2030, and approximately 80% of the deaths will occur in low- and middle-income countries. Not only in health sector, economies will also suffer from increased health-care costs and decreased productivity. For example, while tobacco taxes are known to be the most cost-effective tobacco control measure, some countries encounter several challenges when a tax increase is at stake. As the tax increases, the share of tobacco expenses on the household income also increases, thus increasing the burden on the family budget, especially on poorer smokers. Evidence suggests that the poor are more sensitive to price increases, and consequently, it is expected that as tax increases, the majority will tend to reduce or quit smoking. In order to address the economic arguments used against tobacco control, it is necessary to strengthen the evidence, technical and analytical skills of government officials, academia and civil society. This will help to move forward the tobacco control agenda and to improve both the economy and public health.

1 INTRODUCTION

There are many substantial debates on the economics of tobacco control while the health arguments against it are largely beyond dispute. To reduce tobacco demand it would reduce tax revenues and causes sudden unemployment and increase smuggling. It makes some public health community doubted the efficacy of price interventions. One of the concerns that raised by the governments is the regressive nature of taxes on poor smokers. As the tax increases, the expenses for tobacco consumption on household income also increases, thus increasing the burden on the family budget, especially on poorer smokers.

The smokers from poor family are more sensitive to price increasing. Hopefully as a result if the tax increased the majority will likely reduce or quit smoking. Their respect on their families and society at large likely give them benefit because there will be lower health cost and more resource for other essential goods such as education. Therefore, government should allocate and revenues by higher tobacco taxes towards social program so the poor could get benefit such as accessibly in health

services, health insurance and cessation programmes.

The Tobacco Free Initiative (TFI) to control tobacco economics and the concerns of governments about taxes on poor smokers are about helpin countries to enhance their ability to resist the epidemic of tobacco and to implement responsibilities that encompass surveillance of the global tobacco epidemic, advisin countries on taxation as an instrument of tobacco control policy and other economic policies to control tobacco.

2 METHODS

In this research, a systematic literature review of the research studies of Tobacco Free Initiative activity around the world has been used.

3 RESULT

Table 1: Tobacco Free Initiative in 2003-2004

| Activity | Sub-activity(program) |
|---|--|
| WHO FCTC awareness-raising workshops and technical support to Member States | WHO Regional meetings |
| | National consultations on the Treaty |
| Tobacco Control legislation | - |
| Research and Policy Development | Economics and tobacco control |
| | Meetings and consultations on the economics of tobacco control |
| Cessation of tobacco use | Second-hand tobacco smoke (SHS) |
| | Youth and gender-related issues |
| Surveillance and Monitoring Tobacco-related surveillance | Tobacco Industry Monitoring (TIM) |
| | Training and Capacity Building |
| | World No Tobacco Day (WNTD) |
| | TFI's Global Network |
| Donors | - |

Source : Tobacco Free Initiative Report of Activity 2003-2004(WHO)

Table 2: Tobacco Free Initiative in 2008

| Activity | Sub-activity (program) |
|--|--|
| Capacity-Building, Training And Research | Capacity assessment |
| | Building the national capacity for implementing effective tobacco control policies |
| | Legislation and regulation for tobacco control |
| | Economics of tobacco control |
| | Tobacco Free Initiative support of Bloomberg Initiative grants |
| | Youth activities |
| | Cessation |
| | Raising awareness and capacity-building workshops on illicit trade in tobacco products |
| | Gender and tobacco |
| | Global Tobacco Surveillance Systems |
| | Global Youth Tobacco Survey |
| | Global Health |

| Activity | Sub-activity (program) |
|---------------------------------|------------------------------|
| | Professionals Student Survey |
| Monitoring The Tobacco Industry | - |
| Communication And Partnerships | United Nations Task Force |
| | World No Tobacco Day |
| Product Regulation | - |

Source : WHO Framework Convention on Tobacco Control, 2008

4 DISCUSSION

The Tobacco Free Initiative has designed a method to help countries identify their resources needs and challenges for implementing effective and sustainable tobacco control policies such as FCTC awareness raising workshops and technical support to member states, tobacco control legislation, research and policy development, the cessation of tobacco use, surveillance and monitoring tobacco-related surveillance, and donors (2003-2004). In 2008, there are capacity-building, training and research products and regulation communication and partnerships monitoring the tobacco industry and global tobacco surveillance systems. WHO FTCT as a tool for global tobacco control efforts and TFI (Tobacco Free Initiative) is likely a paradigm of the core functions.

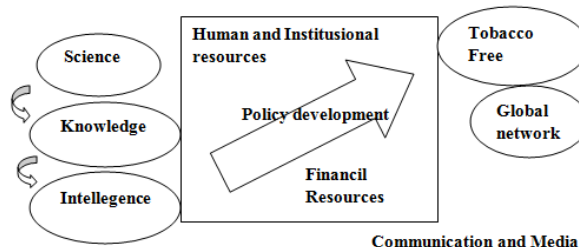


Figure 1: Tobacco Free Initiative (TFI) : Paradigm of core function

1. Science: All tobacco products cause disease and death worldwide by up to 5M death/year, Tobacco leads to poverty at the individual and societal level
2. Knowledge: Building the knowledge base for tobacco control
3. Intelligence: Tobacco industry monitoring such as the periodic monitoring of tobacco industry activities across all WHO regions and ongoing development of a database with industry monitoring reports

4. Humans and Institutional resources: Countries where regional/sub-regional/national levels have participated in WHO initiatives
5. Policy development: Recommendations for the economics of tobacco control, smoking cessation and the treatment of tobacco dependence, gender responsive tobacco control and smoke free places
6. Communication and Media: World No Tobacco Day, and Worldwide Campaigns on 31 May
7. Global Network: International agencies, Civil society, NGOs, collaborating centres, member states and regional economic integration organisations

TFI (Tobacco Free Initiative) work is only possible thanks to collaboration with other institutions and financial support from several donors.

5 CONCLUSION

Tobacco control programs could reach specific populations that fall outside the usual regulatory mechanisms and operate on the margins of community, yet still continuing fail to reduce the differential vulnerability impacts of tobacco use. It is necessary to take an actions regarding tobacco control need to be taken to minimize the barriers to tobacco prevention and cessation services especially for smoker from lower and middle class family. Furthermore, an effort to prevent and control tobacco consumption among those groups are not likely to succeed beyond an integrated approach that seeks to reduce the fundamental social inequities that affects the groups to tobacco use, and gives them a relative disadvantage in accessing cessation discontinuance services.

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Analysis of Age Starting Smoking towards Cigarettes Consumed Per Day in Tanggungan Village of Bojonegoro District

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Keywords: Smoker, Early age, Cigarette, Price, Health.

Abstract: The number of smokers in Indonesia that is growing increasingly which made increasing the number of people who are sick because of the smoke. This is due to the factor of age beginning smoking and also because of the number of cigarettes that factors in use in a day. This research aims to find out the relationship of early age smoking and amount smoked per day with the issue of the increase in the price of cigarettes. Type of this research is descriptive data collection technique is interviews and observations. With a population of 169 people who smoke than the number of citizens as much as 230 residents. The interview was done to all the residents in the hamlet of dependents. Obtainable right characteristics age of smokers and also the number of cigarettes that was spent in a day. Many smokers in the hamlet of Dependents regardless of age ranging from < 15 years until age > 25 years. The amount of smoking in a day spent also around < 5 rods until > 10 cigarettes per day hanging indent of 2-centimeter.

1 INTRODUCTION

The tobacco-related tobacco epidemic is one of the biggest public health threats facing the world today. Cigarettes become an interesting phenomenon because in addition to death the rest is the result of non smokers exposed to smokers (indirect). About one person dies every six seconds from smoking, accounting for one in 10 adult deaths (WHO, 2013)

Smoking is an unhealthy, both for the physical body and for one's economy. Nevertheless, tobacco consumption increased worldwide (1.3 billion smokers) and greatly increased in bulk 82% of smokers in the world (Lian, et al, 2014). world tobacco consumption data by region, Asia Pacific has the highest percentage of smokers by 56%. In ASEAN alone there are 121 million adult smokers, or 10% of the world's smokers are in ASEAN.

Approximately one billion men in the world are smoker, with 35% of them comes from developed countries and 50% comes from developing countries. There was an average of 435.000 U.S. populations per year died caused by smoking habit with 1:5 ratio.

From the research of The Asean Tobacco Control Report Card data at 2008, 30,1% adult population of

South East Asia are smoker. In Indonesia, 57.563.866 adult population are smoker, places it in the fifth rank of the highest cigarette-consuming country worldwide. This condition is compounded by the number of adolescent smokers in Indonesia, thus 80% of smoker in Indonesia is still under 19. Moreover, in East Java, there were 23.9% smokers under 25.

According to The Tobacco Atlas 5th edition (Eriksen, et al, 2015), Indonesia ranks 4th in the world in terms of cigarette consumption. While at the ASEAN level, Indonesia was ranked first with the number of smokers 50.68% of total smokers in ASEAN. Currently, smoking is not only consumed by adults, but the start of the children have started to smoke. Based on data from Infodatin in 2013, the trend of smoking is ranging from 5-9 years. From the data it is found that the trend of age to start smoking is aged 15-19 years.

East Java is a province that always ranks first in the case of cigarette consumption and diseases caused by cigarettes from 2007 until the year 2013. The achievement of cigarette case invention is always increasing every year (Riskesdas, 2013). Teens are always the target of the tobacco industry.

Reported from the data and information center (2013) the prevalence of tobacco consumption in the

population over the age of 15 continues to increase, both men and women. The increase is not only experienced by men, but also women. However, men tend to start smoking more at a young age.

Bojonegoro is one of the regencies in eastern Java with livelihood activity as farmers. One of the most dominant farms in the district is tobacco farmers. The existence of tobacco farmers has existed since the Dutch colonial era. It is known from the presence of Dutch heritage in the form of information tobacco in Sumberrejo. This hall was built by the Dutch colony through cooperation with Krosok Centre Company at 1938.

Based on the high number of cigarettes smoked per day and the initial age of starting smoking, the aim of this research is to analyze the amount of cigarettes smoked per day and the average initial age of starting smoking at tanggungan village, ngraho subdistrict, Bojonegoro.

The increasing price of cigarette from 15.000 rupiah up to 50.000 rupiah is considered as effective to reduce the number of smoker. This is confirmed by demography researcher from Universitas Indonesia, Abdillah Ahsan, through The Jakarta Pos.

2 METHODS

The type of this research is descriptive. Data collection technique is conducted by interview and observation. Interviews were selected on the basis of convenience considerations of communication between researchers and respondents. Because researchers only observed and no attempt treatment of the respondents. Based on the time and design of this research is Cross Sectional study because this research is done at a certain time to describe a situation and activity (Susila & Suyatno, 2015). The population taken in this research is RT 1, 2, 3, 4 members at Tanggungan village and RT 17 Ngori Village, ngraho subdistrict.

The data collected use population as mentioned above as data variable. Sampling in this study was chosen using simple random sampling technique because the number of population has been known by the researcher and so that every individual has equal opportunity to become respondent. Research subjects were observed once and analyzed to the independent variables of smoking age towards dependent variable is the number of cigarettes spent in a day to describe the condition and the phenomenon that occurs in depth. Then the data that have been obtained will be analyzed by applying simple logistic regression test analysis. That is

because independent variables and dependent variables are both ordinal scale.

3 RESULTS

Table 1: Frequency of cigarette amount per day at Tanggungan village and Ngori village in 2016

| Total cigarette (per day) | Total (people) | Percentage (%) |
|---------------------------|----------------|----------------|
| <5 cigarettes | 20 | 40.0 |
| 6-10 cigarettes | 10 | 20.0 |
| >10 cigarettes | 2 | 4.0 |
| No smoking | 18 | 36.0 |
| Total | 50 | 100.0 |

Table 1 shows the amount of cigarettes smoked per day, which the highest is more than 5 pieces of cigarettes a day, which is 40%.

Table 2: Frequency of the initial age of starting smoking in Tanggungan village and Ngori village in 2016

| Early Age of Smokers | Total (people) | Percentage (%) |
|----------------------|----------------|----------------|
| <15 years old | 3 | 6.0 |
| 15-20 years old | 5 | 10.0 |
| 20-25 years old | 21 | 42.0 |
| >25 years old | 3 | 6.0 |
| No smoking | 18 | 36.0 |
| Total | 50 | 100.0 |

Table 2 shows that the highest range of the initial age of smoking is between 20-25 and 42% percentage. The initial age of start smoking <15 is 6%, age 15-20 10%, age 20-25 42%, The results of this research, acquired of age smoker <15 years old as much 6%, 15-20 years old as much 10%, 20-25 years old as much 42 % and >25 years as much 6% and who do not smoke as much 36%. In this study resulted in no effect between the age of smokers and the number of cigarettes spent per day. That is because the majority of respondents assume that they smoke when they have income in order not to become a burden on the family.

According to observation, they smoke in the age around 15 to 25 because they have already made money from their job as a farmer, and also the other reason is because their parents allow them to smoke or in other word they are not forbidden to smoke. Overall, respondents thought that their decision to smoke was based on the income they had had when they started smoking. From this research it can be seen that the number of cigarette smoked per day by

smokers is <5 pieces/ day as 40%, 6-20 pieces/day as 20%, >10 pieces as 4% and no cigarette at all as 36%.

From this research, the result shows that the number of non-smoker (36%) people is lesser than smoker people (54%). Therefore, even the earlier the age a person start smoking, there is no correlation between the initial age of starting smoking and the cigarette smoked per day. This is because the earlier a person start smoking, the more cigarette consumed since he started.

4 DISCUSSION

Smoking delivers many effect related to healthcare, such as wrinkles, stained teeth and halitosis, polluting environment, respiratory disorders (asthma, asphyxiate, lung cancer). Furthermore, smoking can be a bad figure for adolescents. The government not only stay silent in responding this smoking case, but also issuing regulations aiming the reduction of smoker amount and its consequences. Here are government regulations to reduce and/or prevent smoking risks: issuing PP Number 109 Year 2012 about pacification addictive material due to tobacco product for healthcare, FCTC (Framework Convention on Tobacco Control), society protection from cigarette smoke, support to stop smoking, and society education about risks of smoking.

There are some government roles to implement regulations: issuing public policy and legislation product that pro towards health and wealth of citizens due to controlling cigarette consumption in every stage of government administration, applying and enforce the law and also guarantee its implementation. Second, in order to educate society, the government organize KIE to enhance society's awareness, especially youth, beginner smokers. Also, there is also stop smoking program. Third, due to society protection from cigarette smoke risk, there is controlling network development of cigarette consumption impact, and controlling cigarette consumption impact to district and also the establishment of KTR in every district. Fourth, due to stop smoking support, there is integrated effort in controlling cigarette consumption impact to reduce non-contagious risk factors.

Finally, the government is expected to realize the policy-making plan to raise the price of cigarettes and cigarette tax to reduce the number of smokers in Indonesia. Particularly in the dependent villages of the sub district of ngraho where the majority of the

sub-villages are low-income economic categories. It is expected that stakeholders in this case is the government not only do educational-based approach which has been running for so long but the results obtained tend to stagnate and even decline.

Another innovation is required in the case of smokers forced both economic categories low. Changes must be made in an effort to enforce a government cigarette case. For example, such as approaching through legally binding regulation with the aim of ensuring the right of the public to obtain the highest possible health. Other examples, such as restricting cigarette advertisements, isolating cigarettes from sponsorship of events and activities and raising prices of cigarettes and cigarette taxes. In the case of cigarettes need support from all participants, especially the community to succeed the government plan.

5 CONCLUSION

This study concluded that early age smoking has no effect on the number of cigarettes a day is spent directly in the Tanggungan Village, ngraho subdistrict, Bojonegoro. The earlier the age of smoking then the increase is the number of cigarettes spent since he smoked. This is because there are other variables that is the income earned by the respondent when making the decision to start smoking. The government has already contributed in decreasing the number of smoker and passive smoker along with its risks. However, the government is expected to focus more on the problem of cigarettes in the country. In an effort to guarantee the right of citizens to obtain optimal health. The government's attention to the problem of cigarettes can be done with a regulatory approach or a legal approach that is binding on all elements involved in production activities and consumption of cigarettes.

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The Impact of Indonesia's National Health Insurance Implementation on the Prevalence of Cases of Diabetes Mellitus Among Children: A Literature Study

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Keywords: Indonesia National Health Insurance, Prevalence, Diabetes Mellitus, Children.

Abstract: Indonesia is 4th in the world ranking of countries with the highest prevalence of Diabetes Mellitus. Diabetes Mellitus has become a serious problem because its pathophysiology can chronically and progressively develop into acute and chronic complications. Therefore there needs to be comprehensive and integrative treatment. Since January 1st, 2014 Indonesia has been implementing International Health Insurance or Jaminan Kesehatan Nasional (JKN). 33% of JKN's expenses are for Diabetes Mellitus and its complications. By using a literature study and secondary data from BPJS, the result is that the number of children which have Diabetes Mellitus has increased by 500 percent over five years. In 2014, the number of children with Diabetes Mellitus reached 1.100 since JKN was been implemented, and this keeps on increasing.

1 INTRODUCTION

Diabetes Mellitus is a non-communicable disease. Its pathophysiology can chronically and progressively develop into acute and chronic complications. According to the IDF's (International Diabetes Federation) estimations, in 2035 the number of people around the world with diabetes will rise beyond 592 million. Indonesia is 4th in the world ranking of countries with the highest prevalence of Diabetes Mellitus. Diabetes Mellitus itself is the third largest cause of death by non-communicable disease in Indonesia after cardiovascular diseases and cancer. In 2014, the deaths from Diabetes Mellitus were 6%, cancer 13%, and cardiovascular diseases 37% of the total. Diabetes Mellitus can occur in adults, adolescents and children.

IDF estimated that 46% of cases went undiagnosed in 2014. This can lead to a serious problem because people are not aware of their children's increased risk for developing diabetes-related complications. Factor which cause Diabetes Mellitus in undiagnosed cases in Indonesia are due to factors such as the records of Diabetes Mellitus data from many hospital in Indonesia not being well-organised and not all had been reported to a central

service. There is also high price of health care services for Diabetes Mellitus to consider. However, since January 1st 2014, Indonesia's government has been implementing National Health Insurance or Jaminan Kesehatan Nasional (JKN). 33% of JKN's expenses are for Diabetes Mellitus and its complications. JKN also provides a systematic method of recording since it has been applied nationally.

2 METHODS

The author has used a literature study method to analyse the impact of JKN implementation in prevalence cases of diabetes mellitus among children. The author has reviewed the evidence and summarised the available data which relates to JKN and prevalence cases of Diabetes Mellitus.

3 RESULT

Since 2007 until 2013, the number of Diabetes Mellitus cases decreased from 6,9% into 5,7%, but there was a contrast on the undiagnosed respondents.

According to the result of blood sugar level's examination and interview which has been done by *Riskesdas* 2007 and *Riskesdas* 2013, there are 69,6% and 73,7% amount of respondents from Diabetes Mellitus patient which was a undiagnosed sufferer before. It shows that, the number of undiagnosed sufferer increased. The amount of undiagnosed children with Diabetes Mellitus increased can be caused by many factor. One of the main factor is financially incapable to access health services.

Since the first implementation of JKN, the prevalence of children with Diabetes Mellitus increased. it is related to the JKN's funds which its 33% of the funds allocated to Diabetes Mellitus and its complication, so that it decreasing Indonesia's citizen burden related to financial factor to get access to the health services.

Based on the data from a journal titled 'National Health Insurance Effects on Inpatient Utilisation in Indonesia,' the participation in JKN since its first implementation in 2014 until 2015 has reached 155,4 million people. This has kept rising to 171 million people in 2016. Meanwhile, JKN's total target participation is 254 million people to be achieved by 2019. It has been shown that Indonesian citizens prefer to use JKN as their health insurance to cover their health needs more than any another health insurance.

Based on a journal titled 'Unsatisfied Patient in Healthy Industrial in Indonesia,' the number of people included in Indonesia increases every year. The prevalence of 5.7% in 2007 and 6.9% means that this has reached as many as 12.2 million people in 2014. According to the official internal media of BPJS (Badan Penyelenggara Jaminan Sosial), the amount of children was suffering from Diabetes Mellitus increased by 500% over the course of five years. Every week, there will always be new children suffering from Diabetes Mellitus. In 2014, the number of children which suffer from Diabetes Mellitus reached 1.100 since JKN had been implemented and it keeps on increasing.

4 DISCUSSION

Based on the results of the literature study, the increase in the prevalence of cases of children suffering from Diabetes Mellitus can be detected with the implementation of the JKN reporting system. The increase of JKN and the increasing number of children with Diabetes Mellitus has shown that the JKN expenses for Diabetes Mellitus can attract Indonesian citizen's attention. By way of

the increasing number of JKN participants, it has also helped the government to make a centralised recording system. This will also help them to find new cases of undiagnosed Diabetes Mellitus.

5 CONCLUSIONS

Based on the results of several literature reviews in this literature study, the impact of Indonesia's national health insurance is that it can increase awareness of the prevalence of cases of children suffering from Diabetes Mellitus with the centralised reporting system.

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The Implementation of the Policy on Health Promotion in DKT Gubeng Surabaya Hospital According to Regulation of the Ministry of Health Republic Indonesia Number 004 Year 2012

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Keywords: Hospital policy, Health promotion, Hospital management.

Abstract: Hospital Health Promotion is a part of health effort that focuses on hospital patients, hospital clients, hospital workers, community knowledge and the ability to implement PHBS in handling health problems and health issues. One of the hospitals that has Health Promotion units in Surabaya is DKT (Dinas Kesehatan Tentara) Gubeng Surabaya Hospital. This study aims to find the implementation and promotion of health policies in DKT Gubeng Surabaya Hospital. The methodology in this research is descriptive and qualitative with observation technique and an interview with a key informant who is one of the workers in the health promotion unit at DKT Gubeng Surabaya Hospital. Secondary data are obtained through the hospital profile and print media owned by DKT Gubeng Surabaya Hospital. The results of research implementation and health promotion policy in this hospital will be adjusted with the Regulation of the Ministry of Health Republic Indonesia Number 004 Year 2012 about health promotion in the hospital where in the implementation and health promotion policy is described. DKT Gubeng Surabaya Hospital still has not cooperated with other sectors in health promotion and some of them have been running quite well and some have been adopted in accordance with the Regulation of the Ministry of Health Republic Indonesia Number 004 Year 2012.

1 INTRODUCTION

Health, according to WHO, is a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity. Health systems not only focus on curative and rehabilitative efforts alone, but must be balanced with promotive and preventive efforts. Health Promotion enables people to take control over their own health and can be rooted in early life when people have a substantial opportunity to learn, listen and behave from the basics until they are adopted automatically. One of the goals of Hospital Health Promotion is for the public to know how to prevent illness with dressings and preventing the root of ill health and applying this in their daily lives (WHO, 2017a).

Health Promotion can be applied to anyone, anytime, anywhere and it can also be applied in various institutions, and one such is a hospital. Society needs health promotion to avoid becoming sick. One of the most important things for this is

clean and healthy life behavior (PHBS). That is one of the basics to prevent disease. The focus of hospital health promotion is that society knows how to behave in a clean and healthy manner, and another one is to be able to carry out a clean and healthy life behavior in handling health problems. Thus, the duty of hospital health promotion is to create a healthy, safe and clean hospital environment (WHO, 2017b).

There are several hospitals that have implemented health promotion according to the health ministry's regulation about technical implementation of health promotion in hospital, one of them is Bhayangkara Hospital in Semarang. One of the hospitals in Surabaya that has already applied hospital health promotion is DKT Gubeng Surabaya Hospital. DKT Gubeng Surabaya Hospital is the implementing element of Kasdam (Kepala Staff Daerah Militer) in carrying out health services and health support in 084 / BJ korem region with the duty and obligation to carry out health services to

improve the health status of soldiers, civil servants and their families and also the general public. The implementation of hospital health promotion in DKT Gubeng Surabaya Hospital has been running since 2016 and involves the participation of various parties from policymakers and health workers to patients. The hospital has a lot of health promotion posters and brochures that stated around the hall and inside the room and it also has handwashing facility. To see how far the implementation of hospital health promotion in DKT Gubeng Surabaya Hospital has been effective, it is necessary to do a further review on the conformity of implementation and policy of Hospital Health Promotion with some indicators in the Regulation of the Ministry of Health Republic Indonesia Number 004 Year 2012 on Technical Guidelines for Hospital Health Promotion. These elements are management policy, hospital health promotion media inside the rooms, a safe, clean and healthy workplace, and partnership (Department of Health, 2010; Ministry of Health, 2012).

2 METHODS

This research was conducted with a descriptive qualitative method from two data sources, primary and secondary. Primary data were obtained through several key informants using observation and interview methods. Observation was done by observing health promotion media attached in some parts of the hospital and public response to this and the interview was conducted with one of the hospital employees who also works as a member in the Hospital Health Promotion team. Secondary data were obtained through the hospital profiles, brochures, leaflets, and posters owned by DKT Gubeng Surabaya Hospital. Analysis was done by comparing the conformity of implementation and policy of Hospital Health Promotion in DKT Gubeng Surabaya Hospital Gubeng Surabaya according to the Regulation of the Ministry of Health Republic Indonesia Number 004 Year 2012 concerning Technical Guidance of Hospital Health Promotion.

3 RESULT

According to the Regulation of the Ministry of Health Republic Indonesia Number 004 Year 2012 concerning Technical Guidance of Hospital Health Promotion, there are four elements observed management policy, hospital health promotion

media inside the rooms, a safe, clean and healthy workplace, and partnership. The observation result showed in Table 1.

Table 1: The observation results of the implementation and policy of Hospital Health Promotion in DKT Gubeng Surabaya Hospital

| Elements | Elements Break Down | Availability | |
|--|--|--------------|----|
| | | Yes | No |
| Management policy | Written policy | √ | |
| | Work unit / Hospital Health Promotion Division or team | √ | |
| | Hospital Health Promotion workforce | √ | |
| | Budget funds | √ | |
| | Periodic evaluation | | √ |
| | Periodic training | | √ |
| Hospital Health Promotion Medias inside the room | Administration room | √ | |
| | Outpatient room | √ | |
| | Parking lot | √ | |
| | Laboratory | | √ |
| | Canteen | | √ |
| Safe, Clean and Healthy Workplace | Worship place | √ | |
| | Maintain facilities and infrastructure | | √ |
| | A ban on littering | | √ |
| | Smoking ban sign | √ | |
| Partnership | Cigarette Counseling | | √ |
| | Network with external sector | | √ |
| | Cross-sector programs | | √ |

Source : The result of observation about hospital health promotion at DKT Gubeng Surabaya Hospital.

3.1 Management Policy

The function of the hospital is to conduct individual health efforts as well as public health efforts, whereby health promotion is one of the service efforts that must be held (Department of Health, 2011). DKT Gubeng Surabaya Hospital already has a Hospital Health Promotion unit with membership consisting of doctors and nurses. The Hospital Health Promotion Unit obtains activity funds by submission of activity proposals to the hospital's internal management. The activity evaluation process is done once every six months and there is no routine evaluation after the event is finished. There is no regular training of the Hospital Health Promotion unit's employees in managing the content of health promotion activities and media.

3.2 Hospital Health Promotion Medias Inside the Room

Hospital Health Promotion media is important because it contains knowledge about health and how to prevent disease, but not everywhere inside the DKT Gubeng Surabaya Hospital building contains Hospital Health Promotion media. Health promotion media are available in administration rooms, outpatient rooms, parking lots, hospital corridors and places of worship. There is no health promotion media in the canteen because the hospital does not have a canteen.

3.3 Safe, Clean and Health Workplace

In this aspect, there is no special employee to maintain the hospital facilities and infrastructure. DKT Gubeng Surabaya Hospital is a non-smoking area, that proofed by the existence of media promotion contains that smoking is ban and bad to the body. DKT Gubeng Surabaya Hospital puts a lot of trash cans in every corner and corridor of hospital but there is no media which prohibits littering.

3.4 Partnership

DKT Gubeng Surabaya Hospital has not established cross-sector cooperation related to health promotion in hospitals and non-governmental organizations (NGOs). This is proofed by the health promotion activities that are still within the internal scope of the hospital alone by utilizing the resources within it.

4 DISCUSSION

DKT Gubeng Surabaya Hospital only gained a Hospital Health Promotion unit in 2016, so the unit is fairly new, but, in less than a year, the visual media of health promotion in the hospital has been considerably established, even though not all places have health promotion media, such as the laboratory. The form of audio-visual media of health promotion at DKT Gubeng Surabaya Hospital is health counselling, direct education by doctors and poly nurses to patients who receive treatment from poly doctors and health training counselling to all workers in the hospital although the training is not done routinely.

Health promotion media is not only in the form of brochures, posters, or leaflets, but a good form of service is also in the form of health promotion media

in hospitals. DKT Gubeng Surabaya Hospital has Standard Operating Procedures (SOP) about good service from workers to patients, visitors, and other workers. SOP has been performed well by some employees at DKT Gubeng Surabaya Hospital. In addition, the hospital also always ensures that patients and visitors can receive basic information in the hospital when entering the administration room with the presence of important information media at the front, so that they can obtain the information easily.

Regarding facilities and infrastructure, the hospital has been doing maintenance on the facilities and infrastructure of the hospital environment and its completeness, but there are no maintenance workers to clean and maintain the facilities and infrastructure. As described in the observation results, although DKT Gubeng Surabaya Hospital is a non-smoking area, there are still visitors who smoke, although not inside the hospital area. Smokers are smoking around the parking area of the hospital and in open places.

The three basic principles of equality, according to the Regulation of the Ministry of Health Republic Indonesia Number 004 Year 2012, are equality, openness and mutual benefit. DKT Gubeng Surabaya Hospital has not established cooperation with other sectors, so that the health promotion media of the hospital is not fully complete with the needs of the community. Establishing cross-sectoral partnerships has a good purpose, with increased cross-sectoral networks and familial relationships among them. In addition to improving relationships and kinship, partnerships can also benefit each other with the exchange of knowledge and information which would be very useful for the advancement of health promotion in DKT Gubeng Surabaya Hospital. If the partnership goes well, health promotion in hospitals can also be improved and the goal of reducing risk is attained

5 CONCLUSION

DKT Gubeng Surabaya Hospital has its own Hospital Health Promotion unit with its members are Doctors and Hospital Nurses. The visual media of Health Promotion already exist in all parts in DKT Gubeng Surabaya Hospital, either inside or outside the building that is stated according to the hospital's technical health promotion guidelines listed in the Regulation of the Ministry of Health Republic Indonesia Number 004 Year 2012. Health promotion unit in DKT Gubeng Surabaya Hospital has not

undergone partners and work with stakeholders or any institution in the field of health promotion. Health promotion in DKT Gubeng Surabaya Hospital always evaluate its performance every 6 months internally and always make plan of health promotion media change once in 1 month for maximum result

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Implementation of Making Pregnancy Saver (MPS) Policy to Reduce Maternal Mortality in Sampang Regency

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Keywords: Health policy, Maternal mortality, Making pregnancy safer, Partnerships medicaster & midwives.

Abstract: Maternal mortality in Indonesia is still high. One of the highest maternal mortality rates in the country is in the Sampang regency. The high number of deliveries performed by the medicaster is detrimental and endangers the safety of both mother and baby. This is because the medicaster does not have the sufficient skills and/or ability to deal with complications that can occur during and after childbirth. To reduce the rate of maternal mortality, it is necessary to develop a policy that can overcome the barriers against the efforts to make pregnancy safer. One of the strategies is Making Pregnancy Safer (MPS), in order to overcome maternal problems. Being assisted by health personnel will reduce the risk of maternal morbidity and mortality. This study has used qualitative methods using secondary data from other research studies. The findings have been analysed using descriptive analysis. The evaluation and assessment of the success of the program was conducted by the health services in cooperation with the government. The policy can be measured using the key indicators: K-4 coverage, delivery by skilled health personnel, and the maternal and infant mortality rates.

1 INTRODUCTION

In an effort to accelerate the reduction of Maternal Mortality Rate (MMR), as well as to achieve the MMR target of 125/100,000 live births in 2010, and Millennium Development Goals (MDGs) target 102/100,000 live births in 2015, Making Pregnancy Safer (MPS) was initiated by the WHO. It is a health sector strategy aimed at reducing MMR.

The complications and/or emergencies that occur in childbirth and the first week postnatal are estimated to account for 60% of all maternal deaths. WHO research results in 97 countries in 2002-2003 concluded that there was a significant correlation between the quality of the delivery assistance and maternal mortality. The results suggest that the higher the number of deliveries performed by medicaster, the higher the risk that there is of jeopardising the safety of mothers and infants. This is because the medicaster does not have a sufficient enough ability to deal with complications that occur during and after childbirth. To reduce the morbidity

and mortality of mothers and new-borns, the WHO has made Safe Motherhood efforts. Safe delivery assistance by trained health personnel is an effective way to reduce MMR. Nevertheless, it is undeniable that many Indonesians, especially those living in remote villages and areas, entrust delivery assistance to those who are a part of the belief system and culture of the community. Therefore the role of medicaster cannot be eliminated, but they can be invited to partner with and divert some of their roles as a birth attendant to a trained midwife.

One of the strategies focused on in this study is Making Pregnancy Safer (MPS), which was set up to overcome maternal and infant health problems. By ensuring a safe delivery assisted by health personnel, it will reduce the risk of maternal morbidity and mortality. The partnership between midwives and medicasters in rural areas will also further reduce the risk that occurs during childbirth.

2 METHODS

This study using a study literature method from existing studies. The aim of this study is to get explanation about the policy for making pregnancy safer and “*Kemitraan Bidan Dukun*” in the Sampang Regency.

3 RESULT AND DISCUSSION

3.1 Maternal Mortality and Causes

One of the causes of high MMR is the low utilisation of health services and delivery by trained health personnel. Geographical conditions, population distribution, socio-cultural and a low level of education are some of the factors causing the low utilisation of health workers by the community. According to Riskesdas’ data in 2010, the gap of birth attendants to health workers based on residence was wide; i.e. 91.4 percent in urban areas and 72.5 percent in rural areas. As many as 55.4 percent of deliveries occurred in health facilities, while 43.2 percent gave birth at home. Out of the pregnant women who gave birth at home 51.9 percent were helped by midwives and 40.2 percent by midwives.

The role of medicaster in the community in relation to helping a mother during pregnancy, during delivery and after childbirth is closely related to the local culture and customs. Medicasters are mostly well-known people in the village, who are respected and regarded as trustworthy, experienced parents. In addition to prenatal care, attending births, and taking care of the mother and baby after birth, medicasters are generally believed to provide rituals of indigenous accomplishments, so as to provide comfort and security in childbirth. Facts that exist in the field are that the number of medicasters is far more than the number of midwives. This is inversely related to the presence of a relatively limited number of midwives, especially in remote villages and areas. Midwives have recognised expertise in assisting in childbirth. However, despite their experience, their comparatively young age alongside that of the medicasters, especially for those located in remote areas, is often an obstacle to achieving public trust

3.2 Making Pregnancy Safer Policy

In an effort to improve the health of mothers and new-borns, the government has launched the National Movement to Making Pregnancy Safer

(MPS) as the Strategy of Public Health Development towards Healthy Indonesia 2010, as part of the Safe Motherhood program. The goal of the MPS Policy is to protect human rights by reducing the pain, disability and death rate associated with pregnancy. MPS is a health sector strategy, which focuses on health planning and service approaches. MPS has been implemented based on existing efforts with an emphasis on partnerships between government sectors, development agencies, the private sector, families and community members. Based on the lessons learned from the Safe Motherhood program, one of the important objectives of MPS is to guarantee that every delivery is assisted by health personnel.

Based on these facts and the government's policy that every mother's delivery should be handled by health personnel, efforts to build midwife and medicaster partnerships has become very necessary. Medicasters are willing to shift their role as birth attendants to the midwives, but still play a role in the care of the mother during pregnancy, assisting at the delivery (by performing traditional rituals to make the mother feel calm and safe), and caring for mothers and babies after birth (postnatal).

3.3 Partnership of Midwives and Medicasters

The partnership of midwives and medicasters is a form of collaboration with a mutual benefit that has been developed by the Ministry of Health of the Republic of Indonesia through the principles of openness, equality and trust in an effort to save mothers and babies. The partnership places midwives as the helper in childbirth and converts the role of medicaster from birth attendants to partners in caring for pregnant women, accompanying mothers at the time of delivery, and caring for the mothers and babies after childbirth. This established partnership is based on agreements made between midwives and medicasters through the involvement of various elements of the community. The program is called “*Kemitraan Bidan Dukun*” (KBD).

The purpose of KBD is as follows:

1. Improving the services offered to pregnant women, nursing mothers and infants.
2. Increasing community participation in supporting the progress of health development in the villages.
3. Establish cooperation between midwives and medicasters when providing services to pregnant women, nursing mothers, and infants.

3.4 Reduce the Maternal Mortality Rate in Sampang Regency

The Maternal Mortality Rate (MMR) in Sampang Regency is high. To overcome this problem, in accordance with the mission of the Making Pregnancy Safer program, each delivery is assisted by skilled health personnel. Each obstetric and neonatal complication should receive adequate services, and every fertile woman has access to unwanted pregnancy prevention and treatment for miscarriage complications. Problems when implementing safe labour performed by health workers is the traditional Madurese culture. For example, traditional healers, herbal remedies and pregnancy myths. There is still the belief in the community that when it comes to maternity and infant-related problems, shamans are more comfortable to deal with and cheaper.

3.5 Implementation of the Making Pregnancy Saver (MPS) Policy

The implementation of policies has been initiated in order to decrease MMR in Sampang. One of these policies is the Midwives and Medicaster Partnership program called “KBD”, which is the formation of midwifery cooperation with medicasters in the community to ensure that all the deliveries can be helped by health personnel. The midwife's activities cover the medical aspects, while the medicaster's activities cover the non-medical aspects. The medical aspect is the process of managing and servicing maternal and child health programs through planning, implementation, monitoring and assessment (evaluation). The non-medical aspect is to mobilise the involvement of individuals, families (including the partners of pregnant women), and communities in the maternal and child health services, and empowering pregnant women and their families. Maternal and child health services include activities undertaken by the midwife in performing midwifery care in accordance with the authorities, and the ethics and responsibilities of the midwife. The medicaster's duty to help deliver has become referring pregnant women to the service and caring for postpartum and newborn babies based on the agreement between midwives and medicasters.

The support of the stakeholders at the Sampang regency level can encourage the acceleration of the partnership formation, mainly through program support, the budget and moral support. Direct support from the Head of the Region towards the medicaster in the village and the midwife is very

influential. The form of activities conducted to obtain the support of the involved parties has been done through intensive consultation and coordination with the Head of the Region and in the form of hearings with the District Legislative of the Sampang Regency.

Output from the KBD programs show good results. The coverage of K1 and K4 have each passed the ANC coverage standard. There has been an increase in deliveries assisted by health personnel. It shows that the KBD Program is a good program for controlling pregnant women's health in the Sampang Regency.

4 CONCLUSION

Childbirth performed by a medicaster endangers the mother and baby. This is because the medicaster does not have the sufficient skills and ability to deal with complications that occur during and after delivery. To reduce the morbidity and mortality rate of mothers and newborns, strategies have focused on Making Pregnancy Safer (MPS) to overcome maternal and infant health problems. By ensuring a safe delivery assisted by health personnel, the program will reduce the risk of maternal morbidity and mortality. The partnership between midwives and medicasters in rural areas will reduce the risks that occur during childbirth. Alongside the program called “*Kemitraan Bidan Dukun*” (KBD), it will establish cooperation between the midwife and medicaster to help promote safer deliveries in accordance with the MPS policy in the Sampang Regency. The output from the KBD programs show good results and have reduced MMR in the Sampang Regency.

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Factors Affecting Participation Levels among College Student in the Implementation of Smoke Free Area (SFA) in Universitas Airlangga Surabaya

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Keywords: Non-smoking area, Policy, Surabaya, College student.

Abstract: Smoking has become a major issue for public health that needs to be overcome, because it involves various aspects of life such economic, social, political and especially health aspects. Indonesia in 2007 was ranked as the fifth largest consumer of cigarettes (239 billion) behind China (2163 billion). The objective of this study is to get to know the participation of students in the implementation of Smoke Free Areas (SFA) both in relation to smokers and non-smokers, and the factors that influence the level of student participation in the implementation of SFA in Universitas Airlangga. An observational analytic study using a cross-sectional approach was selected. The population in this study is 1-7 semester student of Universitas Airlangga. The research sample was taken by using the simple random sampling method. This obtained a large sample of 95 respondents. Univariate and bivariate analysis was conducted by using a Chi-Square test and the research instrument was a questionnaire. The result of chi-square test showed that there is a relationship between knowledge and participation in the Smoking Free Area implementation ($p=0.024$). The attitude about SFA cannot be analysed because all of the respondents show constant results; all of the respondents have a good attitude toward SFA implementation. The conclusion of this study is that there is a significant relationship between the level of knowledge and the participation in the Smoking Free Area implementation.

1 INTRODUCTION

Smoking has become a major issue for public health because it involves various aspects of life such economic, social, political and especially health aspects. The smoking habit is a lifestyle that can affect human health, and not only affect the users of the cigarette itself but it can have a negative impact on others around them. More than 6 million of the deaths listed are the result of direct tobacco use while around 600,000 are the result of non-smokers being exposed to second-hand smoke. Nearly 80% of the more than 1 billion smokers worldwide live in low- and middle-income countries, where the burden of tobacco-related illness and death is heaviest (WHO, 2011).

Based on WHO (2011), Indonesia in 2007 ranked as being the fifth largest consumers of cigarettes (239 billion) behind China (2163 billion), the USA (351 billion), Russia (331 billion), and

Japan (259 billion). In Indonesia, the smoking behaviour of the population at 15 years of age is likely to increase from 34.2 percent in 2007 to 36.3 percent in 2013. In 2013, the most regular smokers initiated smoking between 15-19 years old (55.4%). The prevalence of smoking based on age at the start of smoking, starting from age 5-9 years is as much as 1.6%, age 10-14 years at 18%, age 15-19 years at 55.4%, age 20-24 year at 16.6%, age 25-29 years at 4.6% and at the age of more than 30 years at 3.8% (Badan Penelitian dan Pengembangan Kesehatan Kementerian RI, 2013).

This is a serious problem because the increase in smoking behaviour in the population aged ≥ 15 years greatly affects the quality of the younger generation in Indonesia. One effort that can be done by the government is to establish public policies. Public policies essentially aim to solve the problems that occur in society, as well as on the exact issue of smoking behaviour.

The Government enacted Law No. 36 in 2009 concerning health in section seventeen about ensuring the safe use of addictive substances. In article 115, section 2, it is the obligation of the local governments to designate smoke free zones in their jurisdiction. The government also enacted a Government Regulation of the Republic of Indonesia No. 109 in 2012 ‘Concerning Materials that Contain Addictive Substances in Tobacco Products in the Interests of Health’, specifically in part five to regulate Smoke Free Zones. In article 49, it is the obligation of the central government and local governments to designate Smoke Free Zones. Surabaya City government also enacted Government Local Regulation No 5 in 2008 ‘About No Smoking Area And Restricted Smoking Areas’. According to Government Local Regulation No 5 in 2008, smoke free areas are a space or area which has been declared to be prohibited for smoking activities or the activities of producing, selling, and/or promoting cigarettes. Areas declared prohibited in the local regulations include health care facilities, educational facilities, children’s playing grounds, religious places and public transport.

Universitas Airlangga as an educational facility for student, additionally as a working place for employees, it is necessary that it should have implemented a Smoke Free Area based on the local regulations. However, since the enactment of Government Local Regulation No 5 in 2008 About Smoke Free Area and Restricted Smoking Areas, until now, not all areas in Universitas Airlangga have implemented this policy. In the enforcement and implementation of a Smoke Free Area, it should be supported by the participation and contribution of the entire community of Universitas Airlangga especially the students as they are the main actors of the campus world. The contribution is not limited to funds and finance but can also take the form of power and ideas.

Therefore, the objective of this study is to know level of the participation of students in the implementation of a Smoke Free Area (SFA) both in smokers and non-smokers, and the factors that influence the level of student participation in the implementation of SFAs at Universitas Airlangga.

2 METHODS

This was an observational analytic study using a cross-sectional approach was selected. The population in this study is 1-7 semester student of Universitas Airlangga. The research sample was

taken by using the simple random sampling method. This obtained a large sample of 95 respondents. The study was conducted from early August to early September. The instrument used in this research was a questionnaire. Data collection was done by distributing an online questionnaire.

The independent variable in this research is the knowledge and attitude about the Smoke Free Area (SFA), and the dependent variable in this research study was the participation level to do with the implementation of a Smoke Free Area (SFA). The data analysis was done by using univariate analysis and bivariate analysis. Bivariate analysis using Chi-square test (χ^2) aims to determine the relationship between the independent variables and is bound to a scale of nominal and ordinal data.

3 RESULTS

3.1 Univariate Analysis

Table 1 shows the characteristics of the respondents and their level of knowledge, attitudes and participation about the implementation of a Smoke Free Area (SFA). The total of 95 respondents had a distribution of 16 male respondents (16.8%) and 79 female respondents (83.2%). The distribution of respondents in the 1st semester was 4 respondents (4.2 %), 3rd semester 38 respondents (40.0%), 5th semester 21 respondents (22.1%), and 7th semester 32 respondents (33.37%).

Based on the univariate analysis results, the respondent's distribution at a low knowledge level about SFA policy consisted of 23 respondents (24.2%) and the respondents with a high knowledge level was made up of 72 respondents (75.8%). The distribution of respondents with a bad attitude about SFA was 0 respondents (0%) and the respondents with a good attitude was made up of 100 respondents (100%). The distribution of the respondents based on the participation rate of SFA was that those with a low participation rate was 21 respondents (24.2%) and those with a high participation rate was 74 respondents (77.9%).

Table 1: Univariate Analysis Result Resume

| Characteristics | n | (%) |
|-----------------|----|------|
| Sex | | |
| Male | 16 | 16.8 |
| Female | 79 | 83.2 |
| Semester | | |
| 1 st | 4 | 4.2 |

| Characteristics | n | (%) |
|-------------------------------|----|------|
| 3 rd | 38 | 40.0 |
| 5 th | 21 | 22.1 |
| 7 th | 32 | 33.7 |
| Knowledge level about SFA | | |
| Low | 23 | 24.2 |
| High | 72 | 75.8 |
| Attitude level about SFA | | |
| Bad | 95 | 100 |
| Good | 0 | 0 |
| Participation level about SFA | | |
| Low | 21 | 22.1 |
| High | 74 | 77.9 |

3.2 Bivariate Analysis

Table 2: Relationship between Knowledge and Participation level on SFA

| Knowledge | Participation | | | | Total | |
|-----------|---------------|------|------|------|-------|-----|
| | Low | | High | | n | % |
| | n | % | n | % | | |
| Low | 9 | 39.1 | 4 | 60.9 | 23 | 100 |
| High | 12 | 16,7 | 60 | 83.3 | 72 | 100 |

*p value = 0.024

Based on Table 2, the results show that 23% respondents had a low level of knowledge, 39.1% had a low level of participation and 60.9% had a high level of participation. The respondents with a high amount of knowledge were as many as 72 respondents with a presentation of 60.9% with a low level of participation and 83.3% had a high level of participation. The statistical analysis using Chi square test obtained $p = 0.024$ ($p < 0.050$), which means that there is a relationship between knowledge and the level of participation to do with the implementation of SFA.

In this study, the attitude variable has not been calculated because the result is constant. All of the respondents have a good attitude, so it cannot be analysed by way of bivariate analysis.

4 DISCUSSION

Most of the respondents have a high level of knowledge about SFA (75.8%), especially in terms of understanding SFA and areas included in SFA. Only a few had knowledge about the implementation of SFA regulations. Most of the students do not know about government regulations and local regulations about Smoke Free Areas. The Chi square test result obtained a value of significance at 0,024

so it can be concluded there is a relationship between knowledge with the level of participation.

Some previous research results have illustrated the existence of a negative influence between cigarette consumption and health status, both self-health status and national health status. Cigarette illnesses such as lung infections, coronary heart disease and chronic obstructive pulmonary disease have become one of the leading causes of death in the world. Both for active smokers and second-hand smokers, the health problems that appear because the toxic substances in cigarettes are endangering them. Therefore, it can be predicted that decreasing cigarette purchasing patterns after increasing cigarettes taxes will reduce the risk of smoking-related diseases in Indonesia.

This study shows similar results with Renaldi's research in 2013 on Students at the Health Science High School of Hang Tuah Pekanbaru, which states that there is a significant relationship between SFAknowledge with the implementation of SFA ($p=0,000$). However, this is different to the results from Saptorini's research in 2013 at the University of Dian Nuswantoro Semarang which states that there is no relationship between knowledge and participation ($p = 0.065$). Many previous studies have reported on the association between knowledge and participation in policy implementation. In theory, the knowledge base that is possessed will affect the whole environment of society. This makes the community understand or not understand the stages and forms of participation that exist (Yulianti, 2012). Knowledge of a policy is needed to understand how the implementation of a policy works, and that understanding can support a person in their participation with a policy. The community's knowledge of the participation process will determine the nature and direction of a decision that is to be taken (Ramla, 1992). One way to increase public participation, especially for students, is to have knowledge of SFA policy, and knowledge of how the course will increase with the information received. Therefore, socialisation is needed regarding the policy and application of SFA as a form of information that can increase knowledge about the implementation of SFA.

5 CONCLUSIONS

This research study has concluded that 75.8% of the respondents have a high level of knowledge about Smoke Free Areas, 100% of the respondents have good attitude about SFA and 77.9% of the

respondents have a high rate of participation towards SFA implementation. There is a correlation between knowledge of SFA with SFA participation with a significance value of 0.024. The attitude about SFA cannot be analysed because all of the respondents have a good attitude toward SFA implementation.

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Evaluating Health Insurance Inequality in Indonesia using Concentration Curve and Index

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Keywords: Health insurance, Concentration index, Kakwani index, National health insurance.

Abstract: Equality in access to health services is one of main concerns in improving the public's well-being. In Indonesia, the public administration has tried to achieve this equality by establishing National Health Insurance (NHI) in early 2014, replacing the older system of public health insurance. The data used in this study is the Indonesian Family Life Survey, which took place 1 year after NHI implementation. This study has assessed the inequality in public and private health insurance for public and private health using a Concentration and Kakwani Index. Furthermore, the sample used was decomposed in to a sub-sample to get more detailed information. This study found that there is some degree of inequality in public health insurance, but it is more pro-poor than private health insurance. However, there is evidence from the decomposed results that shows that there is some room for improving the inequality.

1 INTRODUCTION

In 2005, 58th World Health Assembly underlines the need of Universal Health Coverage, to ensure health financing for every people. Indonesian government already reach out this issue a year before, by enacting Law No. 40/2004 about National Social Security System. This law is the very foundation to achieve NHI (National Health Insurance) in Indonesia. The Indonesian government choose insurance approach rather than market one, prior to the experiences in cross-country that successfully implemented in United States of America and China (World Health Organization, 2010)

In 2014, the Indonesian government's effort towards achieving universal coverage in health insurance has entered a new stage in the implementation of NHI. It is now in the first stage of managing the participants, giving priority to important elements of the public worker sector including people who already have Health Insurance and Workers Social Insurance, and the poor. The next stage is to give access to all people in Indonesia, which is targeted to be achieved in 2019 (Indonesian Ministry of Health, 2013).

Earlier evaluations of Indonesian health insurance have already been conducted by Hidayat, Thabrany (2004) and Pradhan, Saadah (2007) for the

period of crisis from 1997-1998. Another evaluation was conducted by Vidyattama, Miranti (2014) post-NHI implementation. These works used the same factor to assess inequality, which is the access and utilization for health insurance. The results from these works show that the access for health insurance is already pro-poor, but there is some degree of leakage for public health insurance utilisation.

This implementation of NHI surely helps the poor in Indonesia. However, it still needs further evaluation. One way to do this evaluation is using a concentration curve and index. Kakwani (1977) used this method to assess the progressivity of tax. Later on, these methods were implemented in the health economics context by Wagstaff, Paci (1991) and Kakwani, Wagstaff (1997), which together with the Kakwani index is handy for evaluating progressivity.

Why do the evaluation? Does it help to make a change to inequality? These questions have been answered by Wagstaff van Doorslaer (2003) using the decomposition method. In their works, they noted that the decomposing method could answer the three problems that arise in health inequality. First, the inequality of some of the variables might stem from inequality in the other variables. Second, there is evidence that inequality is changing over time (Victoria, et al., 2000; Schalick, et al., 2000), and one should answer to the factors driving this.

The third the most obvious problem in relation to the evaluation is that we need more information to make a better-designed policy.

Two decomposing factors that are relevant to inequality are the health care type and health care provider type. Between public and private health care providers, Gertler (2007) noted that there is evidence of inequality that stems from different access to high-quality outpatient care caused by different treatments from the public and private health care providers. An important factor that needs to be taken note of in relation to this problem is the preference of the poor. It was noted by Gertler (2007) that they prefer public-provided health care.

As for health care type, we began with a price comparison between inpatient and outpatient care. Adam and Evans (2006) worked out that when comparing between the two, the results show that the ratio between inpatient cost compared to outpatient cost could range from 2 to 12 times higher. This suggests that the inequality might be more severe in inpatient care than outpatient care. But in the same study, Adam and Evans (2006) also showed that this factor might be related to the facilities in the hospital. If the hospital could afford more technology that would make for better outpatient care, this would generate a higher outpatient cost.

From that point of view, this article will evaluate inequality using a concentration curve, concentration index, and Kakwani index. Using data from the fifth wave of IFLS (Indonesian Family Life Survey), this article evaluates the inequality approximately 1 year after entering the first stage of NHI. Later, this article decomposed the obtained concentration index to get more detailed information. The decomposing factor used has also been provided in this data set.

Different from the previous works, the factors evaluated in this article relate to the claimed benefit of insurance. It is used for the claimed benefit to get a better insight in to the benefit value of insurance. It is also extending the utilisation findings in the previous works that still use the number of insurance claims, and not the value of them.

2 METHODS

Different to the Lorenz curve, the concentration curve could explain the inequality by connecting economic inequality with other living standard variables (O' Donnell, 2008). In this article, the living standard variable is the claimed benefits of health insurance. The claimed benefit will be plotted against the cumulative population proportion in

they-axis and cumulative wealth proportion in the x-axis sorted from poor to rich. In the Lorenz curve, it plots the shares of the claimed benefit against quantiles of the living standards variable.

From the obtained concentration curve, the concentration index was calculated. The concentration index formally could be defined as being twice the area of the concentration curve and line of equality. A convenient regression to calculate concentration index was demonstrated by Kakwani, Wagstaff (1997) obtained by the following formula:

$$2\sigma_r^2 \left(\frac{h_i}{\mu} \right) = \alpha + \beta r_i + \varepsilon_i \quad (1)$$

where σ_r^2 is variance of the rank used, h is claimed benefit, and r is the rank obtained from the wealth ranking which could be easily obtained through the computation of the concentration curve.

To obtain the standard error of the concentration index, Kakwani (1997) derived the standard error for the individual level data. Their formula resulted from applying the delta method used by Rao (1965). Specifically, the formula used was:

$$var(\hat{C}) = \frac{1}{n} \left[\frac{1}{n} \sum_{i=1}^n a_i^2 - (1 - C)^2 \right] \quad (2)$$

for $a_i^2 = \frac{h_i}{\mu} (2r_i - 1 - C) + 2 - q_{i-1} - q_i$, and $q_i = \frac{1}{\mu n} (\sum_{j=1}^i h_j)$, where n is the sample size, and q is the concentration curve ordinate.

After the concentration index was obtained, we calculated the Kakwani index. This index is useful to see whether or not the variable is progressive or regressive in respect to its ATP (Ability to Pay) measurement. In this case, we will use the Lorenz curve (O'Donnell, 2008). As used by Kakwani (1977), the Kakwani index in this article has been formulated as:

$$\pi_{kakwani} = C_h - G_h \quad (3)$$

where G shows the Gini index which representing ATP.

To obtain a more detailed result, the samples were decomposed using a method demonstrated by Wagstaff, van Doorslaer (2003). The decomposing factor used in this article is the type of health care (outpatient or inpatient) and the type of healthcare centre provider (public or private healthcare centre). Technically, the formula used for decomposing is to

treat the concentration index for claimed benefit as having a linear relationship to the concentration index of the regressor. Specifically:

$$h = \alpha + \sum_k \beta_k x_k + \varepsilon \quad (4)$$

where h is the claimed benefit, and k represents the number of regressors used. From this linear relation, the concentration index can be written as:

$$C_h = \sum_k (\beta_k \bar{x}_k / \mu) C_k + C_\varepsilon / \mu \quad (5)$$

where residual component captured by ε .

The data used in this article is the fifth wave of IFLS. This survey was conducted in 16,204 households in Indonesia, representing 83% of the Indonesian population (Strauss, 2016). This dataset is useful when explaining the claimed benefit of health insurance, complemented with other information about health insurance, which is not provided by other datasets for Indonesia.

3 RESULTS

Figure 1 and Table 1 (see Appendix) show the results for the total and sub-sample of the claimed benefit. The results of the total sample show that there is a moderate value of inequality. However, the results from the sub-sample show the inequality difference between public and private insurance. It shows that the inequality between public insurance is lower than that of the private insurance. These results are also consistent with the Kakwani index,

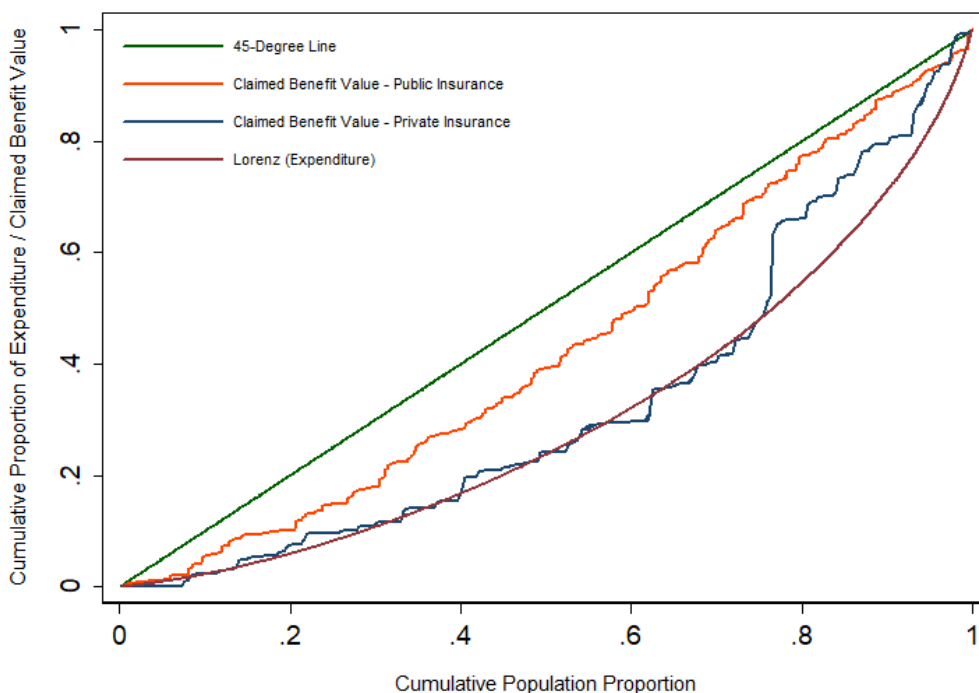
which shows that public insurance is more regressive than private insurance.

Results from the decomposition show that the type of healthcare is more elastic in public insurance. In public insurance, the type of health care contributes a positive concentration to the total value. This means that outpatient care creates more inequality than inpatient care. This result also happens in private insurance, but with a higher contribution to inequality.

The results also show that the type of healthcare provider is more elastic in private insurance than in public insurance. In public insurance, the type of healthcare provider contributes a negative concentration to the total value. This means that publicly-provided health care creates more equality than privately provided care. The magnitude of this “pro-poor” result is very low. Different results happen in private insurance, which shows that public health care centres treat private insurance in a “pro-rich” way.

4 DISCUSSION

Public insurance shows lower inequality than private insurance. This result immediately suggests that public insurance is not implemented as intended, but if we compare it to the results in private insurance, then it is more pro-poor. The Kakwani index for either of the sub-samples also supports this finding. Public insurance is more regressive than private insurance, which means that it is more pro-poor in the perspective of ATP.



Source: Author's Calculation

Figure 1: Concentration Curve of Claimed Insurance Benefit and Lorenz Curve in Indonesia

Table 1: Concentration and Kakwani Index

| | Insurance Provider | | |
|---------------------|--------------------|--------------------|--------------------|
| | Total | Public | Private |
| Gini Index | 0.3893 (0.0078) | 0.3799 (.0094) | 0.3817 (0.0142) |
| Concentration Index | 0.2314 (0.0398) | 0.1439 (0.0437) | 0.3449 (0.0523) |
| Kakwani Index | -0.1579 | -0.2360 | -0.0368 |
| N | 1203 | 954 | 249 |

Table 2: Decomposition of The Concentration Index

| | Public Insurance | | | Private Insurance | | |
|--|------------------|---------------------|--------------|-------------------|---------------------|--------------|
| | Elasticities | Concentration Index | Contribution | Elasticities | Concentration Index | Contribution |
| Type of Health Care (Outpatient = 1) | -1.9199 | -0.0161 | 0.0309 | -1.4340 | -0.0590 | 0.0846 |
| Type of Health Care Center (Public Health Care Center = 1) | 0.0900 | -0.0649 | -0.0058 | -0.1217 | -0.1696 | 0.0206 |
| Residual | - | - | 0.1188 | - | - | 0.2397 |
| Total | - | - | 0.1439 | - | - | 0.3449 |

Findings from the decomposition method show that outpatient care is one of the sources of inequality that happens in public insurance

implementation in Indonesia. This inequality could be caused by the growing service of healthcare as noted by Adam and Evans (2006), which expands

the choice to use inpatient service in-house. Experience from Vietnam in 1998 also shows that outpatient care subsidies tend to be more unequal than the inpatient one (O'Donnell, 2008). Diseases that are included in this category also usually happen to charge at very high price, which normally can only be accessed by the rich.

Results from the decomposition also show that public healthcare centres could reduce inequality in their insurance benefits. The low magnitude suggests that public healthcare centres are still not significant in relation to reducing inequality. This needs to be evaluated since the poor prefer to use public healthcare centres, rather than private healthcare centres (Barber, 2007). Still, results from the private insurance sample show that public healthcare centres are more pro-poor while treating public insurance holders more than the private ones.

5 CONCLUSIONS

The overall results show that 1 year after NHI implementation, the public insurance shows a lower degree of inequality compared to the private one. This has made public insurance a pro-poor instrument for health equality, but contribution of outpatient care as a possible source of inequality in public insurance should be regulated by the government.

The decomposition result from the healthcare provider shows that public healthcare centres are more pro-poor when treating via public insurance. This result supports the preference of the poor that they would rather choose public healthcare centres over a private one. Since the magnitude of "pro-poor" is still low, there is still some room for public healthcare centres to improve the service to public insurance holders.

Although there is still some room for improvement, if these results already show that public insurance are implemented as intended, and showing a good promise. These results need to be monitored after full universal coverage takes place to prepare for any changes in future condition.

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Analysis of Economic Losses to Patent Medicine that Stagnant in Surabaya, Indonesia

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Keywords: Patent medicine, Stagnant, Losses, Hospital, Cost.

Abstract: Ineffective and inefficient drug management can result in the stagnation of hospital supplies and can bring about negative consequences, one of which is economic losses. Patent medicine is one type of drug used in drug services for general patients at the Islamic Hospital of Surabaya. The stagnation of patent medicine at Pharmacy Unit Islamic Hospital of Surabaya was at 26.42% in October 2016 to March 2017. The objective of this research study is to analyse the amount of economic losses due to the stagnation of patent medicine at the Islamic Hospital of Surabaya. This was a descriptive observational research study and used a cross-sectional design. The study was conducted on 299 patent medicines at Islamic Hospital of Surabaya. The results showed there were some effects of stagnation including increased holding costs, embedded capital, loss of ordering costs, increased risk of damage and expiration, as well as increasing extermination costs. The total economic losses due to patent medicines that stagnated in October 2016 to March 2017 amounting to IDR 41.276.489 (1 USD = IDR 13.513). The conclusion showed that the drug management system is still ineffective and inefficient, so that it can causes losses. The recommendation that can be given is to improve the hospital's management information and drug management system.

1 INTRODUCTION

Problems that appear in the steps of pharmacy supplies management can be caused by ineffective and inefficient drug usage in the hospital. One of problems that can appear in the hospital drug management is the occurrence of stagnation to do with the pharmacy supplies. Stagnation is the condition when the amount of drug stock at the end of month is more than 3 times the average drug consumption in every month (Muzakkin, 2008). The occurrence of drug stagnation in a hospital can cause economic losses in the hospital including purchasing costs, ordering costs, and holding costs on the drug that has stagnated (Muzakkin, 2008).

Hospitals are health care institutions that have organised medical and other professional staff, and inpatient facilities, and deliver 24 hours per day, 7 days per week. They offer a varied range of acute, convalescent and terminal care using diagnostic and curative services (WHO, 2016).

The Islamic Hospital of Surabaya is the private hospital type C with the number of bed amounting to 111 beds. The Islamic Hospital of Surabaya uses 2

types of medicines in their services; patent medicine and generic medicine. Patent medicine is used in general patient care (30%) and 70% of BPJS patients are in for generic medicine in an inpatient capacity as well as outpatient services. The amount of prescriptions written during 2016 at the Islamic Hospital of Surabaya was 59,208 scripts for patent medicine. The patent medicine that stagnated on June – October 2016 was 20.52% with an average of 56 drugs stagnating every month. There was an average of 79 drugs stagnant every month. Most of the patent medicines that stagnate are drugs that are in category C or are slow moving. The average of slow moving drugs that stagnate stands at 50 drugs every month.

Drug supplies that stagnate and stock out will affect the budgeting of the hospital because it can cause consequences and losses for the hospital. Drugs that stagnate and stock out will cause costs to arise from that specific condition (Mellen & Pudjirahardjo, 2013).

The presence of an amount of patent medicine that stagnates indicates that the patent medicines in the Islamic Hospital of Surabaya requires a more

effective and efficient management of the supplies of patent medicines in order to avoid stagnant drugs which may result in losses for the hospital, specially economic losses. Based on the explanation above, there is a need to analyse the economic losses caused by patent medicines that stagnate. The objective of this research study is to analyse the economic losses that are caused by patent medicines that stagnate and provide recommendations to improve drug management in the Islamic Hospital of Surabaya.

2 METHODS

This was an observational descriptive research study that used a cross sectional design. This study was conducted on the 299 patent medicines in the Pharmacy Unit of the Islamic Hospital of Surabaya. This research was conducted by way of the observation of the 299 patent medicines in the pharmacy storage without intervention and by way of interviews with the informants on the condition of the patent medicines in the Pharmacy Unit of the Islamic Hospital of Surabaya. The informant in the interview about the patent medicine condition was the Head of the Pharmacy Unit of the Islamic Hospital of Surabaya. The analysis was done by data collecting the patent medicines stock and calculating using the inventory formula.

3 RESULTS

The results showed that the patent medicines that stagnate are 166 items of drugs out of the whole 299 items of drug amounting to 76.254 drugs from October 2016 to March 2017 at the Islamic Hospital of Surabaya. The losses to be borne by the Islamic Hospital of Surabaya due to patent medicines that stagnate include the holding costs of the patent medicines and the ordering costs of the patent medicines.

1. Holding Costs of Patent Medicines

The holding costs that should be borne by the Islamic Hospital of Surabaya caused by patent medicines that stagnate include embedded capital costs, electricity costs AC, and the running of the pharmacy refrigerator, as well as any expired costs.

Table 1: Holding Cost due to Patent Medicine That Stagnate

| No | Holding Cost | Amount of Losses (IDR) (1 USD = IDR 13.513) | |
|----|---------------------------------|--|------------|
| 1 | Embedded Capital Costs | | 39.495.525 |
| 2 | Electricity Costs | | 821.209 |
| | - Cost of Lamp | 26.525 | |
| | - Cost of AC | 414.457 | |
| | - Cost of Pharmacy Refrigerator | 380.226 | |
| 3 | Expired Costs. | | 935.439 |
| | Total | | 41.252.173 |

The total holding cost that should be borne by Islamic Hospital of Surabaya on October 2016 to March 2017 due to patent medicines that went stagnant amounts to IDR 41.252.173.

2. Ordering Cost of Patent Medicines

The ordering cost of patent medicines that have gone stagnant has been calculated by the administration, with the costs including ordering paper costs and stamp costs, and phone charges. In relation to the patent medicines that stagnate, out of the 199 items, there are 94 items that were ordered amounting to 92.736 drugs in total. The administration cost that was required to do the ordering of the 92.736 drugs amounted to IDR 21.683. The ordering of medicines at the Islamic Hospital of Surabaya is done in two ways: 80% of patent medicines are ordered through routine distributors and 20% are ordered by phone, so the phone charges that were used were only calculated from 20% of the patent medicines that were stagnant. The phone charges amounted to IDR 2.631. The total of the ordering costs that should be borne by the Islamic Hospital of Surabaya on October 2016 – March 2017 due to patent medicines that stagnated amounts to IDR 24.315.

The total of the losses that was caused by patent medicines that stagnated has been calculated by adding up the holding cost with the ordering cost.

Table 2: Total Losses Due To Patent Medicines That Stagnate

| No | Losses Caused by Patent Medicines that Stagnant | Amount of Losses (IDR) (1 USD = IDR 13.513) |
|----|---|--|
| 1 | Holding Cost | 41.252.173 |
| 2 | Ordering Cost | 24.315 |
| | Total | 41.276.489 |

4 DISCUSSIONS

The presence of drug supplies that stagnate in the hospital has caused losses for the hospital that relates to purchasing costs, ordering costs and holding cost (Hadidah, 2016). Drug supplies that stagnate can also cause costs for the hospital due to patent medicines that have been damaged in storage. Other than that, drugs can also expire because of being kept too long in storage. Drug supplies that stagnate and have become damaged and expired also cause the cost of drug elimination in the hospital.

The management system is said to be ineffective if the drugs often have stock out and stagnate. The more often and the longer a service unit has stock out and stagnation, the more ineffective its management (Quick, 1997). Excessive investment in the pharmacy will increase the holding cost which may also increase the opportunity cost (Rangkuti, 2004). The holding cost increases because the drugs that should be sold are still in pharmacy storage. The holding cost of the patent medicines that stagnate is obtained from the embedded capital cost of the drugs that should be sold, and the electricity cost that should be incurred.

Pharmacy supplies which have been in storage too long will increase the risk of the drug being damaged and expiring. Patent medicines that stagnated and were in the storage of the Pharmacy Unit of the Islamic Hospital of Surabaya on October 2016 to March 2017 also had expired. The slow moving drugs amounted to 3 items and caused losses because of the drugs not being sold and needing to be eliminated. The losses caused by the patent medicines that stagnate may occur due to the holding cost. Drugs that stagnate also come with an ordering cost (Mellen & Pudjirahardjo, 2016). Patent medicines that stagnated caused losses to do with the ordering costs amounting to IDR 24.315 which was obtained from the administration costs and phone charges. If too many drugs are ordered and less are used, it will cause the drugs to stagnate (Kumalasari, 2016).

Based on the interview with the Head of the Pharmacy Unit of the Islamic Hospital of Surabaya, they know that drug planning is done manually and visually by calculating the amount of drug supplies and not seeing the pattern of drug consumption that cause an occurrence of stagnation by the actions of the officers of the pharmacy unit. The pattern of drug consumption according to the differences in disease trend can cause the occurrence of drug stagnation because the drugs used will be different

every month, and the drug that is required does not always match with the drugs that had been planned before (Ratnasari, 2017). Based on the interview, it has known that there is no specific method used in the controlling of the drugs supplies at the Pharmacy Unit in the Islamic Hospital of Surabaya. Other than that, the Hospital Management Information System (HMIS) at the Islamic Hospital of Surabaya cannot show the data of the drugs thoroughly and they cannot be processed directly in order to see the pattern of drug consumption. Slow access to HMIS in the collection of data will prevent the officers from processing the data to do with the drug supplies and the data of the drugs being used.

Based on the problems that are known to cause the occurrence of drug stagnation, it has been indicated that drug management has not been effective and efficient. Below are the given recommendations for improving drug management:

1. Improving the Hospital Management Information System (HMIS). Improving the HMIS can be done with coordination between the Pharmacy Unit and the HMIS Unit to design the content of the HMIS that will enable the officers to access the data of the drug supplies easily and automatically. The whole data can then be accessed quickly and accurately at any time required. Other than that, it is possible to design an analysis to display drug use trends. The advantage of improving HMIS is the easy access to the data of the drug supplies completely and thoroughly which will facilitate the officers in the analysis of the drug used. The disadvantages are that the process of the re-design difficult and expensive.
2. Make reporting the drugs used adjusted to the trend of the disease, so then it can be known that the drug priority is different in every month to adjust from the precious trend of the disease. The analysis of the trend of the disease and the drugs used is also done with coordination between the pharmacy and the doctor.
3. Improving drug planning by considering the drugs used or drug consumption that is adjusted with the trend of the diseases at the Islamic Hospital of Surabaya. In accordance with the previous research on the Islamic Hospital of Surabaya, one of the planning methods that can be done is by using the Minimum - Maximum Stock Level (MMSL) method. The MMSL method is a method for scheduled purchasing with an interval ordering setting. In this method, each item of drug in the maximum-minimum stock level is determined to be sufficient and not

excessive. The ordering is done when the drugs have reached the prescribed minimum level for ordering until the drug reaches the maximum label again.

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5 CONCLUSIONS

The occurrence of patent medicines that stagnate indicates that drug management has not been done effectively and efficiently. The consequences that can occur at the Islamic Hospital of Surabaya includes increasing the drug holding cost, embedded capital on the drug that has stagnated, losses on the ordering costs, increasing the risk of the drug being damaged, the risk of the drug becoming expired and increasing the drug examinations. The losses that should be borne by the Islamic Hospital of Surabaya amount to IDR 41.276.489. The recommendation that can be given to avoid the occurrence of drug stagnation is improving the Hospital Management Information System (HMIS), to make reporting the drugs used according to the trend of diseases easier, and improving the drug planning system with specific methods.

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Comparing National Health Financing Strategies Amidst Increasing Mobility Within ASEAN: Lessons from the Philippines and Indonesia

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Abstract: Health needs within the Association of Southeast Asian Nations (ASEAN) are expected to become more mobile as a result of regional integration, thus highlighting the need for a regional consensus on providing health services to migrants, the need to equip health systems, and the need to harmonize national health financing strategies. We propose that this harmonization can be facilitated by a contextual comparison of national health financing strategies, guided by the framework promoted by the World Health Organization. Using an analysis matrix that synthesized insights generated from literature, we compared the health financing strategies of the Philippines and Indonesia, two countries with important political and socioeconomic similarities. Results show that the strategies are predominantly inward-looking, which focus more on providing various levels of health coverage depending on socioeconomic status and employment, while lacking mechanisms and a program framework to cover migrants. Thus, while considering the diversity of government structures and health system capacities within the region, there is a need to develop a common framework for universal health coverage for migrants, which has to be included in national health financing strategies within ASEAN.

1 INTRODUCTION

Mobility across the members of the Association of Southeast Asian Nations (ASEAN), specifically the free movement of migrant workers and people engaged in business, is now at its highest and is expected to rise further. In 2015, the number of international migrant workers coming from within the region amounted to 6.78 million, an increase from 6.5 million documented in 2013 (ILO, 2015). This development may be attributed to policy reforms liberalizing and harmonizing the conduct of business, trade, education, and employment in the region, amidst efforts among the ASEAN countries towards economic integration (ASEAN, 2016a).

Accompanying this development is the need to plan for emerging health concerns, and achieve universal health care (UHC), a goal that is consistent with a strategic measure to “promote strong health

insurance systems in the region (ASEAN, 2016b).” In view of the regional goal to facilitate mobility, this goal implies that ASEAN citizens can freely move between the member countries with assurance that their health needs are covered anywhere within ASEAN. Confirming this implied vision is the ASEAN Socio-Cultural Community Blueprint, which highlights regional strategies for socioeconomic development, and specifically mentions the need to “provide guidelines for quality care and support” for migrants (ASEAN, 2016b). Difficulty in developing such guidelines is expected, however, in view of the diversity existing among the ASEAN countries in terms of economic development, healthcare situation, and existing welfare systems for migrants as shown in Table 1, thus complicating regional efforts.

Table 1: Socioeconomic and health indicators of ASEAN member countries (Minh et al., 2014; ILO, 2015)

| | Population (000s), 2015 | Gross National Income per capita, 2016* | Total government expenditure on health as % of general government expenditure, 2015 | Out-of-pocket as % total expenditure on health, 2014 [^] |
|-------------|----------------------------|---|---|---|
| Brunei | 423 | 38 520 | 6.5 | 6.0 |
| Cambodia | 15 578 | 1 140 | 6.1 | 74.2 |
| Indonesia | 257 564 | 3 400 | 5.7 | 46.9 |
| Lao PDR | 6 802 | 2 150 | 3.4 | 39.0 |
| Malaysia | 30 331 | 9 850 | 6.4 | 35.3 |
| Myanmar | 53 897 | 1 190 | 3.6 | 50.7 |
| Philippines | 100 699 | 3 580 | 10.0 | 53.7 |
| Singapore | 5 604 | 51 880 | 14.1 | 54.8 |
| Thailand | 67 959 | 5 640 | 13.3 | 11.9 |
| Vietnam | 93 448 | 2 050 | 14.2 | 36.8 |

*Determined through Atlas method, World Bank

At the national level, plans for funding UHC are supposedly included in national health financing strategies, which are documents that propose policy directions and plans towards financing the health needs of the population while preventing widespread catastrophic health spending (Kutzin et al., 2017). In keeping with the regional thrust to “provide guidelines for quality care and support” for migrants, ideally, national health financing strategies should pave the way for providing health coverage for outbound citizens in other ASEAN countries, as well as addressing the health needs of incoming ASEAN citizens. Since priority for addressing the health needs of specific segments of the population is most clearly manifested by how these are considered in health policies, analyzing the national health financing strategies of individual ASEAN countries can provide valuable insights on socioeconomic and political contexts that affect the level of commitment of each member country to a common UHC regional framework, and thus facilitate consensus building and implementation. However, in view of challenges present in the region, among them the wide disparity of socioeconomic status and the state of health care services, this therefore leads to a hypothesis that policies governing health needs of migrants within the region only offer a semblance of protection within the jurisdiction of the home country, without considering the possibility of a region-wide scope of health coverage.

With the aim to gather evidence on whether national health financing strategies envisioned region-wide coverage for migrants within the ASEAN region in keeping with the shared goals of “promoting strong health insurance systems in the region,” and “providing care and support for

migrants,” this study therefore compared the national health financing strategies of two ASEAN countries, the Philippines and Indonesia. These countries are the primary sources of migrants within the region, with the aim to identify aspects that can facilitate the implementation of a regional UHC framework for the benefit of migrant workers and persons engaged in business and trade. This study also reviewed published studies and grey literature documenting current efforts towards a regional UHC in both countries and in the region.

2 METHODS

In comparing the two countries, we retrieved the national health financing strategy documents published by the Philippine Department of Health (DOH) and the Government of Indonesia, and used the guide for developing national health financing strategies endorsed by the World Health Organization (WHO) as analytical framework, from which a comparison matrix was developed. The WHO guide focused on the following aspects: 1) strategic interventions, which included revenue raising, pooling revenues, purchasing services, benefit design, rationing and entitlement basis, and alignment issues; and 2) governance-related concerns, which included implementation arrangements, evaluation and monitoring plans and capacity building (Kutzin et al., 2017). Special attention was given to any provision that intended to cover migrants and other outbound citizens. Meanwhile, using PubMed and Google Scholar, we searched the literature for any supporting studies on the efforts of both countries in providing health

coverage to their outbound citizens, as well as similar efforts in other countries within the region. For the purposes of this review, only English documents were analyzed.

3 RESULTS

Generally, official documents, published data and supporting literature showed that the national health financing strategies of both countries confirmed the hypothesis that policies for health insurance among migrants are predominantly inward-looking, in that the strategies focus on expanding coverage for the

uninsured, providing benefits for dependents of migrants, and improving the system of reimbursements and the implementation of benefit packages and case rates. These efforts have been spearheaded by the Philippine Health Insurance Corporation (Philhealth) and the *Badan Penyelenggara Jaminan Sosial* (BPJS Kesehatan), which manages the *Jaminan Kesehatan Nasional* (JKN, National Health Insurance). Membership categories exist in both countries as shown in Table 2. This is in addition to the various private health maintenance organizations (HMOs) in both countries that offer health services in private facilities.

Table 2: Public health insurance membership categories in the Philippines and Indonesia (DOH, 2010; JLN, 2017; Pisani, Kok and Nugroho, 2017)

| Membership category | Eligibility criteria | Contribution | Benefits | Providers |
|--|---|---|--|--|
| <i>Philippines</i> | | | | |
| Formal sector (casual and contractual) | Civil servants, private employees, military and police | Payroll contributions | Outpatient and maternal care benefit packages (availed primarily in accredited facilities) Inpatient case rates | Philhealth-accredited public and private facilities |
| Overseas Filipino workers | Registered migrant workers | Fixed premium | | |
| Informal sector | Informal workers, independent professionals, foreign citizens | Voluntary payment of fixed premium | | |
| Indigents (sponsored program) | Certified poor households based on social welfare data | Shared subsidy between local government unit and national government | | |
| <i>Indonesia</i> | | | | |
| Employees: government/ private sector | Civil servants, entrepreneurs, military, police | Salary deduction. Government employees: 3% paid by employer, 2% by employee Private sector: 4% paid by employer, 0.5% by employee | Comprehensive coverage of outpatient and inpatient services | Public and selected private facilities. Options vary according to premium paid |
| Self-employed members | Non-poor self-employed | Monthly premium paid by members Class 1: IDR 25 500 Class 2: IDR 51 500 Class 3: IDR 80 000 | | |
| Subsidized members | Poor and near-poor classified by Ministry of Social Affairs | Fully subsidized by national government | | Public/select private facilities |

An important difference between the two countries is how the Philippine national health financing strategy document specifically mentions the importance of covering the migrant worker

population, and how the DOH acknowledges the need to expand benefits afforded them. Meanwhile, roadmap documents produced by the Government of Indonesia in partnership with third-party

development agencies show that while there is an effort in including the Ministry of Manpower and Transmigration in consultation meetings, there is no directly stated goal or aspiration to cover for the health needs of migrants (JLN, 2017). Thus, for the purposes of this study, information on covering Indonesian migrants was retrieved from other published studies.

In both countries, revenue raising has been carried out through collection of premiums, either deducted from regular salaries or voluntarily contributed, depending on status of employment. In all these efforts, migrants have been included through compulsory premium payments, as in the case of the Philhealth Overseas Filipino Program and the Indonesian Migrant Worker Insurance Program (Guinto et al., 2015). Moreover, risk pooling, which affects revenue raising and the ability of the health insurance system to purchase health services, is affected by the fragmentation of revenue schemes in the two countries, but strategies have been proposed in both countries to consolidate these schemes into a unified health insurance fund, thus reducing fragmentation (DOH, 2010; Pisani, Kok and Nugroho, 2017).

Additionally, in the Philippines, entitlements have been limited in a way that prevents the depletion of pooled funds, thus leading to the development of benefit packages. Unfortunately, such limitations have led to insufficient payment for health services rendered, thus requiring out-of-pocket payment to cover for the remaining cost. This is in contrast to a comprehensive coverage being offered in Indonesia, but provided in specific facilities depending on the amount of premium paid. In the case of migrant workers from the Philippines, while Philhealth provides a mechanism for revenue collection and health insurance coverage for dependents remaining in the country and even an expense reimbursement system for overseas health facilities, its coverage is mostly insufficient, thus pushing affected migrants towards catastrophic health spending, repatriation, and eventual impoverishment (DOH, 2010). Amidst these emerging problems, the governments of both countries have entered into agreements with selected destination countries to ensure that the health needs of migrant workers are addressed (Guinto et al., 2015).

In summary, a system for overseas health expense reimbursement exists for Philippine migrant workers enrolled in the national health insurance program while a similar program is being developed in Indonesia, but the reality of insufficient

reimbursements highlights the need for a more effective health financing framework that is also funded sustainably and sufficiently.

4 DISCUSSION

Though limited by a lack of economic evaluation and modeling, which may be the topic of a future study, the study nonetheless presents two lessons for discussion: 1) that the development of an effective and sustainable regional UHC framework needs to consider how it should equitably cover all citizens, regardless of the economic status of their countries of origin; and 2) that such a framework may follow various health financing schemes adopted by similar international and regional organizations. These lessons lead to a common message: the need to develop a common framework to be integrated in national health financing strategies.

Designing a regional framework that covers both industrialized and economically disadvantaged countries must innovate ways to collect sufficient revenue, create an equitable risk pool, and purchase health services sufficiently, all while transcending national boundaries. This leads to asking the classic question on what kind of health financing system should be adopted at the regional level: a “socialized medicine” approach (Beveridge model) financed through tax payments; a health insurance scheme funded through salary deductions (Bismarck model); or the National Health Insurance (NHI) model, which combines elements of the two aforementioned models by instituting a single payer mechanism funded either by taxes or premiums (Wallace. As a supranational entity, the ASEAN does not have any authority to collect taxes, thus significantly limiting the prospects of a socialized regional health care financing system.

Another possibility is adopting models utilized by international organizations for field employees. Particularly, the United Nations offers its employees a medical insurance plan implemented by a private HMO through its network of accredited health care facilities (United Nations, 2017). The ASEAN Economic Community Blueprint seems to support this direction as it advocated the involvement of the private healthcare sector in efforts towards UHC and the brokering of public-private partnerships for health (ASEAN, 2016a).

Meanwhile, the European Union (EU), whose model of economic integration serves as a pattern for ASEAN, has developed a human rights-based regional health services framework for migrants,

guided by principles of “availability, accessibility, acceptability and quality,” through the health-related provisions of the 2007 Lisbon Treaty and the EU Consolidated Treaty. These provisions encouraged EU states to implement policies that are in keeping with their respective interpretations of the rights enshrined in the aforementioned treaties, while preserving “complementarity of health services in cross-border areas.” While these rights are upheld in laws in both countries that implement health insurance systems (DOH, 2010), at the regional level, the ASEAN itself has developed a strategic framework on health development where the health of migrants was stated as a priority, though regrettably this has not been translated to policy reforms in all of the ASEAN countries (ASEAN, 2016a; Guinto et al., 2015; Government of Indonesia, 2017; Fernando, 2011).

Given these considerations, it may thus be appropriate that an insurance scheme similar to the National Health Insurance model be considered as a platform for complementarity between the health systems of ASEAN countries, while agreeing on a rights-based framework. The possibility of rolling out a similar regional scheme may only be realized through harmonized policy interventions that may either establish a new system specifically for ASEAN citizens, or integrate flexibly within the existing system of the country of destination (Nodzanski, Phua and Bacolod, 2016).

5 CONCLUSION

Therefore, considering the significant percentage of migrant workers in ASEAN and the importance of health coverage in ensuring sustainable economic productivity, it is in the best interest of the region if a regional UHC framework can be developed and adopted, informed by a balance of economic evaluation, consideration of how health financing functions can be optimally implemented, and utmost regard for human rights. Because these considerations require substantial political will in each of the ASEAN countries, these factors must be made part of national-level policy discussions, integrated in national health financing strategies for further consideration of national level policy makers, and included in the agenda for ministerial meetings and in declarations being adopted in the ASEAN.

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The Commitment of Government in Tobacco Control: Content-Comparison Analysis on Policy Documents

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Abstract: Tobacco is a threat to Indonesian Health Coverage. In 2013, up to IDR 5 trillion has been spent due to treating tobacco-related diseases, with approximately IDR 234.5 trillion potential loss on income due reduced productivity. Framework Convention on Tobacco control (FCTC) came as an answer to tackle this problem globally. Unfortunately, Indonesia hasn't signed its FCTC yet, unlike its peers from South-east Asia. Philippine, as a country with same geographical and custom as Indonesia, has already signed and benefit from it. In order to gain insight on the commitment and its after-effects, we conducted comparative content analysis on 37 legal documents from both countries related to tobacco control. The result is quite shocking. From 16 category of public spaces identified, Philippine bans 69% of them from cigarette smoke, while Indonesia only restrict it. On the advertising sector, while Philippine has banned domestic media (TV and radio) from tobacco adv., Indonesia only restrict its permit. Commitment from regulator is needed especially for aforementioned sectors to ensure better tobacco control. While in the other hand, such findings can also be a strong reason for Indonesia to sign FCTC as soon as possible.

1 INTRODUCTION

Tobacco has been the highlight of Indonesian fight against premature death. Tobacco has killed approximately 521 people each day globally, while caused up to 962.403 deaths in 2013 alone. (Assunta & Dorotheo, 2015; Murray et al, 2015) Most of the death caused by tobacco consumption is not only due to non-communicable diseases, but also infectious diseases. Stroke, tuberculosis, cancer, and ischemic heart, and respiratory infection build up to 21% cases directly linked to tobacco death; all of which stands in top 10 cause of mortality in Indonesia. Based on recent studies, smokers are more likely to get coronary heart diseases up to 2 to 4 times, stroke up to 2 to 4 times, and 25 times also more likely to develop lung cancer (WHO, 2008)). Not only death, tobacco consumption in the long run might also cause loss of productivity. On average, smokers may lose up to a decade life-span as compared to non-smoker (Murray et al, 2015).

Despite the awareness of danger that has been elicited in tobacco consumption, the demand of smoking is still rising. Globally, the number of daily smokers has increased from 721 million in 1980 to

967 million in 2012 (Murray et al, 2015). In Indonesia, smokers results in amount of 29.3% of total population (Badan Penelitian dan Pengembangan Kesehatan, 2013). This number of increasing demand needs to be controlled, and it is the duty of government to serve this purpose.

There is a strong willing and commitment of stakeholder all over the world in order to tackle the poor regulation of tobacco, in response to increasing number of cigarette smoking. WHO Framework on Tobacco Control (FCTC) is an example of a world-wide commitment of such efforts. Up until now, there has been 168 countries have signed the treaty, with several is still in ratification progress; of which displays the commitment being taken in control of tobacco on behalf of the country. Not only it displays commitment, but ratification of FCTC has improved the health status of each country directly. In Africa, 43 countries have signed the FCTC up to date. Now almost all countries in the region have national tobacco control focal points, and 41 of them currently have national tobacco control as their national program (WHO Regional Office for Africa, 2015).

FCTC ratification as reflection of commitment by nations to regulate tobacco use is not without impact. Its measure have been projected anywhere around the world. Health warning in cigarette package, for example, as projected as tobacco demand control by FCTC, has gained positive impacts. After being implemented, pictorial health warning has influence interests from people to quit smoking, particularly in developing countries (Baška et al, 2009).

Indonesia is currently fighting for its own regulation freedom for tobacco. The constituent law, reflected by legislatives decision, has accommodated the tobacco control program in the nation, either to control the supply of tobacco products or to control the demands from arising. However, In Indonesia, there has also been challenge and barrier in implementing this regulation. For example, in national level, back in 2001, there has been a petition addressed by Indonesian domestic tobacco industry association that argued articles 113, 114, and 199 health law of 36 in 2009 will cause decrease in production. In the regional level, for example, Jakarta as capital has been strong in enforcing law regarding protection tobacco second-hand smoker. In 2012, a case was handled enforcing smoke-free room law to be applied in all mall in Jakarta.

Despite the efforts, globally, Indonesia is still lacking if compared with other nations. Indonesia is currently the only country yet to sign Framework Convention on Tobacco Control (FCTC) among countries within the ASEAN, which contribute to the delay of speeding control policy of tobacco. Smoke free room, for example, although it is not prohibited in national level, it is already enforce in subnational level. In addition, the taxation structure of tobacco, which is not uniform across tobacco products, hinder taxation process and contribute to low income from tobacco tax.

Indonesia and Philippines, given the same geographical landmark (archipelagic) and population density, share almost the same struggles regarding tobacco control. Whilst being densely populated (Indonesia 3rd most populous and Philippines 12th most in the world), Indonesia has same trend with Philippines in terms of tobacco cigarette consumption. Philippine is regarded as one of the nation with highest level of cigarette consumption among ASEAN, same with Indonesia. Indonesia has 36% of total adult population who is currently smoking; while Philippine adult population shares total prevalent of 28.3% (MOH, 2013; Bellew et al, 2015). Although, the ratification by in Philippine in 2005 made difference between both countries in terms of political commitment.

Policy papers published by the government will provide insight on government's commitment

towards the issue. Based on the differences on the current status on FCTC, it is expected that Philippines has been taking several steps ahead in terms of implementing tobacco strict regulation. Moreover, it is expected from the study that legislative papers by both countries may give landmarks of political decision regarding tobacco control between two countries. In addition, by looking at the content of both, insight of the governments as well as its directions can be assessed.

2 METHOD

We examine 36 circulating legislative articles regarding tobacco regulation and conduct content comparative analysis throughout documents. The content of the paper was analysed, and compared in descriptive manner in given matrix. There are aspects assessed based on content on both papers, referring to requirements that is stated in FCTC, of which divided into regulating both demand and supply side, as well as protection of health (World Health Organization, 2005). The beginning analyse aspects such as characteristic of the paper and target population the document is aimed to. The main content of papers from both countries was analysed and compared referring to Article 6 to 14 in the FCTC. There are two distinct variables, such as: 1) smoke free are status, and 2) tobacco advertisement, promo and sponsor rule of conduct in both countries. Main contents were distinguished in qualitative manner, and compared in matrix for highlighting differences which accounts to the discussion.

Secondary data backup were also considered upon creating the study. Data was gathered from *Campaign for Tobacco-Free Kids* (CTFK) database which enables extraction on policy content regarding tobacco regulation across Asia. Permission was granted from the officials to use such data for the sake of study completion.

The ethical consideration was taken upon completion of study. All data was described and compared using Microsoft Excel®.

3 RESULT

Generally, as seen in Figure 1, documents observed from both two countries are mostly composed of legislative papers. Meanwhile, Philippine has one recommendation guideline that is established as part

of policy paper regarding tobacco control, mainly in safeguarding negotiation with tobacco control. Meanwhile, Indonesia has regulated a standard of procedure that is currently circulating mainly in regulating nicotine containment test.

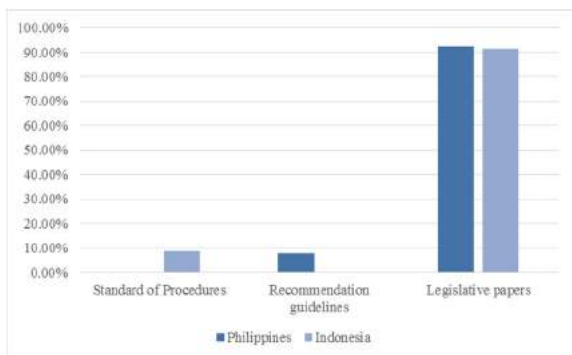


Figure 1: Characteristics of analysed papers

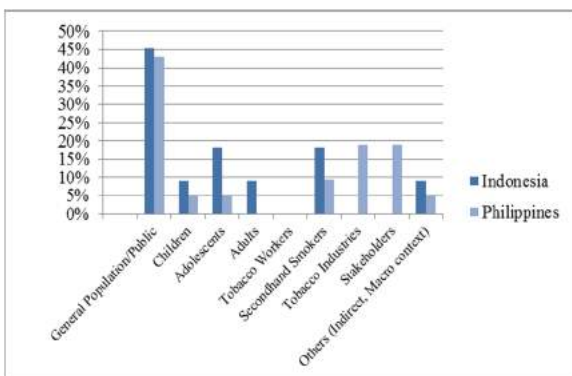


Figure 2: Target group of policy documents

Figure 2 shows the target population of each rule of conduct is aimed to. Policies regarding tobacco regulation are mostly directed towards general population as a whole. However, there is a slight variation on target of policy based on legislative documents between two countries. While exceeding in amount, Philippines published regulations towards tobacco industries not only towards protection of public and, but also to tobacco industries and stakeholders.

Table 1: Smoke Free Status of Philippine and Indonesia

| No | Smoke Free Status | I D | P H |
|----|----------------------|--------|--------|
| 1 | Indoor Workplace | R | R |
| 2 | Indoor Public Places | R | R |
| 3 | Public Transport | | |
| | Taxis | R | SF |

| | | | |
|----|---|---|----|
| | Bus & Trains | R | SF |
| | Public Transport facilities (terminal, Station) | R | SF |
| 4 | Govt. Facilities | R | SF |
| 5 | Hospitals | R | SF |
| 6 | Healthcare Facilities | | |
| | Public Areas | R | SF |
| | Patient Rooms | R | SF |
| | Non-residential | R | SF |
| 9 | Schools & Universities | | |
| | Preschools | R | SF |
| | Primary & Secondary | R | SF |
| | Universities | R | SF |
| 10 | Dine Places | | |
| | Restaurants | R | R |
| | Bars/Pubs | R | R |
| | Casinos | R | R |

Abbreviations: SF = Smoke Free; R = Restricted; U = Uncertain; ID = Indonesia, PH = Philippines

Table 1 depicts the undergoing regulation for both countries in terms of smoke free area status. Public protection from cigarette smoking is priority decision in order to prevent afterward health effects. Smoke free area is regarded as highlight of smoke protection policy in regional level.

Between two countries, there is a significant difference in terms of enforcement on smoking ban in certain public places. Philippines has enforced ban on certain public places, while Indonesia have not banned cigarette in several area that is deemed for public. Most of this area, according to FCTC Art 8, should be smoke free (World Health Organization, 2005). While Philippine has made public transport and government facilities totally smoke free, Indonesia only restricts its use. Indonesia also hasn't made health facilities and school totally smoke free, although prohibition is already enforced to both facilities. Based on analysis of both countries' policy papers, we believe also Indonesia, while has restricted tobacco use, has not made vital public places to be 100% smoke free.

While some may see restriction as national prohibition, some sub-national laws may not agree; thus highlight the difference between terms restricted and smoke-free. While smoke free allows all level of law to prohibit and enforce law to cigarette smoking, restrictions may vary especially in sub-nationals, e.g. districts and regional law.

Table 2: Comparison in Advertisement, Promotion, and Sponsor

| No | Forms of APS | ID | PH |
|----|--|----|----|
| 1 | Domestic TV and radio | R | B |
| 2 | Domestic newspaper and magazines | R | B |
| 3 | Printed domestic media | R | B |
| 4 | International tv and radio | U | U |
| 5 | International news and magazines | U | U |
| 6 | Internet communications | R | B |
| 7 | Internet tobacco product sales | R | R |
| 8 | Outdoor advertising (e.g. Billboards, posters) | R | B |
| 9 | Point of sale advertising/promotion | A | A |
| 10 | Point of sale product display | A | A |
| 11 | Vending machines | B | R |
| 12 | Conventional mail | A | R |
| 13 | Telephone and cellular mail | A | R |
| 14 | Brand marking on physical structure | R | R |
| 15 | Tobacco packaging | R | A |
| 16 | Free distributions of tobacco products | B | R |
| 17 | Promotions with a tobacco product purchase | B | R |
| 18 | Competitions associated with tobacco products | A | R |
| 19 | Direct person to person targeting with individuals | A | R |
| 20 | Brand stretching/trademark diversification | B | R |
| 21 | Reverse brand stretching or brand sharing | A | A |
| 22 | Toys that resemble tobacco product | R | A |
| 23 | Candies that resemble tobacco product | R | A |
| 24 | Retailer incentive programs | A | A |
| 25 | Paid placement of tobacco products in TV, film, or other media | B | B |
| 26 | Unpaid depiction of tobacco use or products in media | R | R |
| 27 | Tobacco industry sponsorship of events activities, individuals, organizations or governments | R | R |
| 28 | Publicity or financial sponsorship by tobacco industry | R | R |
| 29 | Promotion by any means that are false, misleading, or deceptive | R | A |

Abbreviations: SF = Smoke Free; R = Restricted; U = Uncertain; ID = Indonesia, PH = Philippines

From the table 2, we can see some differences between two nations mainly in terms of promotion and advertisements. While Indonesia only restrict domestic advertisements (TV, radio, magazines), Philippines already banned domestic commercials regarding to tobacco. In addition, Philippines also banned internet use of tobacco promotion, as well as outdoor advertising; while Indonesia limits it.

In several aspects, Indonesia has exceeded Philippines regarding advertisements and sponsor. Indonesia has already fully-banned free distribution of tobacco products, especially for promotional purpose; while Philippines only restrict it. In terms the availability of tobacco product vending machine, while Philippines still limits its availability, Indonesia has already erased its practice. Moreover, compared to Philippines, Indonesia has been firm in restricting the packaging of tobacco products, while there is no such regulations act on Philippines.

In terms of pictorial health warnings, there are only slight differences. Both countries have committed mainly in giving warnings in packaging as well as advertisements. In general, Philippines allow larger picture in their package (50% proportions of package) rather than Indonesia (40% proportions of package).

4 DISCUSSION

FCTC lays a perspective of policy commitment towards tobacco control, and usually is shown effective after it has been ratified. While Indonesia hasn't agreed on the matter, evidence shows that Indonesia has been catching up its national law in implementing such measure. The differences need to be seen directly from policy of both countries. In addition, although the variables of control in FCTC use measures of MPOWER as their indicator of control, it is not valid in Indonesia since it is not yet able to stand in positive side of FCTC.

Several differences arise when Indonesia is being compared to countries with similar background. Take example, Philippines. Given the matching background of population, also the prevalence of the smoker to the number of population, the country gives as great example. Moreover, the Philippines' archipelagic nature makes the nation also fights the same setback as Indonesia does.

One of the examples is regarding the differences of enforcement in smoke free-area. It is evident from the study observation that Indonesia has lower commitment in enforcing law in smoke-free area. This has been contradictory in every developing country. Nepal, for example, has been providing this law since 2007 (Sussman et al, 2007). Philippines, as a comparison in the study, also have implemented the same measure.

Enforcing smoke-free law area, while it has been effective, it also correlates with good implementation measures within one country. The

implementation strategy is up to the country, such as by collaborating with local law forces and other related bodies in enforcing punishment to those who disobey (Goel et al, 2014). The implementation of such policy is proven to decrease comorbidities caused by cigarette in a long period (Lee et al, 2011). This can be an evidence for Indonesia to implement total smoke-free law. Although the national commitment is absent, the subnational law is currently underway. One of the examples is the Jakarta provincial decree of smoke-free law. Subnational and local regulation can be strengthened in spite of the absence of national consensus.

Meanwhile, pictorial health warnings shows almost no differences. This shows both countries had taken similar efforts despite the difference in FCTC ratification status. However, there are one difference, that is the size of warning in cigarette pack. It is evident that pictorial health warning can modify the behavior of the smoker, and that pictorial warning lays more effective result in terms of making smokers think about quitting (Fathelrahman et al, 2010; Hammond, 2011; White et al, 2008). Therefore, Indonesia may benefit from adopting same regulation in pictorial health warnings.

In terms of advertisement of tobacco related product, being compared to Philippines, Indonesia still is permitting advertisements both in aired and printed media. This has a strong correlation to increased consumption especially in youth (Edwards, 2017). In addition, if we let it, this can harm the country and banning it is proven to lay benefit in the long run (Levy et al, 2008). Strong willing in the body of government, with or without the boost from ratification, is undeniably required.

On the other hand, promotion of tobacco products that is currently allowed in Philippines also needs to be straightened out. This also includes promotions with a tobacco product purchase, and granted availability of tobacco-product vending machines in the countries. This is dangerous especially if directed to high-risk target, such as kids and adolescents. In the other hand, USA and Indonesia, while haven't ratified FCTC and being largest market of tobacco, has banned such promotions (Deyton et al, 2010; Henriksen, 2012).

5 CONCLUSION

Considering the efforts made between two countries in terms of tobacco control, several aspects need to be considered. While FCTC ratification has boosted progress in several aspects in tobacco control,

several aspects has progressed especially when nations have its own national tobacco control unit. In terms of tobacco control, being compared to Philippines, generally Indonesia has a lot to catch up on. In addition, while national consensus awaits, other efforts such as local and subnational law should be undertaken, specifically regarding the smoke free area.

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Relationship between Types of Work with the Use of Health Insurance Cards in Village Area

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Keywords: Antecedent, Job, Utilization, Insurance card, Village.

Abstract: World Health Organization encourages all countries to develop a health insurance for Universal Health Coverage. The fact showed that most people in Wotan Hamlet, Lamongan worked as farmers. They mostly worked until the evening; unfortunately the health facility was closed already by then. Therefore, if one caught an illness, they chose midwives and made payment out-of-pocket. The utilization of insurance card was triggered by an antecedent factor (occupation). This study aimed to examine the relation between occupation and the utilization of insurance card in Wotan Hamlet. This was an analytical research. The cross-sectional design was used in this study. The sample in this study was taken by using simple random sampling for as many as 71 heads of family. Data were collected using a questionnaire which was then analyzed by contingency coefficient. The result of this study showed that the majority occupation of THE insurance card users was farmer (66.7%). The number of people who made use of the card was 12.7% of the population. There was a relation between occupation and insurance card utilization with significance level of 0.022. The utilization of insurance card was influenced by occupation. Additional time of health service through Mobile Community Health Centre was good ways.

1 INTRODUCTION

World Health Organization encourages all countries to develop a health insurance for every citizen of theirs (Universal Health Coverage). Under the health insurance, all citizen within the countries which develop this health insurance are included as the members of the health insurance (Syaputra, 2015). A universal coverage is a health system where each citizen has a fair access to promotive, preventive, curative, and rehabilitative health services, which are of high quality and needed, within affordable range of price (Ministry of Health Republic of Indonesia, 2013).

The Law of the Republic of Indonesia Number 24 Year 2011 on the Social Security Administering Body states that every company is required to register its employees as a member of BPJS while the person or family not working at the company must register themselves and their family members on BPJS and pay the contribution in accordance with the desired level of benefit.

Wotan Hamlet of Slaharwotan Village is one of the hamlets where the residents have not made use of insurance card. This village is a valley area which only has 1 midwife, 1 nurse. The Ngimbang Community Health Centre is five kilometres away. Besides, the transportation available in this village is only motorcycle taxi which is decreasing in number recently. Most of the people in this village work as farmers. Farming activities are always done in the morning, while Health Centre's outpatient services cannot be done in the afternoon. This causes many citizens have to pay straight away or out of pocket to the nearest health services when they are sick. This condition has been declared by one of the staff in Wotan Hamlet Slaharwotan Village Ngimbang Sub-District.

The use of insurance card by the people of Wotan Hamlet Slaharwotan Village can be identified using Antecedent behaviour Consequence behaviour model. Antecedent behaviour Consequence model states that behaviours are triggered by antecedent (something that precedes behaviour and causally

related to it) and followed by consequences (the behaviour result for the individual) which will add or reduce the chance of repetition. The type of occupation is one of the variables included in antecedent factor categories besides age, sex, education degree and salary (Wati, 2015).

This is the background to set off a research on the relation between the type of occupation and the behaviour of insurance card utilization in Wotan Hamlet Slaharwotan Village Ngimbang Sub-District Lamongan Regency.

2 METHODS

The type and design of this research is *observational research*. The characteristic of this research is analytical research. The design of this research is *cross-sectional*. In a cross-sectional research, risk or causal variable and consequence or case that happens to the object of research are measured or collected simultaneously (at the same time).

This research was held from June to August 2016 in Wotan Hamlet Slaharwotan Village Ngimbang Sub-District Lamongan Regency. Slaharwotan is a rural part of Lamongan City, East Java, Indonesia. The population was all the 270 heads of the family in Wotan Hamlet Slaharwotan Village Ngimbang Sub-District Lamongan Regency and the sample was 71 of them.

Sampling technique used was *simple random sampling*. According to Notoatmodjo (2012), sampling technique using *simple random sampling* is divided into two, by drawing the members of population or lottery technique and by using number table or random numbers. However, the sampling technique used in this research was by drawing heads of the family's names in Wotan Hamlet Slaharwotan Village. This research used a questionnaire as the instrument. Data were analyzed using *coefficient contingency*. The signification result of each variable is considered relational if $\alpha \leq 0.05$.

3 RESULT

The occupation of the respondents is their daily job. The measuring result of occupation types was categorized into seven categories; they are army/police officer, civil servant, state-own company employee, private company employee, entrepreneur, farmer and others. The identification result of the respondent's occupation type in Wotan

Hamlet Slaharwotan Village Ngimbang Sub-District Lamongan Regency is shown at table 1

Table 1: The Distribution of Respondent's Occupation Type in Wotan Hamlet Slaharwotan Village Ngimbang Sub-District Lamongan Regency in 2016

| Occupation Type | n (%) |
|--------------------------|-----------|
| Private Company Employee | 7 (9,9) |
| Entrepreneur | 6 (8,5) |
| Farmer | 57 (80,3) |
| Others | 1 (1,4) |
| Total | 71 (100) |

Table 1 shows that the identification result of insurance card utilization behaviour in Wotan Hamlet Slaharwotan Village Ngimbang Sub-District Lamongan Regency is shown at table 2.

Table 2: Identification Result of Insurance Card Utilization Behaviour in Wotan Hamlet Slaharwotan Village Ngimbang Sub-District Lamongan Regency in 2016

| Behaviour | n (%) |
|------------------------|-----------|
| Use Insurance Card | 9 (12,7) |
| Not Use Insurance Card | 62 (87,3) |
| Total | 71 (100) |

Table 2 shows that 87.3% of the respondents did not make use of insurance card. The distribution of insurance card utilization based on respondents' occupation type in Wotan Hamlet Slaharwotan Village Ngimbang Sub-District Lamongan Regency is shown at table 3.

Table 3: The Distribution of Insurance Card Utilization According to Respondents' Occupation Type in Wotan Hamlet Slaharwotan Village Ngimbang Sub-District Lamongan Regency in 2016

| Occupation Type | Insurance Card Utilization | | Sig. |
|-----------------|----------------------------|------------------------|--------|
| | Use Insurance Card | Not Use Insurance Card | |
| | n (%) | n (%) | |
| Employee | 2 (22,2) | 5 (8,1) | 0,022* |
| Entrepreneur | 0 (0) | 6 (9,7) | |
| Farmer | 6 (66,7) | 51 (82,3) | |
| Others | 1 (11,1) | 0 (0) | |
| Total | 9 (100) | 62 (100) | |

*p<0,05

Table 3 shows that 82.3% citizens who did not make use of insurance card were farmers, this also applied to those who made use of their insurance

card. Analysis data technique used in this research is inferential statistic analysis, using *coefficient contingency*. Relational analysis result between occupation type and insurance card utilization shows significancy number of 0.022. This proves that there is a relation between occupation type and insurance card utilization.

4 DISCUSSION

Citizens who have used insurance card 66.7 % work as farmers while 82.3% of those who have not used the facility are also farmers. Signification result of 0.022 shows a relation between occupation type and insurance card utilization. The lack of insurance card use by farmers is influenced by their job. Occupations have an impact to one's knowledge. Work environment allows someone to get experience and knowledge whether directly or indirectly. For instance, someone who works in health industry certainly will understand how to take care of health in their environment better (Notoatmodjo, 2010).

Based on the research of Londo (2017), it can be concluded that there is relationship between age and occupation with utilization of Community Health Center Service.

According to Health Minister Policy Republic of Indonesia Number 28 Year 2014, Donation Fee Recipient of the Health Care is the poor people. This matches with the research result which shows that most of the respondents are farmers who have insurance card type of Donation Fee Recipient. This also explains that farmers in Slaharwotan Village do not always own their own field; most of them are farm workers. Besides, the citizens with insurance card feel more comfortable visiting the midwife to get health services, than visiting the Community Health Centre. The distance between the village and the Community Health Centre is approximately 5 kilometres away and the lack of public transportation contributes to the low factor of insurance card utilization.

Nadjib & Pujiyanto (2002) show that health service utilization is influenced by many factors, mostly are geography (distance), social-economy (ability to pay), high rate of the services, gender inequality, culture (belief, sick perception), and service quality (medicine availability, open hours, and others)

Behaviour is triggered by *antecedent* (something that precedes behaviour and causally related to it) and followed by consequences (behaviour result to

the individual) which add or reduce the chance of repetition (Wati, 2015). In this case, insurance card utilization can be caused by one's occupation.

One of the ways to increase the access, especially for farmers who need health services, is by using Mobile Community Health Centre. However, Mobile Community Health Centre (*Puskesmas Keliling*) must be able to receive payment by using insurance card. As Permenkes No 75 Year 2014 on Community Health Centre Article 40 Sub-section 5 which mentions that Mobile Community Health Centre provides mobile health services, to increase the range and the service quality for the areas which have not been covered by the main Community Health Centre (Ministry of Health Republic of Indonesia, 2014).

5 CONCLUSION

The lack of insurance card use by farmers is influenced by their job. Most of the citizens who did not make use of insurance card were farmers who had to visit the midwives and paid in cash in order to get the health services they needed. Therefore, the existence of Mobile Community Health Centre that accepts insurance card will be helpful. It is suggested that insurance collaborates with local midwives to find insurance card owners who have not made use of the card and puts forward a dissemination regarding the benefits of paying by insurance card for the card owners, especially farmers which are categorized as mid-low class financially.

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A Challenge of Universal Coverage to HIV/AIDS Outpatients

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Keywords: Utilization, Universal coverage, Affordability, Adherence, HIV/AIDS.

Abstract: HIV/AIDS cases in East Java in 2016 were the largest (16.431) where the most AIDS cases took place in Indonesia. The National Health Insurance in Indonesia commenced on January 1, 2014. BPJS utilization for HIV/AIDS patients nowadays is still limited to inpatient service, whereas its utilization by the outpatients still reaches around 30%. The objective of this research was to analyze the level of BPJS utilization and its relationship with the level of HIV/AIDS outpatients' adherence. The method in this research was quantitative descriptive with a cross-sectional design. This research taken place in Dr. Soetomo General Hospital, the tertiary referral hospital in Indonesia, and the highest HIV/AIDS referral in East Indonesia. The population of this research was HIV/AIDS patients at Dr. Soetomo General Hospital Surabaya's Outpatients. The sampling technique used was purposive sampling. The results of this research showed that there were 31.7% patients who used BPJS to receive outpatient service at Dr. Soetomo General Hospital and that there was a relationship between health costs affordability and the level of patients' adherence. The respondents claimed that BPJS utilization was considered too demanding because there were tiers to benefit from it and which needed to be got through every month. It was expected that a particular policy on easy accessibility will be applied to get HIV/AIDS services from the hospital.

1 INTRODUCTION

Human Immunodeficiency Virus (HIV) is a virus infection which attacks human body's immune system. If a person who is infected with HIV shows some indications, then the virus will be called *Accrued Immune Deficiency Syndrome* (AIDS). The findings of HIV/AIDS cases are increasing in number, whether it is in Indonesia, East Java, or Surabaya (Health Office of East Java Province, 2015). In 2016, East Java was ranked first in the largest number of HIV cases in Indonesia. This situation makes the Ministry of Health Republic of Indonesia (Kemenkes RI) sets the decreasing degree of morbidity and mortality rates from HIV/AIDS as one of the targets of *Sustainable Development Goals* (SDGs) which are continuous on track targets up to now. The government has also regulated the problem of HIV/AIDS by declaring a Regulation of Ministry of Health Republic of Indonesia (Permenkes RI) No 782/MENKES/SK/IV/2011 on Referral Hospitals for people living with HIV and AIDS (PLWHA) which appoints Dr. Soetomo General Hospital as the highest referral hospital for

PLWHA in the province of East Java (Ministry of Health Indonesia Republic, 2016)

HIV/AIDS disease is incurable; however it can be brought under control by taking anti-retroviral (ARV) medicine regularly for a lifetime. The result of a cohort study showed that morbidity and mortality rates would decrease if PLWHA regularly took ARV (Health Office of East Java Province, 2015). The same fact, HIV/AIDS was a chronic disease but of which when it was well maintained would give people living with HIV/AIDS (PLWHA) a quality of life as high as the one of people who were not infected by HIV's (UPIPI, 2015). This is proven by the dramatic drop in the degree of AIDS patients' mortality rate in the era of ARV.

The HIV treatment is applied by taking ARV medicine for a lifetime according to the type and dose prescribed by HIV service doctors. Indeed, this lifetime ARV consumption does require extremely high adherence. Patients' adherence is categorized into three based on how much ARV a patient needs to take according to their doctor's prescription, namely low <80%, medium ≥ 80-95%, and high adherence ≥ 95%. One main thing which the patients need to do to maintain the adherence improvement

and the quality of health is regularly going for a medical check-up as well as getting the ARV medicine once a month at the health centre they have chosen before. ARV medicine in Indonesia were free to achieve successful treatment in developing countries. But a few patients admitted that the obligation to pay a monthly visit to the health centre for a lifetime could be such a burden that sometimes they did not feel like doing it which then led to a follow up failure (patients did not show up again at the health centre for their scheduled following visit).

HIV/AIDS is a disease whose treatment falls into the domain of advanced health facilities (hospitals). A few patients preferred to go for a routine check-up at Dr. Soetomo General Hospital as the highest referral hospital, and which seems to have complete facilities suitable for the needs of patients who are exposed to opportunistic infections. Universal coverage was the key of success of SDGs (Ministry of Health Indonesia Republic, 2016). Since the commencement of National Health Insurance in 2014, according to an observation at Dr. Soetomo General Hospital, the BPJS membership utilization for HIV/AIDS patients nowadays has been limited to inpatients service, meanwhile for outpatients has not yet been optimally put on. On the other hand, both parties, hospital and patients, are in fact liable to benefit from outpatient service using BPJS. Therefore this research needed to be carried out to find out the degree of BPJS utilization which leads to the adherence level of HIV/AIDS outpatients in Surabaya.

2 METHODS

The type of this research is observational, quantitative descriptive with a cross-sectional research design. The population of this research was HIV/AIDS outpatients at Dr. Soetomo General Hospital Surabaya, who represented the general condition of HIV/AIDS patients in Surabaya. Patients at the hospital are an infinite population;

hence the formula used in sample calculation was proportional estimation method. The technique applied in sampling was purposive sampling. The stages in this research were respondents filling in a questionnaire on how they make payment and an observation into medical record documents on the level of patients' adherence.

3 RESULTS

The results of this research were as follows:

Table 1: Distribution of How the Respondents Make Payment

| Underwriter | n | % |
|------------------|----|------|
| Personal Expense | 41 | 68.3 |
| BPJS | 19 | 31.7 |
| Total | 60 | 100 |

It could be seen from Table 1 that there were 31.7% respondents who regularly visited Dr. Soetomo General Hospital's Outpatients Care Center using BPJS. This meant that the respondents preferred to make a personal expense rather than making use of their BPJS membership. As for the amount of expense in one regular visit to the hospital which the respondents paid is as follows:

Table 2: Distribution of Respondents' Expense

| Amount of Expense | n | % |
|---------------------|----|------|
| ≥Rp 50,000 | 1 | 1.7 |
| >Rp 26,000 – 49,000 | 6 | 10.0 |
| ≤Rp 25,000 | 53 | 88.3 |
| Total | 60 | 100 |

It could be seen form Table 2 that there were 88.3% respondents who admitted to spending ≤Rp 25,000 for their every visit to the hospital. The amount was considered affordable by the respondents. Meanwhile, the relationship between costs affordability and the level of patients' adherence is as follows:

Table 3: The Relationship between Costs Affordability and Respondents' Adherence Level

| Categories | Adherence Level | | | | | | Total | | p | R |
|------------------|-----------------|-----|----|------|----|------|-------|------|-------|--------|
| | A3 | | A2 | | A1 | | n | % | | |
| | n | % | n | % | n | % | | | | |
| Not Affordable | 0 | 0 | 1 | 1.7 | 0 | 0 | 1 | 1.7 | 0.010 | 0.327* |
| Quite Affordable | 2 | 3.3 | 14 | 23.3 | 24 | 40.0 | 40 | 66.7 | | |
| Affordable | 0 | 0 | 2 | 3.3 | 17 | 28.3 | 19 | 31.7 | | |

Information:

A1 : Adherence Level 1

A2 : Adherence Level 2

A3 : Adherence Level 3

It could be seen from Table 3 that there was a relationship between costs affordability and the level of adherence by the score of $p: 0.010$ and correlation coefficient of 0.327^* . This meant that the relationship was positive and significant, where the more affordable health costs were, the higher the patients' adherence level was.

4 DISCUSSION

BPJS is an institution that organizes National Health Insurance in Indonesia. Universal coverage providing a specified package of benefits to all members of a society with the end goal of providing financial risk protection, improved access to health services, and improved health outcomes. From the result of this research, data which showed that the respondents preferred to make a personal expense rather than making use of their BPJS membership (31.7%) were acquired. The reason behind this was the respondents would rather spend a small amount of money, that was <Rp 25,000, or Rp 15,000 to be exact, than undergoing a tiered referral process every month for a lifetime. The expense of Rp 15,000 was considered affordable by the respondents.

However, basically service costs affordability was not only related with one's income, other costs were also added to the list, for example transportation costs, retribution payment, and the loss costs when one paid a visit to the hospital. Included in the loss costs were the cost of being absent from work or the embarrassment one has to endure for visiting the hospital every month. The costs affordability in this research was the sum of the underwriter's expense, whether it is BPJS, private or company or personal insurance and the amount of costs one needed to pay when they made payment by personal expense. As discussed before, most of the patients made personal expense to get a treatment although they had BPJS. In their opinion, BPJS utilization was considered to be complicated because they had to go to the health facilities of first tier, second tier, then finally the third tier, which is Dr. Soetomo General Hospital. Fees charged to the patients to pay for the hospital retribution was Rp 15,000 and no charge for the ARV medicine. This is because the declaration of a government program about ARV medication. However, the patients sometimes came to the hospital along with a relative who was also infected by HIV, so that the fees paid exceeded Rp 15,000. This situation was in fact what burdened the patients because besides the fees there

were also transportation and consumption costs which in total could be up to Rp 100,000. The other research mentioned that one of the factors which hindered the adherence in taking ARV was the costs of treatment. High-cost and not affordable treatments would make the patients feel reluctant to visit the health facilities, and the other way around applied (WHO,2015; Sugiharti et al, 2014).

When related to the patients' adherence to take ARV medicine, costs affordability showed a positive and significant relationship by the score of $p: 0.010$ and correlation coefficient of 0.327 . Medication adherence of patients with chronic condition is highly important so that the factors which support patients' adherence must be optimized. Beside of cost affordability, incorporating a behavioural component to adherence interventions may increase potential efficacy of ARV (Dean et al, 2014). The purpose of ARV medication is to stop HIV virus from multiplying thus the immune system will improve. Eventually the viral load (the amount of a virus in the bloodstream) will decrease even to the level of undetectable and the other way around, CD4 cell will increase.

HIV/AIDS patients are obliged to go for a general medical check-up at least once every six months. The check-up includes complete blood test and CD4, as well as viral load once a year. As discussed before, there were patients who did not go alone when paying a visit to the hospital, but also along with some relatives which made the costs not affordable so that they needed BPJS. On the contrary, most of the respondents claimed that BPJS utilization was considered too complicated and demanding because there were tiers to benefit from it which needed to be got through every month. Therefore, an innovative health financing program, especially HIV/AIDS, which is one of the targets of SDGs. With this innovative program, universal coverage could be achieved effectively and efficiently. It is expected that a particular policy on tiered service will be applied to patients with a chronic disease, such as HIV/AIDS, who are obliged to visit the hospital once a month for a lifetime. One of the possible applicable policies is giving a longer time period on the referral letter from the first tier health facility so that HIV/AIDS patients do not need to get the letter every month. This becomes a mental burden for the patients because up to now HIV/AIDS disease carries its own social issue regarding stigma and discrimination (Schwartlander et al, 2011).

5 CONCLUSION

The results of this research showed that there were merely 31.7% patients who utilized BPJS to receive outpatient service at Dr. Soetomo General Hospital. HIV/AIDS patients preferred to make a personal expense because the costs were considered affordable. There was a relationship between costs affordability to visit the hospital and the level of patients' adherence. Therefore, a particular policy is needed in a form of easy accessibility for patients to get HIV/AIDS service in the hospital. The government needs arranged a budget to promotive and preventive programs to save the country's expenditure on HIV/AIDS. Because the cost of HIV/AIDS treatment was much greater than its prevention program.

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Piloting Collection Model of Health Insurance Contributions for Informal Sector Members

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Keywords: Health insurance contributions, Informal sector, Promotor agent, JKN.

Abstract: Studies conducted by BPJS and CHEPS, 2015 showed that an active collection model through a third party (a promoter agent) can improve the collectability status of informal sector members. This study aimed to do a piloting collection model by a promoter agent (individuals, primary care facilities (PCF), and local leaders) as well as informed about the ideal criteria of being agents with its challenges. **Methods:** A quasi experimental design with non-equivalent group design (NEGD) was implemented on two provinces with 1,509 households' participants in Semarang and 1,193 households in Balikpapan. **Results:** an individual promoter agent had 37.5% lowest proportion of being delinquent. Multivariate regression analysis revealed that participants fostered by PCF and local leader as their promoter agents had higher risk for being delinquent than those facilitated by individual promoter agents. The effectiveness of the model differs between Semarang and Balikpapan with Individual Agent Model showed a significant effect in Semarang. While in Balikpapan, there were no meaningful models to improve the collectability. At last, the ideal individual agents have to hold: an experience working in the community, have highly social skills as well as highly understanding of their intervention regions.

1 INTRODUCTION

The number of participants BPJS Health up to December 2016 has reached 171,048,734 participants equal BPJS Health achieves 68.5% of the target of UHC and BPJS Health should be able to cover about 75 millions of residents in the remaining 2 years to 2019. From the contribution aspect, the growth of informal sector members who exceed this target ideally can support revenue contribution of JKN, but in fact the realization of contributions of informal sector members until the end of 2015 and then reached 2.8 trillion rupias. This amount is far above the initial target of the determination of the receivables of informal sector members estimated by BPJS Health at 1.8 trillion rupias. The high receivables are contributed by the low collectability of informal sector contributions that only reached 60%. This will certainly affect the national health financing cash flow, especially for BPJS Health which can ultimately have implications

for financial management and services in health care providers.

In the context of informal sector members, there were four main reasons impact delinquency rate: erratic income (23.6%), reluctant to queue (15.8%), others reasoning (16.8%) such as (ATM Offline, took a long time to pay at bank, forgot to pay (12.8%), disappointed with provider or BPJS Health (6,8%) (Ruby, 2016).

In Kusumasari & Widiastuti (2013), there are four element can influence person's behaviour to pay health insurance contributions. *Action* is built on the condition that a person wants or feels the need for a health service guarantee, especially when they sick (*desired*). However, when people health, it is necessary to build an interest in informal sector worker that make them interested in joining JKN program, which in their perception can be a protector of their risk from illness or risk of financial burden due to illness (*interest*). To achieve these perceptions, it is necessary to build awareness of in informal sector members in the existence of JKN in protecting themselves and their health (*awareness*).

If the AIDA link to informal sector members has been established it is not impossible that the level of collectability of health insurance contributions in this type of participants may increase. It takes a method or model of collection contributions that more than just provision of payment channels that tend to be passive. It takes an officer or individual who actively and directly interacts with the participants to guide, educate and build awareness of participants' behaviour in paying health insurance contributions, which will be known as BPJS Health Promoter Agent.

The general objective of this activity is the implementation of the Piloting Collection Model of Health Insurance Contributions for Informal Sector Members to enhance the collectiveness and sustainability of group contributions of informal workers in the achievement of the National Health Insurance (JKN) program.

2 METHODS

The design of this study used quasi-experimental method. Quasi experiments are experiments that have treatments, outcome measures, and experimental units but do not use random placements.

The quasi experimental design used in this study is Non-Equivalent Group Design (NEGD). This is because in the assessment to be done on the level of collectability status that will be compared not only between groups of intervention with the control group alone, but also among fellow intervention groups with different promoter model models. Baseline collectability level compared to the end line collectability level on each model as an intervention agency and the intervention by the control.

The selection of both groups was done purposively. A total of 300 informal worker households were designated as intervention targets, but due to field dynamics faced by agents, the number of households reached for each agency was at least 150 households. The number of households that can be visited is 6 - 8 households per day per promoter agent, so that within 1 month (25 working days) will be achieved the visit of 150 households of informal workers per month. While the control areas were not intervened, 150 informal workers' households in the control areas were adjusted to the number of participants for each intervention and observed their initial contribution rate (as baseline data) and at the end of the program (end line).

The unit of analysis in this study was the household of informal worker participants who participated in the BPJS Health in one cluster (1

cluster, consisting of 150 households). Interventions conducted at Central Java Province, Semarang City and East Kalimantan Province, Balikpapan City

The population in this study was all households of informal workers in the experimental model of active dues collection model, namely Central Java and East Kalimantan provinces. While the sample in this study is the head of the family who became the respondent survey of the collection model of contribution stage 2 in 6 cluster points per province (1 point cluster contains 150 households).

This trial was conducted 2 (two) stages. Phase 1 is held on October 20, 2015 until December 23, 2015. Stage 2 is held from April 2016 to 31 October 2016.

3 RESULTS

Data was analysed by univariate, bivariate, and multivariate analysis. Variables were used consist of number of family members, children under 5 years old and oldest of family members, services class, worker number of family members, sex, age, education background, married status, smoking behaviour, sector of work, head of household income, health status at first registration, economic status, catastrophic status, and respondents' delinquency status in the baseline and end-line of the research. Data was category and used SPSS software to analyse.

The data was analysed by univariate to show the frequency of all variables. Bivariate analysis was done to show the relationship between collectability status baseline and end-line and others variables which had represented social economic, and demography aspect. Bivariate analysis used *chi square* test by city, rural urban cluster, and village sample.

Besides, chi square was used to show the differences increase of delinquency rate between intervention and control members. So, it could show the effectivity of intervention. Effectivity analysis also described based on promoter agent model in this intervention which shown the lowest proportion of delinquency rate by the promoter agent model.

After found the affecting factor of collectability rate, the data was analysed multivariate to show the most affecting factor of collectability rate. Multivariate analysed used logistic regression test by looking the highest Odds Ratio (OR) value of independent variables. Multivariate analysed was done on city area sample level (Semarang and Balikpapan)

In this study there are a total of 2702 household heads of informal sector members who responded to the trial of applying an active JKN dues collection model through a promoter agent. This number consisted of 1509 household heads in Semarang city (55.8%) and 1193 household heads in Balikpapan (44.2%).

1. Demography profile

Table 1: Demography Profile of Respondents in Semarang and Balikpapan 2016

| Variables | Semarang | Balikpapan |
|-----------------|----------|------------|
| Sex | | |
| Male | 75.2% | 80.9% |
| Female | 24.6% | 19.1% |
| Age | | |
| <26 years old | 2.8% | 3.5% |
| 26-40 years old | 28.9% | 27.4% |
| 41-58 years old | 46% | 47.3% |
| > 58 years old | 22.4% | 21.8% |

Majority of the respondents are male which were 75.2% in Semarang and 80.9% in Balikpapan. But there are around twenty percent respondents are female who act as head of household for informal workers who become their household members. This data show that the role family health insurance payer majority are heads of families, fathers or sons who are in the household. However, the table above showed women role as family health insurance payer is rising.

Most (3 of 4) payer contributions in the households of informal workers in Semarang are at working age (26 - 58 years). However, not a few workers in informal workers' salaries are more than 58 years old (retirement age), 22%. This trend occurs in all villages sample. Not much different from the characteristics of the age of underwriters in the city of Semarang, 3 of 4 underwriters in the city of Balikpapan are also at the age of work and the rest are at retirement age.

2. Social and Economic Profile

Table 2: Social Economic Profile of Respondents in Semarang and Balikpapan 2016

| Variables | Semarang | Balikpapan |
|----------------------|----------|------------|
| Married status | | |
| Single | 5.5% | 4.3% |
| Married | 82.5% | 79% |
| Divorce | 11.5% | 16.5% |
| Education background | | |

| | | |
|--------------------------|-------|-------|
| < SHS | 23.1% | 48.4% |
| SHS – Vocation/ Bachelor | 49.4% | 48.9% |
| > Vocation- Doctoral | 27.3% | 2.7% |

Most of the respondents are married 83% in the city of Semarang and 79% of Balikpapan. Both in Kota Semarang and Balikpapan, underwriters in households of informal sector member are dominated by heads of households with high school education – Diploma (48%). This indicates that most of the contributors in informal sector member households are educated, although there are still 29% of respondents who have junior high school education. In this group, potential contribution arrears most occur.

From Semarang data in Figures and Balikpapan in Figures 2015 indicates that 60% of the workforce population in Semarang and 27% of the workforce population in Balikpapan work in the informal sector (PBPU). In workforce aspect, most of them work in employment in services (71%) and 15% in trading. Only 3% of them work in agricultural. Of those who work, 58% work more than 40 hours a week. Nevertheless, there are still 5% health insurance payers are unemployed and 37% work less than 40 hours a week. In this group of households also the potential contributions of arrears most occur.

Table 3: Income Profile of Respondents in Semarang and Balikpapan 2016

| Area sample | Income Profile Category | Percentage |
|-------------|---------------------------|------------|
| Semarang | < Rp 1,900,000 | 27.6% |
| | Rp 1,900,000-Rp 4,500,000 | 52.4% |
| | > Rp 4,500,000 | 6.4% |
| Balikpapan | < Rp 2,200,000 | 53.2% |
| | Rp 2,200,000-Rp 4,500,000 | 36.5% |
| | > Rp 4,500,000 | 10.2% |

84% of the participants of the informal sector who responded to the pilot project in Semarang are worked. Of those who worked, more than half of the respondents earned between Rp 1,900,000 to Rp 4,500,000, only 6.4% of respondents earned more than Rp 4,500,000 while 4 out of 10 respondents were still earning less than the minimum regional wage (UMR) of Semarang, Rp 1.900.000 (27.6%).

Meanwhile, in Balikpapan city, 86% of family members of informal sector who participated in the pilot project in this city are worked. Of those who worked, 36.5% of the respondents earned between Rp 2,200,000 to Rp 4,500,000, only 10.2% of respondents earned more than Rp 4,500,000 while almost 5 out of 10 respondents still earned less than UMR in Balikpapan at Rp 2,200,000 (53.2%).

3. Other Social Economics Variables

Table 4: Economic Status and Catastrophic Rate in Semarang and Balikpapan 2016

| Variables | Semarang | Balikpapan |
|-------------------|----------|------------|
| Catastrophic rate | | |
| Yes | 10.6% | 22.1% |
| No | 89.4% | 77.9% |
| Economic status | | |
| Poor | 12.7% | 35.4% |
| No Poor | 87.3% | 64.6% |

In this study also identified poverty status of underwriters in informal sector members. Poverty criterions were based on Social Ministry Policy No.46 of 2013 about *Fakir dan Orang Tidak Mampu*. The data showed that 12.7% of informal sector member in the pilot project model of health insurance contributions collection in Semarang categorized as poor household in Semarang. In addition, there are 10.6% of informal sector household falls into the category of catastrophic conditional, which is a household financial condition where 30% of the income is charged to pay dues.

In Balikpapan city 35.4% of respondents in this city are identified as having poor status based on Social Ministry Policy No.46 of 2013 about *Fakir dan Orang Tidak Mampu*. In addition, 22.1% of informal sector member fall into the category of catastrophic conditional, which was, the financial condition of informal sector members with a proportion of 30% contribution to income. Percentage of participants in the informal workers who fall into the poor category and experience greater condensed catastrophic conditions in Balikpapan than the percentage in Semarang. This is allegedly because of the cost of living (living cost) in the city of Balikpapan. Balikpapan is currently a costly living city according to various references.

4. Healthy profile

Table 5: Healthy profile of Respondents in Semarang and Balikpapan 2016

| Variables | Semarang | Balikpapan |
|-------------------------------|----------|------------|
| Health status at registration | | |
| Health | 89.8% | 96.6% |
| Sick | 10.2% | 3.4% |
| Services class | | |
| 1 st class | 20.2% | 16.8% |
| 2 nd class | 36% | 25.4% |
| 3 rd class | 43.8% | 57.8% |

Most of the respondents in Semarang who registered as member of BPJS Health were good health (8.89%). This means, 1 out of 10 respondents registered as BPJS health's members were taken sick. Based on the class of care taken, 43.8% informal sector members who as respondents in Semarang used 3rd class of services. In Balikpapan, 96.6% of informal sector members who participated in the pilot project admitted being in good health at the first registration as a participant and 57.8% respondents chosen 3rd class of services.

5. Level of Contribution Collectability

In this pilot study conducted collection of dues through the placement of promoter agencies BPJS Health in some sub-districts which has been established into the intervention area of study. In each city, six sub-districts have participating households in the largest informal worker group. In the sub-district, each village was selected to intervene. In each village a promoter agent is placed, with one type between individual promotional agents, promoter agencies working with FKTP and promoter agencies in collaboration with village officials.

To see the level of contribution collectability, the researcher uses the respondent analysis unit is the individual with a total of 7856 individuals participating in the informal sector members who participated as the respondents of this pilot project actively through the promoter agent. This number consisted of 4,282 individuals participating in informal sector members in Semarang, Central Java (54.5%) and 3574 members in Balikpapan, East Kalimantan (45.5%).

In Semarang, respondents with informal sector members who chosen third class of services were the most participants (44%) except in Tlogosari Kulon (30%) and the lowest participants chose first class (19%). The amount of delinquency against total participants at the baseline was 31% and increased by 17% to 48% on the end-line. Participants who chose first class of services became the highest arrears followed by 2nd and 3rd class. In the baseline data, villages with the highest total arrears were Puduk Payung (38%) and lowest Krobokan (22%). Then when viewed on the end-line data, the highest arrears remain in Puduk Payung (54%) and lowest Tlogosari (39%) and Krobokan (40%).

The rate of contribution collectability in the Balikpapan city intervention area showed that respondents in the informal sector members with the third class of services were the largest participants (61%) and the same for all villages, while the lowest

participants were in 1st class (16%) except in Batu Ampar village by 23 %. Total Arrears to total participants at the 24% baseline increased 22% to 45% on the end-line. Participants with 3rd class (23.54%) became the highest arrears and followed by 2nd class and 3rd class of services. The highest arrears on baseline were Batu Ampar village (36%) and lowest Karang Rejo (19%) became the lowest percentage of influence was Karang Joang (18%).

4 DISCUSSION

Based on the result of *chi square test* with 95% confidence level, it is found that the condition of the respondent when registering as a participant of BPJS Health in Semarang has an effect on the incidence of arrears (P value = 0,002) with the highest proportion 57,9% respondents in this city registered in sick condition. Respondents in sick conditions tended to have dues delinquency, they do not continue to pay dues when they have received services and returned to health. This is allegedly because participants who enrolled in good health tended to have sufficient knowledge of the concept and philosophy of health insurance for their lives, while those in sickness tended to register due to their current needs. This variable does not provide a meaningful relationship to contribution in Balikpapan, however there is an odds ratio value that can illustrate the role of this variable against the risk of contributions arrears. From the results of the odd ratios, the households of informal workers in Semarang who are underwriters are enrolled and / or their members are sickly, 2.1 times are at higher risk of delinquent JKN contributions compared to those enrolled when they are healthy. While in Balikpapan, informal sector household whose underwriters are enrolled and/ or their family members are sick, 1.4 times higher risk of arrears JKN contributions compared to those enrolled when healthy.

The contribution delinquency in Balikpapan also was affected by number of family member (p values 0.000) and the highest proportion is households with more than three persons in one family. So, households with more than three persons in family 2.8 times higher risk of arrears JKN contributions.

Besides that, in Semarang the presence of elderly has a significant relationship with the incidence of arrears (P value = 0.0001), as well as in the city of Balikpapan (P value = 0.0001). Therefore, the informal sector households with elderly household members or underwriters are heads of families over the age of 58 should receive

government assistance. Not only about the ownership of the elderly in the household, the arrears of contribution in the informal sector members in Balikpapan is also affected by the ownership of children under five (P value = 0.006). Toddlers are also a group of people who are vulnerable to health problems from outside so that the risk of exposure by disease agents to be high.

From the socioeconomic point of view, the informal employment households in Semarang who have catastrophic rates have a significant relationship with incidents of arrears (P value = 0.034), as well as respondents in Balikpapan (P value = 0.008).

Based on the intervention of the promoter agent, it can be seen that the type of promoter agent has a significant effect on delinquency status of informal sector members in Semarang City with p values 0.000 and the proportion of participants in the lowest arrears is the individual promoter agent of 37.5%. Based on the analysis of multivariate regression, participants of informal workers are supervised by agents promoters working with primary health care is 1.4 times more at risk for delinquent dues than agents promoter individually while participants of the informal workers who scouted agent promoter who worked with village officers at risk 1.7 times greater for delinquent JKN contributions compared to individual promoter agencies.

Meanwhile, in Balikpapan the lowest proportion of participants in arrears exists in individual promoter agent by 44.4%. Based on a regression analysis, informal sector members who had supervised by promoter agent working with health facilities and village officials 1 times greater risk of delinquency than individual promoter agent.

One of the achievements of the promoter agency's performance is the role of the agent in maintaining the level of college participants' collective contribution, both routine and routine (not in arrears). Below shows the result that the presence of a promoter agency in the middle of the informal worker of BPJS Health in Semarang made almost 61% of the informal workers' households of the pilot project participants still pay regularly. While in the control area, where the fee payment model is passively conditioned on the basis of the existing payment channel, there are 30.77% of the informal worker's households who remain delinquent in payment of their health insurance contributions.

While in Balikpapan, the presence of promoter agency in the middle of informal sector members of BPJS Health keeps more than 50% of informal sector households routinely pay from informal

workers. Whereas in the control area, where the fee payment model is passively conditioned on the basis of the existing channelling payment channel (existing channel), there are 22.54% of the informal worker's households who remain delinquent payment of their health insurance contributions.

In terms of cost ratio in the implementation of contribution collection by promoter agent, it can be seen that the model of individual promoter agent in Semarang City has the lowest cost ratio that is 1.57 whereas the biggest cost ratio in Semarang City is promoter agent in cooperation with village officer with the amount of 2.44. In the city of Balikpapan, lowest expense ratio is the promoter agent who cooperated with village officials with a ratio of 3.51 while the ratio of the largest costs in Balikpapan is the agents who cooperate with healthcare facilities with the amount of 3.98.

5 CONCLUSION

1. In general, all areas of both intervention and control occur to increase arrears;
2. The effectiveness of models differs between two areas: Individual Agent Model is more meaningful in Semarang. While Balikpapan does not have a meaningful model in the increase of collectability;
3. Costs ratio is greater than the benefits so that the cost of benefits is not efficient;
4. There is no general profile of agents that can indicate performance fee collection: Semarang: women and agents as main income, while in Balikpapan: Male, age above 30 years, married, has experience and this job as the main income.
5. Profile agent required to perform their functions are have active experience in social activities so that they can formulate strategies in the field; having a high social spirit and good communication skill; know the area very well, so it can map the participants quickly and can be accepted by the local community well.
6. The main obstacle is the presence of household heads who are hard to find because of work and are not willing to meet, the difficulties of the agents coming to the night especially for the female agent, for the housing area are not given access to meet the families of informal worker participants, resident participants, and in rural areas difficult geographically reachable.

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Fish, Meat, Vegetable Food Expenditures are Contribute to Haemoglobin Concentration among Pregnant Women in Sub-Urban Areas of Indonesia

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Keywords: Haemoglobin Concentration, Fish, Meat, Vegetables, Food Expenditure.

Abstract: Low haemoglobin concentration during pregnancy remains a problem in developing countries. One of contributing factors towards haemoglobin concentration is food intake to do with protein and high iron sources. The intake of this type of food is affected by economy access that can be measured by food expenditure. The objective of this research was to analyse the correlation of food expenditure and haemoglobin concentration among pregnant women in sub-urban areas. A cross-sectional study was conducted from August-October 2016 in Sidoarjo, East Java. The sample was selected by stratified random sampling. The sample was 83 pregnant women who completed a blood sample collection and home visit interview. The characteristics and food expenditure were assessed by way of a structured questionnaire. The haemoglobin concentration was analysed by the cyan meth method. The Pearson correlation was employed to analyse the data. The result showed that most of the pregnant women had graduated from high school, were on their second pregnancy, and the majority were housewives. The mean of the haemoglobin concentration was 14.5 (SD±0.958). There was a correlation of total food expenditure, and fish, meat and vegetable expenditure towards haemoglobin concentration in pregnant women. It can be concluded that the higher the proportion of expenditure on fish, meat and vegetables, the more it contributes to a higher haemoglobin concentration.

1 INTRODUCTION

The problem of low haemoglobin level in pregnant women is ubiquitous in developing countries due to the changes in the physiology during pregnancy and the low intake of iron source food. Low haemoglobin level in pregnancy poses a higher risk of foetal and neonatal morbidity as well prematurity and low birth weight. Low haemoglobin level below the cut off is depicted by anaemia. Based on an Indonesia basic health survey in 2013, it indicated that the proportion of anaemia in pregnant women was 37.1%. The figure of anaemia in rural area was slightly higher than that in urban areas, accounting for 37.8%. The urban area proportion was 36.4% (Balitbangkes RI, 2013). The Indonesian government set up the target that anaemia among pregnant women should be below 30%. Therefore, anaemia remains a problem in pregnant women.

The cause of anaemia is due to multiple factors. Among those factors are nutritional such as vitamin and mineral deficiencies and non-nutritional such as infection and haemoglobinopathies. The major mineral deficiency linked to anaemia is iron, since it

has a role in oxygen transport and there is often a low availability of iron source in daily consumption, hence it is considered that iron deficiency is one of the ten leading global risk factors of disease burden (McLean et al., 2007).

Pregnant women in developing countries are prone to having the higher risk of nutritional problems due to several factors such as socio economy, inadequate diet, the high burden of physical demand due to household chores and frequent reproductive cycles (Lee et al., 2013). Moreover, women in low-income households are more likely to eat a poor diet than their wealthier counterparts due in part to an inadequate understanding of nutritional requirements and the limited ability to purchase healthy foods (Bhargava, 2004).

Based on previous research, it showed that consumer motivations to purchase foods are mainly influenced by the price of food, and also its taste and convenience (Lennernas et al., 1997). Moreover, for lower income families, price is the most important and the decision made is based on the ability to purchase the food item (Dachner et al., 2010).

Therefore, a family with a low income often perceive that a healthier diet such as a decent intake of meat, vegetable, fruits and dairy product is difficult to obtain.

Individual or family food access can be linked to their health outcomes. The lack of family access to healthy food is also known as household food insecurity. A study in Bangladesh, a developing country with similar social background to Indonesia showed that food insecurity in the household reduced maternal dietary diversity, particularly with a reduction in all types of animal source foods such as eggs, meat, fish and dairy products (Na et al., 2016).

Identifying the link between particular food expenditure and the haemoglobin level in pregnant women may suggest an important intervention due at the household level. The purpose of this study was test the hypothesis as to whether total food expenditure and expenditure on particular items are inversely related to the level of haemoglobin among pregnant women in sub-urban areas.

2 METHODS

2.1 Study design and setting

The cross-sectional survey study was conducted from August -October 2016. The study was conducted in an area with a high prevalence of anaemia and chronic energy deficiency (CED) among pregnant women in Sidoarjo, East Java. Sidoarjo is sub urban area that is located near the capital city of East Java Province.

2.2 Study participants

The study participants were 83 eligible pregnant women who were randomly selected for the sample. Stratified random sampling was done by looking at the primary health care (PHC) centres with a high prevalence of anaemia and CED, and dividing them into three (3) stratum based on the village characteristics. The sample size calculation found 21 PHC: 8 PHC in the urban area, 7 PHC in rural areas and 6 PHC in industry areas. In each PHC, one village was selected randomly. In each village, five (5) pregnant women were selected randomly based on the midwives' register. Some pregnant women did not complete the blood test for various reasons. Therefore only 83 pregnant women's data has been possible to analyse in this research.

2.3 Measurements

The main outcome variable in this study was haemoglobin level. The independent variables include maternal characteristics, family income, food expenditure, child sex, prematurity, family type, maternal working status and maternal education. The data collection instrument was a validated structured questionnaire. Haemoglobin Assessment at the time of enrolment, 5 mL of venous blood was collected by a trained technician using standard procedures. The haemoglobin concentration was determined by the cyan-meth method.

2.4 Data collection and analysis

The data was collected by trained study enumerators during a home visit along with a face-to-face interview. The enumerators were trained by the research team and they did the trial interviews using a standardised questionnaire in two of the pregnant women before data collection in the research site. Descriptive statistics included the frequencies and proportions that were first performed. Following this, a bivariate analysis was done by way of the Spearman Correlation. A statistical association was declared to be significant if the p-value was less than 0.05.

2.5 Ethical consideration

Ethical clearance was obtained from the Faculty of Public Health of the Universitas Airlangga's Ethical Review Board with certificate number 504-KEPK. Written informed consent was also obtained from each respondent.

3 RESULTS

The results of this research showed that the maternal characteristics of the majority of pregnant women was that they had graduated from high school, were non-employed and on their second pregnancy. The detailed figure of the characteristics has been summarised in Table 1. 1. Demography profile.

Table 1: Distribution of the percentage of participants

| Background Characteristics | n | % |
|----------------------------|----|------|
| Education level | | |
| Elementary School | 5 | 6.0 |
| Junior high School | 19 | 22.9 |
| Senior high school | 46 | 55.4 |
| Diploma/University | 13 | 15.7 |

| Background Characteristics | n | % |
|----------------------------|----|------|
| Employment | | |
| Had employment | 19 | 22.9 |
| Non-employment | 64 | 77.1 |
| Pregnancy | | |
| First (1 st) | 25 | 30.1 |
| Second (2 nd) | 43 | 51.8 |
| ≥ Third (3 rd) | 15 | 18.1 |

Drawn from several items of food expenditure, the food expenditure items were then correlated to haemoglobin concentration including fish, meat, vegetable and pulse (nut/lentil) expenditures. The detailed median of each food item and statistical correlation is in Table 2.

Table 2: the Median of Each Expenditure and Statistically Correlation

| Food Expenditure Item per month | Mean±SD | p-value |
|---------------------------------|--------------------|---------|
| Grain | 205,000±105,470.41 | 0.309 |
| Root/Tubers | 10,000±42,112.79 | 0.115 |
| Fish | 120,000±131,969.81 | 0.000* |
| Meat | 100,000±120,319.47 | 0.000* |
| Eggs and milk | 80,000±236,058.19 | 0.477 |
| Vegetable | 80,000±62,317.37 | 0.016* |
| Pulse (nut, lentil) | 80,000±47,837.64 | 0.523 |
| Fruit | 60,000±74,170.93 | 0.120 |
| Instant noodle and crackers | 25,000±50,783.25 | 0.381 |

*statistically significant correlation

The higher proportion of food expenditure was grain as the staple food. The mean of haemoglobin concentration among pregnant women was 14.5 (±0.958). This haemoglobin concentration is relative high.

4 DISCUSSION

Food prices pose a barrier to adopting a healthy diet. This research findings show that certain food expenditures, particularly fish, meat and vegetable expenditures, were correlated to haemoglobin level. Thus food which has a correlation to haemoglobin level is well known as a source of iron. However, sometimes the decisions to do with healthy food are often affected by the price of the food. This study is consistent with the previous finding that maternal dietary diversity declines in relation to the level of household insecurity which reported that animal source food, especially meat, fish, dairy product was consumed less by the pregnant women. There was also a lower frequency of micronutrient-dense plant-

based food such as legumes and nuts (Na et al., 2016).

From this research findings, it should be also highlighted the contribution of food expenditure on vegetable to haemoglobin level of pregnant women. Since vegetable is considerable affordable for food insecure family, it is also important to encourage the pregnant women to include vegetable particularly dark green vegetable in their daily consumption.

The average of haemoglobin concentration in this research was at a good level. This reflects that the iron status among pregnant women is adequate. Iron plays a vital role in oxygen transportation and storage, oxidative metabolism, cellular proliferation and many other physiological processes. Dietary iron requirements are the highest in the second and third trimester of pregnancy (Lynch, 2007). The importance of maternal iron sufficiency is for ensuring an optimum supply for the developing foetus.

Findings from this study should be viewed with caution for several reasons. Although the food expenditure is significant correlated to haemoglobin concentration, it is not causal because of the nature of the study design that was employed. This study could not establish the causal effect. The expenditure itself was not calculated based on an individual basis, but instead on overall household expenditure. This may not represent the pregnant women’s food consumption since it is also depends on the food distribution within the family.

5 CONCLUSION

The higher proportion of expenditure on fish, meat and vegetables contributes to a higher haemoglobin concentration. It has been suggested to the family to improve the quality of their diet by increasing the food expenditure in relation to iron-rich food.

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Unit Cost Calculation as a Role of Cost Containment at Central Surgery Installation of Hospital X

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Keywords: Central surgery installation, Unit cost, Activity-based costing.

Abstract: In regards to good health development services in terms of budgeting and financing, not all hospitals, such as hospital X, have data on the production cost of services as the basis for determining the tariffs, because this has not been calculated based on unit cost. The unit cost calculation of services in Central Surgery Installation (CSI) Hospital X is the main purpose in this research, which used a cross-sectional with descriptive observational approach and analysed using Activity-Based Costing (ABC) method. The results showed that the unit cost calculation was divided based on eight qualifications of operation in minimum and maximum unit cost intervals, as follows: (1) Minor: IDR 1.320.206 - IDR 2.805.815, (2) Moderate: IDR 2.057.070 - IDR 2.733.284, (3) Major: IDR 2.408.011 - IDR 3.995.652, (4) First Major: IDR 2,228,755 - IDR 4,759,747, (5) Second Major: IDR 1.727.593 - IDR 5,523,273, (6) Third Major: IDR 3,049,093 - IDR 7,099,322, (7) Fourth Major: IDR 6,176,461 - IDR 7,512,786, (8) Fifth Major: IDR 1,711,223 - IDR 9,439,909. The existence of the unit cost calculations assists management to make accurate decisions on budgeting and cost planning; hopefully, it can be developed in an integrated system for recording and reporting.

1 INTRODUCTION

In the course of the development of health services, the aspects of budgeting and financing of health are essential, because it focuses the hospital's attention and how the budget can be used for investment, operational purposes, improving the competence of human resources and improving the welfare of its employees. It should be considered in the implementation of Security Agency of Health (BPJS-Kesehatan) which has implemented tariffs in accordance with the existing policy, namely Permenkes Number 69 Year 2013 about Standard Rates on Primary Health Care and Advanced Health Facilities level in the Implementation of Health Insurance Programs, where the determination of the tariffs' policy caused problems in its implementation at this time⁷. In health care systems, hospitals provide primary care, serve as referral institutes for higher-level care, and train health care workers. Those benefits are costly (Baker, 1998).

General hospitals as health care organizations should adjust the tariffs immediately into a variety of management functions such as regulation, planning, guidance, and supervision. In addition, it

should be realized that the hospital has many unit production and supporting costs, whereby each unit has to generate revenue and there is not a must have list in terms of cost. Such diversity is sometimes likely to cause a lack of accuracy of the actual costs owned by the hospital. The unit cost as the basis for calculating the budget does not necessarily reflect the actual costs at the hospital. Therefore, a tally of *unit* cost, *actual* cost and expense management should be made in a normative order with respect to the tariff policy of being rational and accountable (Roztocki et al, 2004). A company which has valuable information in comprehending and identifying customers who are more profitable or not will help advance the overall organizational profitability (Baker, 1998). Customer cost information is considered very helpful in maintaining the level of profits and retain customer relationship.

In general, there has not been accurate data of the hospital facilities and production costs of health and medical services for use as a basis of determining the tariff. This condition is not recommended because the basis of current rates has not been calculated as unit cost; basically, the hospital has

calculated *the unit* cost, but is still not rational. The rationality level of the tariffs has many viewpoints, such as the current rate being too expensive or too low. Both conditions lead to different consequences. If the current rate is too expensive, what the consumer pays is not comparable with *the output* obtained. Similarly, the lower rate could lead to the hospital as a healthcare provider not reaching the *break-even point* or even having a deficit (Mulyadi, 2015). This situation should sensitize health care providers to adopt a rational rate, in accordance with the service received by consumers.

2 METHODS

This study was an observational study descriptive and there was no treatment on the sample. Observational study emphasizes on activities in the field as a data source and a research approach in data collection in the form of primary and secondary data, such as financial reporting documents, the traffic data, annual reports, internal data and other data. Based on the time of the study, the study design was *cross-sectional* because of the timing of data collection and information research conducted at one particular time and then an analysis of data using *Activity-Based Costing*.

The data analysis technique used was Activity-Based Costing, which is a method for calculating the cost of production used to provide cost information for managers as a basis for making strategic decisions and other actions that affect the capacity and fixed costs (Blocer et al, 2000). The stages of accounting by *Activity-Based Costing* are as follows: (1) identification of activities; (2) organize activities into cost centers; (3) identification element of main cost; (4) analysis of relationship between cost activities; and (5) identify cost drivers

3 RESULT

The effective working time in one year was calculated based on 2013, which determined the total of the number of effective days of each month. Effective days are work days which were already reduced by holidays and national holidays. Number of days effective in one year were then converted into units of minutes. The result of the calculation of time effective for one year, based on research, showed working hours per day for eight hours with a total time of 1,960 hours or 117,600 minutes. Throughout 2013, there were 6,809 medical actions

undertaken operative in Central Surgery Installation, which was divided into 12 rooms of CSI, so that at each CSI room could serve 2-3 patients per day. From the results of field observations, relevant data area of Central Surgery Installation of 518m² were obtained. Magnitude of spacious CSI rooms can be divided into 12 rooms, each of 42 m², except room 10. Direct costs related to the place of the medical action operative are the fees charged to patients when performing medical procedure operatives as cost replacement incurred by the hospital for procurement and the maintenance of buildings (Fauziah et al, 2014). The building is assumed to have a lifetime of 20 years, so the function of building was considered normally in 20 years of life. After knowing the entire procurement cost of space in CSI, the cost center of the main Central Surgery Installation (CSI) building will be delivered. Based on calculating the cost center of the Central Surgery Installation (CSI), obtained from Annual Investment Cost, and the the calculation of depreciation costs of buildings, we get the total cost center for Central Surgery Installation (CSI) of IDR 389,042,092.88. The costs of procurement for each operating room obtained from the calculation of the cost center of Central Surgery Installation (CSI) were divided by the effective working hours per operating room in minutes to obtain the cost per-minute on each operating room, which were then multiplied by the duration of action per operative medical treatment. The following is the calculation of the cost for medical treatment operative place.

Note:

| | |
|-----------------------------|---|
| Effective | : 245 days |
| Working Hours effective | : 245 days x 8 hours x 60 minutes = 117 600 min |
| Cost center of the building | : IDR 389,042,092.88 |
| Then the cost of space per | : IDR 389,042,092.88 /117 600 |
| | : IDR 3308.18 |

Furthermore, the cost will be multiplied by the length of each operative medical treatment in CSI. Human Resources (HR) is composed of medical personnel, both specialist doctors, general practitioners, nurses and other medical personnel, who perform operative medical procedures and non-medical personnel involved indirectly in Central Surgery Installation. Cost of Medical Consumables per operative action of the medical pharmacy depot parts were obtained from CSI. Consumable Cost fees in the pharmaceutical depot in CSI were different from the central pharmacy depot. In the central pharmacy depot, using a software that shows

pharmaceutical expenditure costs, as in the table below.

Table 1: Total Cost of Consumables

| Month | Fees Consumable Cost (IDR) |
|---------------------------------|----------------------------|
| January | 449,181,603.00 |
| February | 449,181,603.00 |
| March | 449,181,603.00 |
| April | 449,181,603.00 |
| May | 449,181,603.00 |
| June | 449,181,603.00 |
| July | 449,181,603.00 |
| Month | Fees Consumable Cost (IDR) |
| August | 449,181,603.00 |
| September | 449,181,603.00 |
| October | 449,181,603.00 |
| November | 449,181,603.00 |
| December | 449,181,603.00 |
| Total 1 year Consumable Cost | 5,390,179,236.00 |
| Consumable Cost Cost per action | 791,625.6772 |

Source: Hospital pharmacy depot X

Furthermore, to obtain the value of consumable cost per category action then a score was made according to the category of the type of medical treatment operative. Here the results of calculation of the consumable cost were based on medical surgery category.

Table 2: Cost of Consumable Per Qualifying Operation

| Qualification Operation | Score | Total Cost Consumable Cost |
|-------------------------|-------|----------------------------|
| Minor | 1 | 791.626 |
| Moderate | 2 | 1,583,251 |
| Major | 3 | 2,374,877 |
| Major 1 | 4 | 3,166,503 |
| Major 2 | 5 | 3,958,128 |
| Major 3 | 6 | 4,749,754 |
| Major 4 | 7 | 5,541,380 |
| Major 5 | 8 | 6,333,005 |

Waste of CSI can be divided into medical waste and non-medical. The calculation of the unit cost of processing medical waste obtained a sewage treatment fee per kg of IDR 10111.09. Based on interviews and dealing with operating personnel in the CSI, the weight of solid waste for each action is not always the same, but can be searched by averaging suitably qualified operations, described as follows.

Table 3: Unit Cost Medical Waste

| Qualifying Operating | Weight Solid Waste (g) |
|----------------------|------------------------|
| Minor | 400 |
| Moderate | 500 |
| Major | 600 |
| Major 1 | 1700 |
| Major 2 | 2700 |
| Major 3 | 3700 |
| Major 4 | 4700 |
| Major 5 | 5800 |

Activities of non-medical services in the installation of the Central Surgery entail management and administration activities performed at the Central Surgery. The room used to perform non-medical services has area of 1480m² with cost per m² of IDR 1,401,583.73 and then multiplied by the area. So, from the calculation of the above Annual Investment Cost, cost directly related to for the site of management activities is IDR 50,373 per action. Based on the calculation of infrastructure maintenance costs, maintenance costs can be calculated by load per-action with the total action in 2013 as many as 6,809 by dividing the total cost of maintenance with the actions in 2013, so that it shows the burden of indirect costs for treatment as IDR 50,455.66. Furthermore, other costs include the operating costs consist of expenditure on electricity, water and telephone/ fax. In 2013 there already exists a recap of telephone charges, water and electricity by the hospital. By knowing the total area of the hospital as 82,381.01 m² and total action as many as 6,809, these are used to determine the costs of electricity, water and telephone per action and can be explained as follows. From the calculation of operating costs, total other costs per action is IDR 14,584.99, while the results of calculating costs for non-medical consumables are IDR 6,809.00 for one year, and total expenses per action is IDR 4,303.81. Below is a table of indirect costs in the Central Surgery installation and direct costs of each operative medical treatment activity.

Table 4: Indirect Costs

| Components Indirect Costs | Total Costs |
|--|-------------|
| Place | 50,373 |
| HR Non-Medical | 161,797 |
| Maintenance | 50,456 |
| Operations (electricity, water, telephone) | 14,585 |
| Consumable Cost | 4,304 |
| Total | 281,514 |

4 DISCUSSION

Based on this study it can be seen that the results calculation of *Unit Cost* in the Central Surgery Installation is divided based on operation qualification. *Cost drivers* used are old minimum and maximum actions that ultimately produce intervals of *unit cost* minimal and *unit cost* maximum. The following summary table calculates minimal and maximal unit cost.

Table 5: Unit Cost Result

| Operations Qualification | Unit Cost Minimum (IDR) | Cost Unit Maximum (IDR) |
|--------------------------|-------------------------|-------------------------|
| Minor | 1,320,206 | 2,805,815 |
| Moderate | 2,057,070 | 2,733,284 |
| Major | 2,408,011 | 3,995,652 |
| Major 1 | 2,228,755 | 4,759,747 |
| Major 2 | 1,727. 593 | 5,523,273 |
| Major3 | 3,049,093 | 7,099,322 |
| Major 4 | 6,176,461 | 7,512,786 |
| Major 5 | 1,711,223 | 9,439,909 |

Based on the table, the calculation of unit cost uses Activity-Based Costing, generating minimal and maximum unit cost divided by operation qualification. The idea concepts of Activity-Based costing is a cost accounting system that focuses on activities performed to produce a product / service. Activity is any activity which is the trigger of the cost (cost driver) and acts as a causal factor in spending in a production process. Activity-Based Costing is able to present more accurate product cost and information, and is a direct measurement of the profitability of products that more accurately reflects strategic decisions on the selling price, market product lines and expenditure models. It also obtained a more accurate measurement of the costs triggered by activity, thus helping management improve the product value and the value of the process, thereby helping the information on costs for decision making (Carter et al, 2012). The weakness of *Activity-Based Costing* is that some costs were allocated at random due to limitations in finding the cost of the activity. It also ignores the cost of analysis and requires extensive time and cost. The Activity-Based Costing method can help to reduce unnecessary cost effectively and reduce costs that do not have added value and can even remove the cost of unnecessary activity through activity analysis. Analysis of activity should result in: (1) what activities are carried out; (2) how many people are doing the activity; (3) the time and resources required to perform the activity; and (4) the calculation of the value of the activity

5 CONCLUSION

Based on this study, it could be concluded that the calculation of unit cost can be used in controlling costs in health services provided by health agencies. The results showed that the unit cost calculation in CSI Hospital X was divided into eight qualifications based of operation, which resulted in minimum and maximum unit cost intervals as follows: (1) *Minor*: IDR 1,320,206 and IDR 2,805,815; (2) *Moderate*: IDR 2.05707 million and IDR 2,733,284; (3) *Major*: IDR 2,408,011 and IDR 3,995,652; (4) *1stMajor*: IDR 2,228,755 and IDR 4,759,747; (5) *2ndMajor*: IDR 1,727,593 and IDR 5,523,273; (6) *3rdMajor*: IDR 3,049,093 and IDR 7,099,322; (7) *4thMajor*: IDR 6,176,461 and IDR 7,512,786; (8) *5thMajor*: IDR 1,711,223 and IDR 9,439,909. Calculation of unit cost is analyzed using many approaches and methods, one of which is Activity-Based Costing.

Therefore, the recommendations can be given as follows. (1) There should be improvement in the inventory records of medical devices and non-medical, either in the form of soft files or hardfiles; (2) improvement in the recording and reporting of activities of medical in Central Surgery Installation by developing an integrated system for recording and reporting; (3) provision of services of medical personnel according to their competencies, thus incorporating elements of clinical pathways becoming absolute in recording employee data; (4) registration of consumables per action should be through clear mechanisms ranging from pharmacy depot or warehouse pharmacy to the pharmacy that provides services; therefore it is necessary for the manufacture and development of integrated information systems; (5) the development and strengthening of the integrated management information system in any installation; and (6) provide training to Human Resources to run the new information technologies

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Why People Decide to Participate in National Health Insurance? Based on Theory of Planned Behaviour and Technology Acceptance Model

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Keywords: Decision, Membership, National health insurance, Technology acceptance model, Planned behaviour theory.

Abstract: There are many Indonesian have not participated in National Health Insurance (NHI). Preliminary study on 2016 in Faculty of Public Health, Universitas Airlangga showed only 29.5% (102 students) participated in NHI. From 102 students, only 34.3% paid the premium by their parents for their non-wage workers status whereas for the rest, the premium was paid by employer or through wage cut. The purposes of this study are influenced by the combination of planned behavior theory and technology acceptance model. This observational analytic research with cross-sectional design used stratified random sampling to obtain 242 parents of the student. Result shows that most parents had negative perceived ease of use and perceived usefulness about NHI. Attitude, subjective norm and perceived behavioral control of parents about NHI are also negative, whereas regression test shows that perceived ease of use influenced perceived usefulness. Both perceived usefulness and perceived ease of use influenced attitude on NHI, whereas intention to participate in NHI was influenced by perceived usefulness, attitude, subjective norm and perceived behavior control. Conclusion shows, need to improve perceived usefulness, perceived ease of use, attitude, subjective norm and perceived behavioral control through education on NHI program.

1 INTRODUCTION

In the past 15 years, many countries have adopted universal health coverage (UHC) as an aspiration for national policy. In 2010 World Health Report, universal health coverage is defined as providing everyone in a country with financial protection from the costs of using health care and ensuring access to the health services they need (World Health Organization, 2010).

The National Health Insurance Program (NHI) is a form of government commitment to the implementation of public health insurance to reach universal health coverage in Indonesia which entered into force on 1 January 2014. NHI membership is mandatory and implemented gradually over the entire people in Indonesia referring to Article 4 at the Social Security Act Constitution in 2004 which is declare that the principle of compulsory membership is a principle that requires the entire population to become social security participants which implemented in stages.

Beside Indonesia, Taiwan also implements national health insurance to reach universal health

coverage since 1995. Based on research, participation in Taiwan almost reach 99% because it is a mandatory health insurance scheme (Wu et al., 2010).

Meanwhile Indonesia implemented national health insurance just recently. In 2014, national health insurance implemented to address growing disparities in health care and make basic health care available to entire population of Indonesia. There is however some evidence of areas where NHI in Indonesia is underperforming.

One of the problems in Indonesia is the low participation of citizen in national health insurance and the participation dominated by the low income family which their participation is paid by the government. Community's decision to participate in a health insurance scheme is determined by socio-cultural and socio-economic factors (Fenebga et al., 2015). There are several factors caused the decision of citizen to actively participate in national health insurance. Research showed that intensify community education and balanced commitment to technical and perceived quality improvement effort related to national health insurance are needed to

enhance and stimulate active participation in national health insurance (Alhassan et al., 2015).

Based on the preliminary survey conducted to 346 students at Faculty of Public Health (FKM), Universitas Airlangga, showed that only 29.5% (10 + 2 students) who participate in the program NHI. Among the 102 students, only 34.3% who pay premiums independently and classified as Not Receiver Wage Workers (PBPU). The purpose of this study was to analyze the factors that influence parents' decisions to participate in NHI program by using a combination of planned behaviour theory and technology acceptance model.

2 METHODS

This is quantitative observational with analytic design. The sample size on this research is 242 parents of Faculty of Public Health, Universitas Airlangga's students. The sampling technique used stratified random sampling technique. This study was conducted in December 2016 until May 2017. Data collected with questionnaire and analysed with statistical method to analyse the factors influencing intention to participate in NHI

3 RESULTS

This research showed parents' perception about perceived of used, perceived usefulness, attitude subjective norm and perceived behaviour control of the National Health Insurance (NHI) program.

Table 1: Perception of parents about Perceived Ease of Use and Perceived Usefulness of the National Health Insurance program (NHI)

| Perceptions | Perceived Ease of Use | | Perceived Usefulness | |
|-------------|-----------------------|------|----------------------|------|
| | n | % | n | % |
| Bad | 93 | 38.4 | 87 | 36 |
| Enough | 79 | 32.6 | 84 | 34.7 |
| Good | 70 | 28.9 | 71 | 29.3 |
| Total | 242 | 100 | 242 | 100 |

Table 1 shows that the majority of parents have poor perceptions of Perceived Ease of Use and Perceived Usefulness in the National Health Insurance (NHI) program.

Table 2: Perception of parents about the attitude, subjective norm, and perceived behavioural control of the National Health Insurance program

| Perceptions | Attitude | | Subjective norm | | Perceived Behavioural Control | |
|-------------|----------|------|-----------------|------|-------------------------------|-----|
| | n | % | n | % | n | % |
| Bad | 104 | 43 | 99 | 40.9 | 89 | 6.8 |
| Enough | 53 | 21.9 | 77 | 31.8 | 75 | 1 |
| Good | 85 | 35.1 | 66 | 27.3 | 78 | 2.2 |
| Total | 242 | 100 | 242 | 100 | 242 | 100 |

Table 2 shows that most of parents have a bad perception about the attitude, subjective norm, and perceived behavioural control of the National Health Insurance program (NHI).

Table 3: The test results of the influence between perceived ease of use and parents perceived usefulness on the NHI program

| No. | Variable | Standardized Coefficients (β) | Significance (p) |
|-----|-----------------------|-------------------------------|------------------|
| 1. | Perceived Ease of Use | 0.700 | 0,000 * |

Table 3 shows that the parental perception of perceived ease of use significantly influences the perceived usefulness with p value of 0.000. Therefore, there are similarities ratings of perceived ease of use of the perceived usefulness of students and parents.

Table 4: The Test Results of the influence of Perceived Usefulness and Perceived Ease of Use against Student Parent Attitude

| | Variable | Standardized Coefficients (β) | Significance (p) |
|----|-----------------------|-------------------------------|------------------|
| 1. | Perceived Usefulness | 0.236 | 0,000 * |
| 2. | Perceived Ease of Use | 0.275 | 0,000 * |

* a significant effect, P < 0.05

Table 4 shows that perceived usefulness and perceived ease of use has a significant influence on the attitude of parents of students on the National Health Insurance program (NHI).

Table 5: Influence Test of Perceived Usefulness, Attitude, Subjective Norm and Perceived Behavioural Control to the Student Parent's Intention to the National Health Insurance Program (NHI).

| No. | Variables | Standardized Coefficients (β) | Significance (p) |
|-----|-------------------------------|-------------------------------|------------------|
| 1. | Perceived Usefulness | 0.599 | 0,000 * |
| 2. | Attitude | 0.146 | 0,023 * |
| 3. | Subjective Norm | 0.529 | 0,000 * |
| 4. | Perceived Behavioural Control | 0.467 | 0,000 * |

* a significant effect, P < 0.05

According to the table 5, it can be seen that the perceived usefulness, attitude, Subjective norms and perceived behavioural control have a significant effect on the parents' intentions to the National Health Insurance (NHI) program. Based on the influence (β), it is known that perceived usefulness have the greatest influence on parents intention, then subjective norm and perceived behavioural control.

4 DISCUSSIONS

In this research, there were several variables analysed to identify its influence towards intention to participate in national health insurance. The variables such as perceived of usefulness, attitude, perceived ease of use and subjective norm. These variables compiled based on Theory of Planned Behaviour and Technology Acceptance Model.

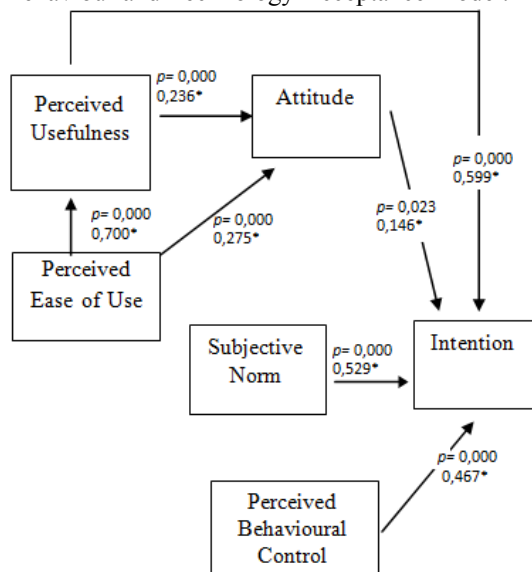


Figure 1: Factors affecting intention to participate in NHI

Based on figure 1, there are several factors affecting, directly and indirectly, towards intention to participate in NHI program. Perceived usefulness, attitude, subjective norm, and perceived behavioural control showed significant and direct influence towards intention to participate in NHI. Meanwhile, perceived of use and perceived usefulness also showed significant and indirect influence towards intention to participate in NHI.

4.1 Perceived Usefulness

Perceived usefulness is defined as the extent to which a person believes that NHI program will provide benefits for student's parent. Based on the results of the study shows that most of parents (36.00%) have poor assessment of perceived usefulness. It can be interpreted that most of parents feel that the NHI program does not provide benefits in life. Results of linear regression analysis showed that perceived usefulness effect on the attitude of the parents of students. In tune with the research Widhiastuti, et al (2015) stated that the perception of the benefits (perceived usefulness) had a significant influence with NHI membership.

4.2 Perceived Ease of Use

Perceived ease of use is to measure a person trust over NHI program will provide students and parents have health services easily in NHI era. Based on the survey results, revealed that most of parents (38.40%) have a perception Perceived ease of use is bad. This may imply that most of parents feel that the program is give less benefit to obtain health services.

4.3 Attitude

Attitudes are a negative and positive response on the part of a person if they have to perform the behaviour to be determined, in relation to the student's parental attitudes toward the acceptability of the NHI program. Based on the results of this study is that the most of parents (43.00%) being negative to the NHI program. Linear regression test showed that attitudes affect the intentions of the parents of students participated in NHI. This is in line with study conducted by Purwaningsih (2016) which states that there is a significant relationship between the family head attitude and NHI program membership.

4.4 Subjective Norm

Subjective norm is the perception of social pressure are used to behave or not behave that can be influenced by others. Most of parents (40.90%) rate subjective norm negatively. Linear regression test showed that the effect on the subjective norm influenced parents intention to participate in NHI program. This is in line with previous study by Takhti, Rahma and Abedini (2013) which describes the influence of subjective norm to intention.

4.5 Perceived Behavioural Control

Perceived behavioural control is confidence that individual will ever on never do, which is then estimated by his ability to do. In this case, the student's parents will estimate their ability to receive the NHI program. Linear regression test showed that perceived behavioural control affect the parents' intention to participate in NHI program. This is contrasts with other study conducted by Melinda, et al (2016) which states that there is no relationship between behavioural control (perceived behavioural control) with the participation interest in BPJS.

4.6 Intention

Intention is an indication of the readiness of individuals to perform certain behaviours that are assumed to be direct influence of individual behaviour. Based on the value of the influence of variables that affect the intention, subjective norm is the most powerful influencing variable.

5 CONCLUSIONS

Most of student's parents have perceived ease of use perceptions, perceived usefulness, attitude, subjective norm, and perceived behavioural control is bad against the National Health Insurance program (NHI). Results of regression analysis showed that perceived usefulness and perceived ease of use influence the attitudes of parents toward NHI program. Parents Intention becomes participants in NHI influenced by perceived usefulness, attitude, subjective norm and perceived behaviour control. The conclusion showed that to improve parents to participate in the NHI program, we need to increase the perceived usefulness, perceived ease of use, attitude, subjective norm and perceived behavioural control through education about NHI program.

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Increase Compliance Implementation Regional Regulation No 5 Year 2008 above SFA and SRA in Surabaya Used Monitoring Team Methods

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Keywords: SFA, SRA, Implementation, Monitoring team.

Abstract: The monitoring team for assess compliance facilities to implemented regulation about Smoke Free Areas (SFA) and Smoke Restricted Areas (SRA) has been established by decree of the Mayor. The aim of the study was a comparison between the facilities with a monitoring team and without a monitoring team. This was a case control study. Cases is the places that are in the category of health facilities where there is a monitoring team. A survey of 300 places (100 places were Case and 200 places were Control). Cluster Random Sampling was used based on the different areas of Surabaya (East, West, Center, North, and South). Data collection was done by an observation check list. The study found that places where the monitoring team is significantly affects the implementation of the regulation. They showed that signage 'no smoking' ($p=0.00$;OR3.58), No found smokers ($p=0.00$; OR13.68), No Smell of cigarette smoke ($p=0.00$;OR32.33), No found Ashtrays ($p=0.00$;OR2.9), no found cigarettes butts ($p= 0.00$; OR5.6) and no cigarette sellers ($p=0.00$;OR3.69) significantly. Only one variable (There are no smoking rooms) ($p = 0.06$,OR 1.85) showed no significance. The monitoring team is very important to increase the effectiveness of the compliance with the regulation's implementation.

1 INTRODUCTION

The establishment of a Smoke Free Area (SFA) regulation is an obligation that all district and city governments should implement. This is based on Article 8 of the FCTC (Framework Convention on Tobacco Control) has regulated the provision of Smoke Free areas as an effort to protect against exposure to secondhand smoke(World Health Organisation, 2005). Beside that Government Regulation of health No. 36 2009 on article 115 which states that every local government is obliged to establish a Smoke Free Area in their Territory. There are seven areas included in the Smoke Free Area. These are health care facilities, teaching and learning places, children's playgrounds, places of worship, public transportation, workplace and public places (Presiden RI ,2014).

Surabaya is one of the pioneer cities regarding the regulation, as one of the cities in Indonesia which already has a Smoke Free Area (SFA) and a Smoke Restricted Area (SRA). This came with the issuance of the regulation, namely Perda Kota Surabaya no 5 2008 regarding SFA and SRA (Walikota Surabaya 2008b).

A Smoke Free area is an area where it is prohibited to produce, sell, advertise, promote and

use cigarettes. A Smoke Restricted Area is a place or area where smoking activities are restricted to occurring within.

A Smoke Free area referred to in local regulations includes children's play spaces, learning facilities, health facilities, places of worship and public transport. Smoke Restricted Areas are workplaces and public places such as malls, restaurants, hotels, sports venues, terminals, stations.(Walikota Surabaya 2008b)

This regulation is designed to protect Surabaya residents from exposure to second-hand smoke. This regulation was enacted in 2008 and implemented in 2009. The Surabaya city government has established a Smoke Free Area Monitoring Team and a Smoke Restricted Area in Surabaya city to monitor the implementation of Surabaya regulation no 5/2008 on SFA and SRA. The team was formed in 2009 based on Surabaya Mayor's Letter Number 188.45 / 330 /436.1.2/2009.(Walikota Surabaya 2008a) Many argue that the rules on SFA have not been properly implemented. This is because there are still many violations found in facilities that fall into the category of SFA or SRA.

Currently, the SFA and SRA monitoring team is only active in Surabaya City Health Office. Surabaya City Health Office monitors only the

health facilities. While other facilities include a Smoke Free Area and a Smoke Restricted Area, there is no monitoring team that does monthly monitoring visits. The aim of this study was comparison between the facilities with the monitoring team actively visiting and those that are not visited by the monitoring team.

2 METHODS

This was case control study. The cases were in places that are in the category of health facility in which there is a monitoring team. The control sample is in places in other categories for facilities where there is no monitoring team. A survey of 300 places (100 places Case and 200 places for the Control) that were categorised as Smoking Restricted Areas and Smoking Free Areas under the Regulation was conducted.

Cluster Random Sampling was used based on the different areas of Surabaya (East, West, Center, North, and South). Data collection was done by an observation check list. The observation check list have been modified based on the Guideline to Assessing Compliance with Smoke-Free Laws, Second Edition A “How-to” Guide for Conducting

Compliance Studies was used (Birckmayer et al. 2014). The variables consisted of people still found to be smoking inside the building, found smoking ban, the presence of smoking rooms, ashtrays, cigarette butts and cigarette sellers found in the Smoke-Free Area.

Data analysis in this study was conducted univariate and bivariate. Univariate analysis is performed to describe each variable. While bivariate analysis using chi square statistical test to get how much influence between independent variable to case or control.

3 RESULT

The result of this research found 300 facilities consisting of 100 facilities that were entered in the case category and 200 facilities included in the control category. There were 7 variables used to assess the compliance of the facilities with the local regulation, namely the existence of smoking prohibitions in accordance with local regulations, no smoking room found, no smoke smell, no ashtrays, no cigarettes, no cooperation with the cigarette industry and no cigarette sales.

Table 1. Distribution of the percentage of facilities with and without monitoring facilities

| Variable | | Facilities with Monitoring team | | Facilities Without Monitoring team | | P< 0.05 OR |
|--------------------------------------|-----|---------------------------------|-----|------------------------------------|------|--------------------------|
| | | Number | % | Number | % | |
| signage”no smoking | Yes | 73 | 73 | 86 | 43 | P 0.00 OR 3.58 |
| | No | 27 | 27 | 114 | 57 | |
| No found smoker | Yes | 91 | 91 | 85 | 42,5 | P 0.00 OR 13.68 |
| | No | 9 | 9 | 115 | 57,5 | |
| No Smoking room | Yes | 83 | 83 | 145 | 72,5 | P 0.06 OR 1.85 |
| | No | 17 | 17 | 55 | 27,5 | |
| No Smell cigarette smoke | Yes | 97 | 97 | 100 | 50 | P 0.00 OR32.33 |
| | No | 3 | 3 | 100 | 50 | |
| No found Astray | Yes | 64 | 64 | 76 | 38 | P 0.00 OR 2.9 |
| | No | 36 | 36 | 124 | 62 | |
| no found cigarettes butts | Yes | 68 | 68 | 55 | 27,5 | P 0.00 OR 5.60 |
| | No | 32 | 32 | 145 | 72,5 | |
| No Corporation with Tobacco Industry | Yes | 100 | 100 | 66 | 33 | P 0.00 OR Undefine |
| | No | 0 | 0 | 134 | 67 | |
| No Cigarette Seller | Yes | 78 | 78 | 98 | 49 | P 0.00 OR 3.69 |
| | No | 22 | 22 | 102 | 51 | |

The results showed that facilities which had a monitoring team have a smoking ban of 73% while for facilities that did not have monitoring team, only

43% put up signage of the smoking ban. Based on statistical calculations, it shows that facilities with a monitoring team are more than 3 times (p <0.05; OR

3.58) likely to be against the installation of a smoking ban.

The Facilities which had a monitoring team easier to prevent smoker at that facilities. This study found that 91% facilities no smoker founded. The facilities with monitoring team are more than 13 times ($p < 0.05$; OR 13.68) no found smoker than others.

The 'No Smoking room' variable showed that 145 (72.5%) facilities in the control group provide a smoking room. According to local regulations No. 5 2008 states that public facilities and facilities are included in the Smoke Restricted Area (SRA) category. The SRA is still allowed to provide a smoking. It should be separate with an area declared as a place for otherwise forbidden smoking, equipped with exhausts and with adequate ventilation.

Many smoking rooms were not accordance with local regulations at the time of observation. The room was still inside the main building, there were no exhausts that immediately emitted the tobacco smoke outdoors and the room's smoking door was often open so that the cigarette smoke got in to the main building and resulted in second hand smoke exposure.

The facilities which had monitoring team can avoid some violation like as Smell cigarette smoke, Found Astray and Found cigarette butts. This study showed that three variabel showed significant difference between facilities had monitoring team or not.

Other results related to non-smoking compliance indicated that the relevant variables of cooperation with the tobacco industry shows the highest compliance, as all of the monitoring team facilities do not cooperate with the tobacco industry. Based on statistical calculations, it shows that facilities with a monitoring team have a significant influence on the compliance variable in the form of no cooperation with the tobacco industry.

Beside that, Facilities with a monitoring team can decrease shop sell cigarette. This study show that the facilities with monitoring team no found seller cigarette 3 times than nor.

4 DISCUSSION

The present study showed that facilities that have a monitoring team have a higher level of compliance with local regulations. This is influenced by the fact that the Surabaya city health office has a monitoring team consisting of the staff of the Surabaya city

health office, professional organisations such as the Indonesian Public Health Association (IPHA), Indonesian Pharmacist Association (IPA), Satpol PP and academics. Job description of monitoring team is monitoring every month in health facilities that include Hospitals, Primary Health Care, Apoteks, Drug Stores, Clinics and General Practitioners regularly. The role of monitoring has shown improvement every year. It is like in the previous study, which stated a decline in the violation in some of the indicators used to assess implementation compliance with SRA and SFA from 2012 to 2014 (Artanti et al., 2015).

While the facilities as controls in this study are facilities that the categories of public places and workplaces. The public places consist of hotels, restaurants, malls, markets and parks. In fact all the facilities in Surabaya have a monitoring team that has been formed by the mayor in the mayor's decree, but not all do their job well.

This has led to violations, especially in facilities that monitoring team has not been well served. This is like other studies in Greece and Bulgaria showing that daily Greek smokers reported that they systematically violated the existing smoking restrictions at work, compared to the Bulgarian employees (Lazuras et al., 2012). Nevertheless smoking should not be allowed anywhere in public places (Li, J., & Newcombe, 2013).

Many suggest that the implementation of local regulations on SRA and SFA is not optimal, due to the absence of strict sanctions on violations that have been committed. Another study conducted by Borland et al declared that current cigarette smokers would support smoking bans associated with living in a place where the law prohibits smoking. Smokers adjust, and both accept and comply with smoke-free laws (Borland et al., 2006). Therefore the role of the monitoring team needs to function optimally because it consists of Prevention, Monitoring, Action, Evaluation and Reporting (Walikota Surabaya, 2017).

5 CONCLUSIONS

The monitoring team is very important to increase the effectiveness of compliance implementation. There is a need to revitalise the function of the monitoring teams coordinated by local government officials.

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Relationship Between Total Incomes with Willingness to Pay in National Health Insurance on Coffee Farmer in Jember

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Keywords: Willingness to pay, National healthi, Coffee farmer.

Abstract: Based on formative study in 2015, there were 98% of inhabitants who haven't register as a participant in National Health Insurance (NHI) at Silo Sub district. From unregistered participant, 46.9% haven't received information about NHI, while 29.2% showed their dissatisfaction about primary health services. In general, incomes still to be main factor of NHI participation. The objectives of the study were analyze correlation between total incomes with Willingness to Pay (WTP) and based on their education level and socialization they had. The type of study was analytic and involved 98 respondents. The result showed there were positively correlated between total incomes with WTP ($r_s = 0.462$; $p = 0.000$), even though relationship statistically was only shown in uneducated level group ($r_s = 0.704$; $p = 0.002$), senior high school and higher ($r_s = 0.716$; $p = 0.003$) and also socialized group ($r_s = 0.571$; $p = 0.000$). The recommendations are optimize socialization of NHI to informal groups, middle groups and also empowering available resources in the community

1 INTRODUCTION

Jember is the one of districts in East Java that has great potential in coffee plantation. The subdistrict area which is gives high contribution in robusta plantation is Silo. In 2013, there was broad enough space for coffee plantation area, it was 2.288,70 hectares by coffee production of 9.336,01 quintal (BPS Jember, 2014). These flagship commodity are expected to improve the welfare and financial capability of coffee farmers as we know that coffee farmer have become main livelihood of the community, thereby reducing poverty and financial incapacity in the community.

In 2004 the government issued Law Number 40/2004 on the National Social Insurance System (SJSN) which explains that social and health insurance are compulsory for the entire population and managed by a Social Insurance Agency (BPJS). This policy then then resulted in a program which called National Health Insurance (NHI). This coverage system has been implemented since January 1st, 2014. In order to succeed of NHI, the government targets the entire population of

Indonesia must become participant no later than January 1st, 2019 or known as Universal Health Coverage (UHC).

Based on formative study in 2015, there were 98% of inhabitants who haven't register as a participant in National Health Insurance (NHI) at Silo Sub district. From unregistered participant, 46.9% haven't received information about NHI, while 29.2% showed their dissatisfaction about primary health services. In general, incomes still to be main factor of NHI participation although at the time of harvest, some coffee farmers' income were quite good. This condition will be an obstacle to UHC achievement.

In paying for health services, the Willingness to Pay (WTP) aspect becomes important thing, because it is a combination of perception and intention in making payments, in another side, WTP is the maximum willingness of consumers to buy a product (Herfert, 2007). WTP can be influenced by a person predisposing factor because predisposition either directly or indirectly affects the person's attitude and behaviour. Main factors affecting the WTP in health insurance include the products which offer; quality and quantity of services provided; user utility or

intent to services and user income (Permata, 2012). The objectives of the study were analyze correlation between total incomes with Willingness to Pay (WTP) and based on their education level and socialization they had.

2 METHODS

The type of study was analytic, based on timing of the implementation; it was cross sectional study and involved 98 respondents. The selection respondents was done by multistage random sampling technique while the analysis used was spearman analysis..

3 RESULT

3.1 Distribution of Respondents

The education level in the study was categorized in four category, there were uneducated level, elementary school level, junior high school level and senior high school or higher. Eventhough the data of total income in the study was ratio, in the table below is categorized in three category. The distribution of respondents in this study is shown in the table below.

Table 1: Distribution of the percentage of respondents

| Variables | N | % |
|------------------------------|----|--------|
| Education Level | | |
| Uneducated | 16 | 16.3 |
| Elementary school | 42 | 42.9 |
| Junior high school | 25 | 25.5 |
| Senior high school or higher | 15 | 15.3 |
| Total | 98 | 100.0 |
| Total Income | | |
| <1.500.000 | 33 | 33.67 |
| 1.500.00 – 3.000.000 | 55 | 56.12 |
| >3.000.000 | 10 | 10.20 |
| Total | 98 | 100.00 |
| Socialization | | |
| Socialized | 53 | 54.1 |
| Unsocialized | 45 | 45.9 |
| Total | 98 | 100.0 |
| WTP | | |
| 0 – 25.000 | 88 | 89.8 |
| 25.500 – 42.400 | 8 | 8.2 |
| 42.500 – 59.400 | 2 | 2.0 |
| Total | 98 | 100.0 |

3.2 Correlation Analysis

The result showed there was positively correlated between total incomes with WTP ($r_s = 0.462$; $p = 0.000$), even though relationship statistically was only shown in uneducated level group ($r_s = 0.704$; $p = 0.002$), senior high school and higher ($r_s = 0.716$; $p = 0.003$) and also socialized group ($r_s = 0.571$; $p = 0.000$). Distribution of correlation between total income and willingness to pay is shown in graph below.

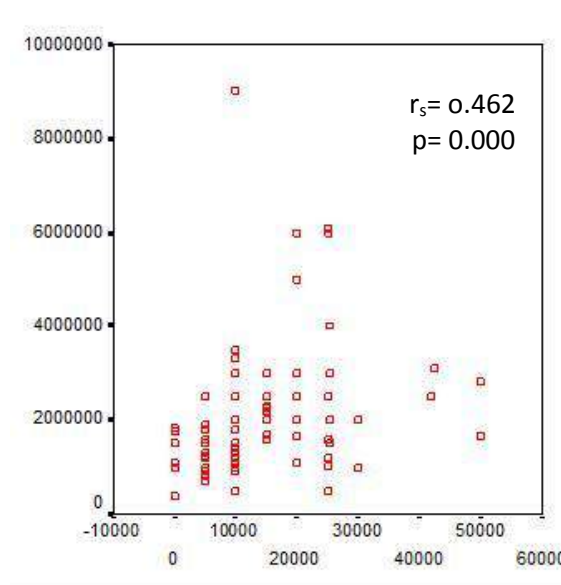


Figure 1: Correlation between Total Income and WTP

4 DISCUSSION

The result showed there was positively correlated between total incomes with WTP. It is according to ho much on essential and non essential food expenditure they had. These result are in accordance with Binnendijk et., al (2013) who stated in their study that hel on rural poor community in India that level of WTP could be estimated based on each community's food expenditures. Based on the results obtained, all research variables were positively correlated, but statistically related was only found in uneducated and senior high school or higher. This shows that the level of education has a relationship to the willingness to pay. This confirms that higher the educational level of a person will give more information obtained (Notoatmojo, 2002). The results showed that that higher educational level has

a relationship to WTP and this finding is consistent with Dror et., al (2007) that stated education is secondary factor which has relationship to WTP in India as well as on the results obtained from research conducted in Nigeria by Onwujekwe et., al (2009) that males and people with more education stated higher WTP values than females and those with less education.

Information gained will affect a person's perception to be more positive causing the expected behaviour because it is able to absorb and understand the knowledge they gain. Similarly, the information obtained, the more information obtained, the more increase the knowledge of a person. Higher total income also causes a person to increase his willingness to pay.

5 CONCLUSIONS

Some of these results show that to improve willingness, improving education levels, improving socialization and improving income are main key to improving willingness to pay. This can be done by involving a key group in the community to become an NHI socialization agency. Increasing the welfare of farmer groups becomes a necessity that must be achieved. This can be done by developing a group of coffee farmers. The development of small medium enterprises become one of the alternative that can be done which of course need support and attention from local government

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The Impact of National Health Insurance Program on Equity of Inpatient Care Access in Hospital: The Indonesian Family Life Survey Data

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Keywords: JKN, Equity of JKN, Equity of inpatient care, Propensity score matching-difference in difference, Concentration index.

Abstract: Access to health care is a basic right of every resident. The State has an obligation to ensure the health for every citizen. By implementing the National Health Insurance Program (*Program Jaminan Kesehatan Nasional, JKN*). The main objectives of the JKN is to improve access of health services and to improve egalitarian equity. To evaluate how far the JKN meeting the goal studies are needed. The purpose of this study is to evaluate the impact of the JKN equity of inpatient care. The design of this research is retrospective quasi experiment using IFLS data of 2007 and 2014. The sample is IFLS respondents which is ≥ 40 years old. The analysis used Probit, Propensity Score Matching and Difference in Difference. The results showed that the JKN increase inpatient probability by 115.8%. The study found significant improvement of concentration index (more equitable) among JKN member. The researcher recommended acceleration of JKN membership and the availability of hospital beds within reasonable geographical access to further improve equity.

1 INTRODUCTION

Access to health services is a basic right of every resident. Access is defined as the opportunity and ability of a person to obtain the necessary health services and protection from financial risks (Appiah et al 2011; Braveman 2006; vans et al 2013). The fulfillment of human rights to access to health services is a means of equitable distribution of health services that must be accepted by every resident regardless of economic level (egalitarian equity).

Egalitarian equity is agreed as the most important goal in any health system in the world⁵. Unfairness in access and utilization of health services will have an impact on health inequalities (Liu et al, 2012). The disparities in access to health services occur in almost all countries, including Indonesia. Access disparities occur in all types of primary and secondary health services. But in this

study, researchers focused on inpatient disparities that can impoverish the population, if they do not have an insurance. One characteristic of complex advanced health care services is there is a huge cost for each service that is generally unaffordable for each family. Out-of-pocket health spending causes a high gap (there will be no equity).

The facts of inequality in access to health services in Indonesia are caused by several aspects such as geographical aspects, limited health facilities, limited health budget and unequal distribution of health personnel throughout Indonesia. The fact of inequality of access in Indonesia from various aspects mentioned above has long been a concern of the government. Until the end of Law number 40 of 2004 mandated to the state to develop a national social security system which one of them is health insurance (Bappenas, 2015). On January 1, 2014 Indonesia officially launched the National Health Insurance (JKN) program managed

by National Health Insurance Corporation (*Badan Penyelenggara Jaminan Kesehatan, BPJS*) in accordance with Act No.24 / 2011.

The National Health Insurance Program (JKN) is organized nationally with the primary objective to improve the access to formal health care and to improve the equity of healthcare. The JKN program is the state's effort to ensure the fulfilment of basic public health needs so that they can live healthy, productive and prosperous lives.

The result of monitoring and evaluation of JKN by some independent institutions, mass media and also academics showed that the main problem of JKN on health service in hospital. Based on the facts presented above, it is necessary to continuously evaluate JKN to see how far the goal of improving access to and equity of health services is achieved.

2 METHODS

This study is an impact evaluation that aims to measure the effects of the National Health Insurance (JKN) Program on the equity of inpatient services access at the hospital. This study used a quasi-retrospective experimental design. The picture of the effects of JKN on inpatient care equity is derived from the measurement of equity utilization of inpatient services prior to JKN and after the current JKN program. This study using IFLS (Indonesian

Family Life Survey) data in 2007 (describe condition before there JKN program) and 2014 (describe condition after JKN program implemented). The data sets are also supplemented with Village Potential Survey data (Survei Potensial Desa, *PODES*) to complement the description of health facility variables. The location of this study covers all areas of IFLS samples in 13 provinces in Indonesia (IFLS I): in Java, Sumatera, Bali, West Nusa Tenggara, Kalimantan and Sulawesi.

The sample of this research is IFLS respondents who have age ≥ 40 years with sample number 12,964 respondents. The basic selection of research samples with age ≥ 40 years is inpatient services largely due to chronic conditions and questions related to chronic conditions in IFLS are only asked on respondents who have age ≥ 40 years. The analysis used in this research is a combination of propensity score matching and difference in difference (PSM-DID), concentration curve and concentration index

3 RESULTS

The impact of the JKN program on inpatient access in this study was measured using a combination of propensity score matching and difference in difference (PSM-DID) methods. The result of PSM-DID calculation in this study as follows:

Table 1: Difference of In-patient Utilization in Hospital in Before and After JKN Program

| Variable | Before JKN | | Diff | After JKN | | Diff | DID | |
|--------------------------------|------------|---------|-------|-----------|---------|-------|-------|-----|
| | JKN | Non-JKN | | JKN | Non-JKN | | Diff | Sig |
| | Mean | Mean | | Mean | Mean | | | |
| Total In-patient | 0.029 | 0.010 | 0.019 | 0.053 | 0.012 | 0.041 | 0.021 | *** |
| In-patient in Public Hospital | 0.023 | 0.006 | 0.017 | 0.031 | 0.006 | 0.024 | 0.007 | *** |
| In-patient in Private Hospital | 0.006 | 0.004 | 0.002 | 0.024 | 0.005 | 0.019 | 0.016 | *** |

Note :significant: p value <0.01

The difference values indicate the magnitude of the impact of the JKN program on the utilization of inpatient services in hospitals. The result of the analysis shows that the JKN program significantly (p value <0.01) gives the same impact on access of inpatient service in hospital that is 115,8% (2,1 points). When the analysis was done separately on each type of hospital (not combined), the PSM-DID analysis results showed differences in both types of samples. In the main sample of the study (respondents \geq age 40 years) it appears that the JKN program significantly (p value <0.01) had an effect on access to inpatient services in private hospitals of 850% (1.6 points) and at government hospitals

41.2% (0.7 points). The results of this study are in line with several studies conducted in Indonesia as well as in some countries where health insurance is significantly able to improve access to health services. A study of the compulsory health insurance effect on outpatient equity in Indonesia conducted by Budi Hidayat, et al (2004) proves that ASKES insurance for civil servants has a strong positive impact on access to outpatient services in government health facilities.

The ultimate goal of this study was to identify changes in the equity of access to inpatient health care services in hospitals after 1 year of the current JKN program. The equity of inpatient health

services in this study was analyzed using concentration and concentration index.

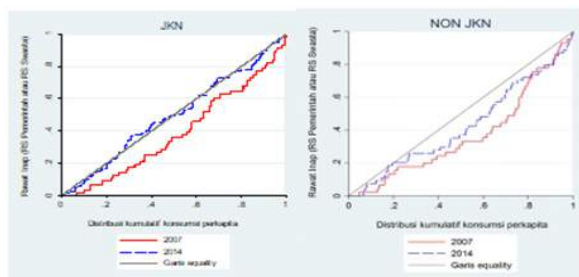


Figure 1: Concentration Curve of Hospital's In-patient Care in The Before and After Implementing JKN in JKN and Non-JKN Group

The concentration curve in figure 1 indicates that the JKN program is able to improve access inpatient care gaps in hospitals. This can be proven in the JKN group in 2014 (after the JKN program is implemented) the position of the curve moves closer to the equity line compared to 2007 (before the JKN program is implemented) the curve is below the equity line. The same thing happened to non- JKN group, but the biggest change of equity in inpatient care occurred in JKN group.

The magnitude of the equity value of the JKN and Non-JKN group curves in the figure 1 can be measured using the concentration index. Differences of the equity value of the JKN and Non-JKN groups are the magnitude of the impact of JKN on the equity of inpatient care access at the hospital.

Table 2: The Impact of National Health Insurance Program on Equity Of Inpatient Care Access in Hospital

| Variable | JKN Group | | Non-JKN Group | | Diff |
|-----------------------------|-----------|---------|---------------|-------|---------|
| | 2007 | 2014 | 2007 | 2014 | |
| | CI | CI | CI | CI | |
| Total In-patient | 0.226 | 0.006 | 0.263 | 0.151 | (0.108) |
| In-patient Public Hospital | 0.218 | (0.055) | 0.182 | 0.104 | (0.196) |
| In-patient Private Hospital | 0.293 | 0.084 | 0.414 | 0.205 | 0.000 |

Table 2 shows that the impact of the JKN program on the equity of inpatient care access in hospitals is -0.108. A negative concentration index

gives meaning that hospitalization services provided by the JKN program are more utilized by the poor

4 DISCUSSION

This study proved that after 1 year have implemented, JKN program able to give positive impact on access of inpatient service in hospital by 115.8% (2.1 poin) in the sample of the research with age ≥ 40 years old.

The results of this study are in line with several studies conducted in Indonesia as well as in some countries where health insurance is significantly able to improve access to health services. A study of the compulsory health insurance effect on outpatient equity in Indonesia conducted by Budi Hidayat et al (2004) have been proved that ASKES insurance for civil servants has strongly positive impact on access to outpatient services at government health facilities (Hidayat, et al, 2004). Sparrow et al (2013) conducted a study on Askeskin in Indonesia, the results showed that the Askeskin program was able to improve the utilization of health services in both outpatient and inpatient services (Sparrow, et al, 2013). Another similar study showed that health insurance is able to provide economic protection to civilian civil servants on inpatient and outpatient health services so that their access to health services is widespread (Sparrow et al,2013; Szarcwald, CL et al 2010).

Equal conditions in access to health care for all residents are an ideal condition expected by each country (Bonfrer, et al, 2016). Findings from studies from various countries show that social insurance can improve the equity of access to health services (Braveman,2006; David HP et al, 2008; Hidayat, 2004). When access equity can be achieved it will affect the occurrence of macro efficiency (low health costs). Efficiency is one of the expected outcomes of a market mechanism in healthcare (Szarchwald et al, 2010).

The improvement of equity in inpatient services in hospitals on the findings of this study has an influence on the main national policies on the JKN program. Although the access of inpatient services has not reached a perfect condition of equity but the findings of this study indicate scientifically that the JKN program is able to improve access to in-patient hospital health services and be able to change the condition of equity inpatient access to equity is perfect compared to before the program JKN. Thus it can be said that the government needs to make continuous efforts to

expand the participation of JKN so that access equity can be immediately achieved according to the main purpose of JKN.

5 CONCLUSION

This study proved that after 1 year have implemented, JKN program able to give positive impact on access of inpatient service in hospital by 115.8% (2.1point) in the sample of the research with age ≥ 40 years old.

This study concludes that there has been a change in utilization of inpatient services after the JKN program runs 1 year. The impact of the JKN program on inpatient care access was 115.8% of samples aged ≥ 40 years. This study also proves that the JKN program is able to narrow the gap of inpatient service access in hospitals in all income groups. Researchers recommend suggesting accelerated coverage of hospital coverage and availability of hospitals within adequate geographic coverage for equity improvement.

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Cost of Hypertension Disease in Kediri Regency

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Keywords: Cost of Illness, Hypertension, Individual perspective.

Abstract: The incidence of hypertension is the highest non-communicable diseases in Kediri District. The prevalence of hypertension in Kediri District is 27.9 %. Their increasing prevalence is threatening to cause significant damage both to individuals and society. From the individual perspective, it is therefore necessary to consider the economic impacts associated with hypertension diseases, and identify interventions that can reduce the burden of these diseases. This cost of illness study aims to measure cost of hypertension disease in Kediri District from individual perspective. This research is a quantitative research with cross sectional method. Primary data collection is done by interviewing 100 hypertension sufferers in Kediri District. The results estimated the direct costs is 6.220.470 rupiahs per capita and the indirect costs is 6.164.081 rupiah per capita. Cost of illness caused by hypertension is about 12.384.551 rupiahs per capita. It can be concluded that the cost of hypertension disease is very high. So it can be recommended to increasing promotive and preventive efforts to reduce the incidence of hypertension disease

1 INTRODUCTION

Health problems in Indonesia is quite complex which in the last ten years Indonesia had triple burden disease. Infectious diseases are still very high, but on the other hand occurring of an increasing number of non-communicable diseases and new emerging diseases. According to WHO (2014), mortality rate from non-communicable diseases will continue to increase worldwide. In 2030, estimated there are 52 million deaths from non-communicable diseases. One of the non-communicable diseases which counted as a public health problem is hypertension. Not only happened in developing countries but also happened in developed countries.

Hypertension is commonly called by silent killer because the symptoms are not known for sure. The symptoms that appear can be vary depend on each individual and almost the same as other diseases. In addition, hypertension is also a risk factor for deathly diseases such as stroke and coronary heart disease. Riskesdas (2013) showed that nationally 25.8% of populations of Indonesia suffered from hypertension.

The number of incidence of hypertension in Kediri District increased from year to year. In 2016 the incidence of hypertension got a first place for non-communicable disease in Kediri District.

Hypertension prevalence rate even reached 27.9 %. This number was higher than the hypertension prevalence rate of eastern Java which was 26.2 %. Some of high and unreliable incidence of hypertension can cause a loss not only economically but also on productivity and complications of other diseases. Increasing the number of incidence of hypertension can have an impact on economic burden, productivity loss and the complication appearances.

So that important to conduct a study concern to the costs which is covered by patient during illness. According to Jo C (2014) Cost of illness is a study to estimate the magnitude of the economic costs borne by an illness. The purpose from this study is to measuring cost of illness of hypertension that was experienced by a patient with hypertension in Kediri District from individual perspective.

2 METHODS

This research was a quantitative research with cross sectional design. Population in this research was total patient of hypertension in Kediri District in 2017 that is equal to 435,628 people. The sample was calculated by using Slovin formula to obtain a

large number of sample as many as 100 people who has hypertension.

The sample in this research taken by cluster random sampling. The first stage technique of sampling began with determining the cluster by using the working area of the Primary Health Care. There was a consideration in selecting the working area where to be sampled to represent the population. That was by selecting the existing primary health care in rural and mobile areas. 2 working area where to be chosen that meet the criteria are Kandangan Primary Health Care (rural village) and Pare Primary Health Care (crowded area).

Data were collected randomly by door to door way on patient who has hypertension in Pare Primary Health Care and Kandangan Primary Health Care. Instrument that used in this research is questionnaires. the study was conducted from May to July 2017. The cost of illness in this study used an individual point of view. Variables to calculate the cost of illness consists of direct cost and indirect cost. Tool for data analysis in this research used Ms.Excel.

3 RESULTS

According to WHO (2009) the cost of illness can be divided into direct cost and indirect cost. Direct cost is costs that are directly related to treatment of hypertension, while indirect cost is costs that are not directly related to the treatment of hypertension borne by the patient during treatment for the illness.

3.1 Direct cost

Direct cost is costs that are directly related to the treatment of hypertension. This cost is paid by patients who has hypertension to check-up their health. According to Istiqomah (2016) Direct cost is divided into two categories, they are routine cost and incidental cost. Routine Cost is the average of direct cost that is routinely paid by patient as long as the patient has the illness. This cost is calculated for one year.

The cost which is a routinely direct cost is the outpatient expense and other medical expenses. Outpatient costs be obtained from the average expenses for outpatient treatment by the patients for one year. While other medical costs are showing the average expenses of other treatments which is paid by patients for one year. The other treatments which being intended is a treatment that is not performed in

health services, like buying medicine in pharmacy by themselves or buying traditional medicine.

Incidental direct cost is a direct costs which paid at any time during the treatment for the illness. Costs that include incidental direct costs in this study is the cost of hospitalization. The cost of hospitalization is an average expenses for inpatient treatment for hypertension patients.

The average of routine direct cost during illness was derived from the multiplication of routine direct cost over for a year with the average duration time of illness. The average duration of illness of the patient was calculated by reducing life expectancy of Kediri District population which is 72 years old by the age of the first time respondent has the illness which is 55 years old. So the average value of the duration of illness is 17 years.

The following is a calculation result of direct cost that can be seen in Table 1.

Table 1: Direct Costs on Hypertension Patients in Kediri District

| Statement | Cost (Rupiahs) |
|--|------------------|
| INCIDENTAL COST | |
| Average of Inpatient Treatment | 178.500 |
| ROUTINE COST | |
| Average of Outpatient Treatment | 297.870 |
| Average of Other Treatments | 57.540 |
| Average of Routine Direct Cost | 355.410 |
| Average of Routine Direct Cost during Treatment for The Illness (17 years) | 6.041.970 |
| TOTAL DIRECT COST | 6.220.470 |

Based on Table 1 it can be concluded that the direct costs which paid by hypertensive patients is Rp 6.220.470, -. The biggest component in direct costs is in a routine direct cost that is the expenses for outpatient treatment.

3.2 Indirect Cost

Indirect cost is costs that are not directly related to the treatment of hypertension which paid by the patient for the illness. Istiqomah (2016) state that indirect cost is divided into two categories: routine indirect costs and incidental indirect costs. Routine indirect cost is an indirect cost which routinely paid by the patient as long as the patient has the illness. While incidental indirect cost is indirect costs which

paid by the patient at any time as long as the patient ill.

Routine indirect costs consist of outpatient transport cost, outpatient productivity loss, and outpatient companion productivity loss. While the incidental indirect costs consists of inpatient transportation cost, inpatients productivity loss, and inpatient companion productivity loss. Transportation cost represent transportation costs incurred when visiting health services for the treatment. Transportation cost is obtained by multiplying the number of visits with the average of one-way cost to the intended health service. The cost of aids is a cost incurred to purchase aids as long as patient suffers from hypertension. While the productivity loss is the cost of productivity loss due to the absences of the patient for leaving the job or normal activities to undergo treatment. The cost is obtained by multiplying the percentage of total absences in a month with an average monthly income.

Tabel 2. Indirect Cost on Hypertension Patients in Kediri Distric

| Statement | Cost (Rupiahs) |
|---|------------------|
| INCIDENTAL COST | |
| Average of Transportation of inpatient care | 48.440 |
| Average of <i>Productivity Loss</i> on patients of inpatients care | 64.268 |
| Average of <i>Productivity Loss</i> on patient company of inpatient care | 67.980 |
| Average of Incidental Indirect Cost | 180.687 |
| ROUTINE COST | |
| Average of Transportation of Outpatient Care | 162.020 |
| Average of <i>Productivity Loss</i> on patients of outpatients care | 120.655 |
| Average of <i>Productivity Loss</i> on patient company of outpatient care | 69.290 |
| Average of Routine Indirect Cost | 351.964 |
| Average of Routine Indirect Cost During the Illness (17 years) | 5.983.394 |
| TOTAL INDIRECT COST | 6.164.081 |

Based on Table 2 it can be seen that amount of indirect cost is 789,272, -. The largest component of the routine cost is productivity loss costs for outpatients and outpatient transport.

After the calculation of direct and indirect costs, it can calculate the cost of illness for each individual patients who has hypertension follows:

$$\begin{aligned}
 \text{Cost of Illness} &= \text{Direct Cost} + \text{Indirect Cost} \quad (1) \\
 &= 6,220,470 + 6,164,081 \\
 &= 12.384.551 \text{ rupiahs}
 \end{aligned}$$

Based on the above calculation can be concluded that the value of cost of illness which is borne and covered by hypertension patient in Kediri District is Rp 12.384.551, -.

4 DISCUSSION

According to WHO (2014) nearly 45% burden of disease that occurring in low-income and middle-income countries is caused by non-communicable diseases. Hypertension is one of them which counted as the major risk factors for global disability, death and disproportionate impacts in low-income and middle-income countries. Two-thirds suffer from hypertension. In 2010 estimated that 9.4 million deaths and 162 years are lost due to hypertension worldwide. The prevalence of hypertension continues to increase worldwide and it is estimated to affect more than 500 million people by 2025. Based on the health profile of Kediri District, Hypertension is a non-communicable disease with the highest number of cases in 2016.

This study showed that the routine direct cost of hypertension in one year is obtained from outpatient and other medical expenditure every month. Besides outpatient visits in health services, some patients also buy their own medicines at pharmacies, buy traditional medicines and other alternative treatments. The results showed there was a cost for other treatments of Rp 57,540 per month.

Besides identifying the direct costs, cost of illness analysis also needs to identify indirect costs. In this study, indirect cost consist of outpatient and inpatient transportation costs and productivity loss during outpatient and inpatient care.

The value of transportation costs incurred by the patient is influenced by the frequency of visits to health services. The higher frequency of visits then the higher also the cost of transportation cost. In this study the patient uses a variety of transportation to go to health services. For the example is motorcycles, cars, public transportation or walk. This study also found that some patients who live in crowded population areas (working area of Pare Primary Health care) go to health services by riding a bicycle or walking. This is because the location of health services is easily accessible. While transportation in patients in rural areas (working area

Kandangan Primary Health Care) go to health services by motorcycle.

Components that affect the value of patient productivity loss is the frequency of visits and income per month. This study found that the percentage of unemployment patient is 22%. This is because of most of them are elderly sufferers, so they have no job and the final effect is the productivity loss becomes low. If anyone at his productive age suffer from hypertension, his work activities will be distrubed due to the illness. In the other hand, the work's time will be reduced when he had to undergo the treatment such as outpatient care and hospitalization. According to Hyder et al (2012) productive age is generally associated with people aged 15th-64th years. At that age, people is considered to spend more of his life to move and work. At the under 15th years and age above 64th years it is considered a dependent in domestic life.

The elderly sufferer, who usually have entered the age of retirement and not working, have lower productivity loss than patient on productive age. At this age, the patient has entered an old age that caused organ function's decreased. The process of degeneration and disease suffered will increase the severity of the illness. Therefore, the patient will need the help from the others while visiting health services for outpatient and inpatient.

When someone who has no money suffered from hypertension, the cost of the treatment will depend on his family. If the income is low then it will make the economic situation of the family worse off. Because of that, the JKN program will help public ensure the health needs in order to remain the public to check his health so it won't get worse.

Based on research conducted by Catherine (2016) it is estimated that the value of *Dissability Adjusted Life Years* in almost all the world due to high blood pressure ranks second after the risk of illness due to diet. According to Chataut et al (2011) in a study conducted in Nepal in 2011 mentioned that gender and old age are independent factors or hypertension risk factors that can not be changed. In other hand, there are many risk that preventable. Such as healthy diet, healthy lifestyle.

Based on the results of the research can be concluded that the indirect costs which paid by patients is not really different with the direct costs. But in reality there are still many people who are unaware that besides the direct costs of the treatment, there are another economic losses such as expenditures for transportation costs and productivity loss.

5 CONCLUSION

The results showed that the cost of illness of hypertension in Kediri District is Rp 12.384.551 per capita. This means that every individual who suffers from hypertension will bear the economic burden which is Rp 12.384.551. Based on the analysis it can be concluded that during suffered from hypertension there are much of indirect costs that must be covered by patient due to the illness. The indirect costs which paid by patients is not really different with the direct costs. But in reality there are many people who do not realized that hypertension can caused the economic loss which is indirectly affect the economic conditions of households, regional even a country.

The point is to make awareness to public for increasing preventive and promotive of hypertension disease. Preventive and promotive efforts need a Government support. It can be done by increasing the budget for the promotive and preventive efforts to make more activity programs to reduce the prevalence of hypertension. Preventive and promotive efforts also require commitment and active participation from the human resources of health sector and the public to ensure the programs can be done well.

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Problems of Health Services in the Border Areas and the Efforts to Overcome

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Keywords: Health problems in border area, People mobility, Improve health service.

Abstract: Frontier areas have specific characteristics due to the impact of different environmental conditions, e.g. the distance away from the centre of government and geographical conditions that tend to be difficult. The easy movement of people from one region to another has an impact on the rapid transmission of disease. Therefore the health care system in border areas requires specific handling because it involves two or more districts. This research study was conducted to identify health service problems in the border areas in East Java, so then a recommendation can be made to improve the appropriate health service system. This research is a descriptive research study with a cross-sectional design. The location of the study was in four of the outermost regencies in the East Java Province. The results of the research indicate that some of the problems identified are the high utilisation of cross-border health services that has an impact on the incomplete health services provided to the community, and that there is no inter-region case reporting mechanism. Some efforts that can be undertaken to improve the health care systems in border areas include developing cooperation for better coordination in the case of inter-regional population mobility, standardised service procedures and reporting recording systems, and floating surveillance networks.

1 INTRODUCTION

Indonesia is one of the largest countries in Southeast Asia, with an area of 5,180,053 km². It consists of a total land area of 1,922,570 km², and an area of 3,257,483 km² of sea, which is divided into 34 provinces. Since 1999 with the enactment of Law number 22/1999 on Regional Government, and also Law number 25/1999 on Fiscal Balance between Central and Regional Governments, the Indonesian government embraces the decentralisation system by granting state authority to the district/city governments.

The government of Indonesia has stipulated that the implementation of health services in border areas and isolated, vulnerable and municipal islands is the duty and responsibility of the district health authorities. Each district must prepare adequate health resources in order to be able to properly carry out the health services in those areas.

People living in rural and remote areas, including those living in border areas, face challenges in accessing appropriate health services (Bourke, et al., 2011). Border areas have their own problems and peculiarities (Gogoi, et al., 2009). The public health situation in the border area is actually similar to other regions, but they have different characteristics as a result of different environmental

conditions. The environmental conditions that make the public health situation in the border area different from elsewhere is related to accessibility. The border area is a long distance from downtown. The long distance has several consequences, such as the number of human resources, the health worker and health facilities being limited, access to health care facilities especially secondary and tertiary health care facilities becoming more difficult, and the referral time becoming longer. Klobuchar (2014) state that patients in rural areas with serious conditions such as heart disease and cancer must travel longer distances than patients in urban areas to see specialists. Almost all border areas are in rural, so this kind of difficulty is also faced by people in the border areas.

In some areas, the distance or travel time to another city centre is faster than to the centre of the city of origin. This causes people to prefer to seek treatment at health facilities in other districts /cities that are nearby. Similarly, in the referral process, the First Level Health Facility (FKTP) prefers to refer patients to other district / city hospitals.

Community mobility between regions also affects the public health situation in the border areas. The easy movement of people from one region to another has an impact on the rapid transmission of disease.

Thus, the public health status in a region is not only determined by the performance of health services in the area, but also is strongly influenced by the situation in other areas, especially the immediately adjacent areas. Therefore, health problems in adjacent areas or regions need joint, integrated and coordinated management by involving the relevant sectors so that the existing problems can be resolved optimally.

Health services in border areas require specific treatment because they involve two or more districts. Several important issues related to health services in the border areas are services to the poor, the continuity of care between different treating professionals and organisations (Commission Of The European Communities, 2008), referral health services, infectious diseases, the adequacy of health personnel and the handling of outbreaks and disasters. The spread of infectious diseases does not recognise geographic region. Many diseases are transmitted through both animals and humans. Along with the easier access between, the spread of diseases between regions is also increasing, for both old and new diseases. The era of globalisation and technological progress has also accelerated the transmission of disease without recognising geographical and administrative boundaries. Several diseases which often become a problem because of the speed their transmission includes TB, Malaria, AIDS, and other related immunisation diseases (Kamel, 1997^a). Kamel (1997^a) also state that borders are crucial entry point for communicable disease which, if it not properly managed, would affect the community health status.

The previous research by Bourke, et al., (2011) has develop six key concept as a framework of rural and remote: (i) geographic isolation, (ii) the rural locale, (iii) health responses in rural locales, (iv) broader health systems, (v) broader social structures, and (vi) power relations at all levels. These six matters are interrelated in raising public health issues in the border region. That is why public health problems in the border area seem more complex than health problems in other regions. On this basis, it is important to identify what health problems are happening in the border areas, as well as what efforts can be made to strengthen the health care systems in border areas.

2 METHOD

This research is descriptive because it was done to obtain the best description of health problems in the

border area, with a cross-sectional design. The data collection was conducted in 2015 in 4 of the outermost regencies in the East Java Province; Ngawi, Bojonegoro, Sumenep and Banyuwangi districts. The respondents consisted of two groups; community and health personnel. Communities as respondents are the people who live in the outer regions bordering other areas. For each district, 100 community respondents were drawn, so there was a total of 400 respondents in the 4 cities. Data from the community was collected by using a structured questionnaire to describe the utilisation of cross-border health care facilities. The officers consisted of a midwife from Polindes in the border area, a Puskesmas officer in the border area, and staff from the District Health Office. For the health officer respondents, data collection was done through a Focus Group Discussion (FGD). FGDs were conducted once in each area, so there were 4 repeats of the FGD. FGDs were conducted to discuss the findings from the results of the community surveys, so that further health problems and solutions could be identified.

3 RESULT AND DISCUSSION

A border area is a meeting area of two or more regions with different administrative authorities, i.e. between district and inter-provincial boundaries. Each region has the authority to regulate its own territory in accordance with their respective policies on the basis of the real needs of the community. The identification of various health problems in the border areas is important in order to improve the health care system for people living in there so that their health status will be better. In addition, good handling of the health care systems in border areas can also prevent the expansion of health problems.

The special characteristic often encountered in the border area is the great distance from the city centre. The city centre is usually identical to the central government. Therefore one of the limitations faced by people living in border areas is that it is more difficult to access government services located in the city centre, such as local public hospitals. For people living in border areas, sometimes access to health facilities in their area is more difficult due to the longer distances involved than to other area health facilities. The impact of this condition is the occurrence of cross-border health utilisation. This means that residents of district A go to district B, or vice versa. Table 1 represent the results of the

survey of 400 residents living in the border area on the utilisation of cross-border health facilities.

Table 1. Utilisation of cross border health facilities by communities in border areas in the Banyuwangi, Bojonegoro, Ngawi and Sumenep districts, 2015

| Utilisation of cross border health facilities | | Frequency | District | | | |
|--|-----|-----------|------------|------------|-------|---------|
| | | | Banyuwangi | Bojonegoro | Ngawi | Sumenep |
| Prefer to seek treatment at health facilities in other districts | No | n | 89 | 81 | 6 | 33 |
| | | % | 89,0 | 81,0 | 6,0 | 33,0 |
| | Yes | n | 11 | 19 | 94 | 67 |
| | | % | 11,0 | 19,0 | 94,0 | 67,0 |
| People from other areas who seek treatment at health facilities in this area | No | n | 72 | 82 | 55 | 99 |
| | | % | 72,0 | 82,0 | 55,0 | 99,0 |
| | Yes | n | 28 | 18 | 45 | 1 |
| | | % | 28,0 | 18,0 | 45,0 | 1,0 |

Based on Table 1, it can be seen that there are residents who prefer to seek treatment at health facilities in other districts, mostly in Ngawi. The next order is in the Sumenep, Bojonegoro and Banyuwangi districts. This is because the distance is closer. For the case of residents from other areas who seek treatment in other health facilities, this is the most widely available in the district of Ngawi. Next is in Banyuwangi, Trenggalek, Bojonegoro and Sumenep districts. In Ngawi district, people living in Kendal district are closer to Magetan district with only about 20 minutes' travel time. Meanwhile, people living in the Mantingan sub-district are closer to the Sragen district. For reasons of close proximity and easier access, this is also the reason why many Ngawi people are treated in other districts.

The same condition also occurred in Sumenep. For people living in Pragaan sub-district, they prefer to go to Pamekasan because it is closer and there is easier access. In addition, there is a growing image in Sumenep society that the health service in Pamekasan is better, mainly because of its more complete health personnel. This results in the community going to Puskesmas Pragaan. If referred to the hospital, they prefer to go to Pamekasan rather than to Sumenep. As for the Sumenep people who are in the archipelago, they tend to seek out the nearest health services. For example, the examination of Hajj health is closer to the Bali island than to Sumenep. In Bojonegoro District, Puskesmas, which borders with the Cepu district, sometimes prefers to refer patients to hospitals in Cepu rather than to hospitals in Bojonegoro because of the proximity to the house. Before Padangan Hospital was established, 40% of Padangan residents preferred to go to Cepu. But now the condition is

turning, as the Cepu people prefer treatment at Padangan Hospital.

The utilisation of cross-border health services, if not managed properly, will be able to trigger the emergence of several other problems. One of the problems that can arise from the movement of these patients is related to the problem of recording and reporting health data. Biases on recording data occur as a result of patents crossing border for hospital or health care. Biased statistics misrepresent what is needed and can affect the adequacy of health care planning and delivery (Kamel, 1997^b). Important things for strengthening health services in border areas are to create and manage mechanisms for identifying and managing cross-border issues (NHS Commissioning Board, 2013).

One of the important problems is related to immunisation. Based on the results of Focus Group Discussion (FGD) with health personnel in the Ngawi District, it was found that there were differences in the determination of immunisation status between the Ngawi and Sragen regency. For example, in the Ngawi district, Tetanus Toxoids' (TT) immunisation status is calculated based on birth history, whereas in the Sragen regency, every pregnant mother is given TT immunisation because all pregnant women need TT.

Another problem identified from the FGD with health personnel in Ngawi District is the occurrence of loss control towards high risk pregnant women. The antenatal care procedure (ANC) of Ngawi Regency compared to Sragen is different. According to resource individuals from Ngawi District, the community considers the ANC service in Ngawi to be more stringent, in the sense that more checks have to be done, thus causing certain communities to prefer ANC in more relaxed areas. In East Java,

there is a policy of determining high-risk status by using the Pudji Rochyati Score Card (*In Indonesia: Kartu Skor Puji Rochyati or KSPR*), whereas in Central Java Province, this does not exist. This is felt by the people who live directly adjacent to the Sragen regency who feels that in Sragen, the criteria are looser. This has resulted in some pregnant women who initially conducted a medical examination in Ngawi District to have finally moved to the Sragen regency. If the mother continues to get health services in other districts, this makes the recording continuity of antenatal care services in Ngawi District disturbed. If this condition occurs in high-risk pregnant women, it is feared that it could endanger the health condition of the mother and foetus, because the new health facility does not have the history of pregnancy.

The phenomenon above illustrates that one of the reasons for the change of health service from one district to another is the patients desire to get a simpler service procedure. Another reason is related to the quality of service. The public tends to choose a place of service which, according to him, is more qualified, even if the location of the health care facility is in another district. The results of this study are in line with previous research that found those cross-border health users are usually linked to service quality issues (Rich and Merrick, 2006; Dejun Su, et al, 2011).

Several other studies have found that the use of cross-border health services is linked to the cost and health insurance issues, such as Dejun Su, et al (2011) and Miller and Thayer (2010). Dejun Su, et al (2011) in his research at United States found that the most significant predictors of health care utilization across border were lack of health insurance coverage and dissatisfaction with the quality of health care. The results of Miller's study in Mexico also found the same thing, the utilization of cross-border health services was triggered by the lack of quality of service, access difficulties, and low coverage of health insurance in the region of origin (Miller and Thayer, 2010).

The third problem is related to the recording and reporting of health data. The health data recording and reporting system is hierarchical. Recording and reporting is done in stages, from the smallest service unit to the centre. The Puskesmas (Public Health Center) network consists of Polindes, Ponkesdes, Puskesmas Pembantu, and other health care facilities in the Puskesmas working area, reporting the results of their activities to the Puskesmas. Furthermore, the Puskesmas reports its data to the District Health Office/City. District Health Offices conduct

recapitulation and forward the information to the Provincial Health Office, and then from the Provincial Health Office to the Ministry of Health. So its nature is vertical. There is no routine reporting mechanism that is horizontal (except for certain cases), such as for Pulmonary TB and Dengue Fever. As stated by the resource persons from Sumenep District, TB already has a reporting format across multiple regions.

To overcome this issue, the government should ensure that arrangements are in place so that public health bodies engage populations across the border in discussions on quality and the changes to the services provided. This is to ensure that there are well-defined and clear protocols for managing changes in where a patient is treated (NHS Commissioning Board, 2013). Miller and Thayer (2010) suggest that those problems can be solve through innovations in cooperation projects on health, the facilitation of health care access for at-risk populations, and increased economic opportunities in health care on both sides of the border.

4 CONCLUSIONS

Environmental characteristics in the border areas make these areas face several health problems. Some of the public health problems occurs in the border areas are the high population mobility, resulting in statistical biased related to the recording of patient health data. The consequences of this situation is incomplete of monitoring health status that cause in the emergence of other health problems, such as misidentification of immunization status and inaccuracy detection of risk factors for pregnancy,

One important step should be taken to reduce or prevent the emergence of these problems is to build cooperation between districts, so there is agreement between two interdependent areas on the mechanism of handling cross-border society problems.

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Insurance as Efforts to Control Risk Disease Caused by Benzene for Home Industry Shoes Workers

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Keywords: Benzene, Excess cancer risk, safe duration, Insurance.

Abstract: This study aimed to determine the risk characteristics of workers exposed to benzene and their insurance as an effort to control the risk of occupational diseases in the shoe home industry in Surabaya. The research method was a descriptive study by describing the risk control with insurance based on the characteristics of the exposure to benzene. The sample size was 20 shoe home industry workers. The data analysis used was descriptive. The results showed that the highest benzene concentration was 7.44 mg/m³, the average intake of benzene was 0.00363 mg/kg/day, and that the Excess Cancer Risk of the 20 respondents >10⁻⁵ means that the exposure to benzene was not safe for their health. The safe duration for the workers between 0,03 - 3.53 years means that the workers have a high risk of suffering from leukemia due to their exposure to benzene. Because it is high risk, the workers must be insured. However, based on the research results, 100% of the workers had no insurance (BPJS Ketenagakerjaan); the home industry had no Pos Upaya Kesehatan Kerja. From the results of the study, it has been concluded that the workers have a high risk of exposure to benzene. The workers had no insurance (BPJS Ketenagakerjaan) and no Pos Upaya Kesehatan Kerja so there was no protection for the workers.

1 INTRODUCTION

Benzene is in the working environment of shoemakers. Therefore it is an absolute necessity to know the level of risk of the exposed groups. This study has measured 8 work sites to determine the broader picture of benzene concentration.

One of the UKMs in Indonesia is the informal industry of shoe craftsmen. In the early 1990s, the footwear industry became a major contributor to Indonesia's Gross National Product as the third largest national income after the wood and textile industry. About 40 percent of Indonesia's shoe exports are shipped to the US market, while 33 percent are shipped to Europe. The rest are exported to African, Middle Eastern and South American countries.

The efforts of shoemakers to maintain the quality and existence of their products are often not matched by the protection from the occupational risks associated with harmful equipment and materials. The use of hazardous materials or chemicals in shoe

crafting includes using glue as a material for the process of making shoes. The process consists of several stages of work, starting with making the shoe design, preparing the tops of the shoes (patterning, pattern cutting, stripping, decorating, sewing and insoles), preparing the bottom of the shoe (outer soles, gluing, coat, sewing, nailing) finishing (cleaning, smoothing) and packing for subsequent delivery to the consumer/market in the production process using a variety of equipment (Maryantari, 2016).

Shoe work is a risky job. Long working hours not supported by a safe and comfortable workplace, uncomfortable body position, and harmful equipment. Equipment used in the production process includes electric heating/ fire (oven), nails and hammer, raw materials made of fabric, synthetic leather or plastic materials. For the process of gluing, the workers use two types of glue; yellow glue Pro ARDico Brand, glue LK and white glue PU-Weber brand, DS-Bond DNS 818. Yellow glue is used to connect the openings so it is usually used in the surface and finishing, while white glue is

generally used to patch the soles because of the much stronger adhesion force. In a normal situation (normal day), within a month they can use 30-40 kg of yellow glue and white glue by approximately 30 kg. The use of the glue means that it is poured in to small containers such as bottles, drinks with open positions or directly from a container of 3kg glue size (Maryiantari, 2016). Based on the research conducted by Hendra, it stated that there is an organic solvent in the glue in the form of benzene by about 1-2%.

The various equipment and materials used in the shoe making process is one of the high risk hazards involved. The use of chemicals can be detrimental to the health of the shoemakers. One of them is the use of glue. In the process, there is an organic solvent vapor contained in the glue that is very likely to have an impact on health if inhaled continuously for long periods of time (Lu, 2006).

Benzene, when inhaled, can cause aplastic anemia and leukemia. Research conducted in Europe, America and Mexico has shown a significant relationship between elevated levels of benzene in the air and increased rates of cancer and local leukemia. In other studies in the United States, it has been shown that inhaling benzene even at the threshold can cause chromosomal abnormalities in sperm cells.

Indonesian National Standard in 2005 refers to Permenaker No. 13 of 2011 which contains the time-weighted average of workplace-treated chemical substances, with the number of working hours of 8 hours per day or 40 hours per week. It states that benzene is included in the A2 group (Chemical substances estimated to be human carcinogens) and has a NAB of 10 ppm or 32 mg/m³ benzene in the air (SNI 2005).

The occurrence of health problems due to benzene exposure in shoe workshop workers is reported to occur in China, which is the largest shoe manufacturer in the world. A retrospective cohort study of 75,000 workers exposed to benzene from 1987 to 1991 in 12 Chinese cities found that 43 groups of workers were exposed to benzene. This study suggests that the workers exposed to benzene are at a higher risk of dying from leukemia with a relative risk of 2.3 compared with the workers not exposed to benzene (Chen and Chan, 1999).

Risk control is a preventive method that is done in such a way that the risk does not occur. One effort to control the risk of disease in workers is with insurance. Health insurance is an insurance product that provides a finance security guarantee to the policy holder at the time of health problems due to illness or an accident (Tualeka, 2015). By insuring a company's property when there is a big risk, it transfers the impact of the risk to the insurer. Insurance will not reduce the risk probability but it will reduce the impact of those risks.

2 METHOD

This research was a descriptive and observational study conducted in the home industry of shoes workers in Tambak Oso Wilangan, Surabaya. While in terms of time, the type of approach used in this study was a cross-sectional research design using a risk analysis paradigm by taking one component, namely the risk assessment/risk assessment (NRC, 1983). Risk assessment was used to calculate the extent of cancer incidence, and if the duration of work (Dt) was safe. Participation in relation to insurance was done by interview.

This research was conducted at 8 locations of work with the research subjects totalling 20 respondents. The measurement of benzene concentration in the work environment was done by using the NIOSH 1501 measurement method with an active carbon absorbent pipe (choarcoal) by using the Gas Chromatography (GC) technique by a trained officer from UPTK3 Surabaya. To know the ownership of insurance, we used the interview method.

3 RESULT

Benzene in the working environment of shoemakers makes it an absolute necessity to know the level of risk of the exposed groups. This study measured 8 work sites to determine the picture of benzene concentration.

Table 1: Benzene Concentration Distribution in Working Environment of Shoemakers in Tambak OSO Vilagge Wilangun Surabaya 2016

| Concentration Benzene (NAB= 1,6 mg/m ³) | N | Percentage (%) |
|---|-------------|----------------|
| ≤ 1.6 mg/m ³ | 6 | 75 |
| > 1.6 mg/m ³ | 2 | 25 |
| Total | 8 | 100 |
| Mean | 1.3475 | |
| Median | 0.6350 | |
| Std. Deviation | 2.54762 | |
| Min-Max | 0.04 - 7.44 | |

In Table 1, the concentration of benzene by as much as 6 points (75%) is still below the determined brick threshold value of 0.5 ppm or 1.6 mg/m³. The average benzene concentration is 1,6313 mg/m³. The lowest concentration level was 0.04 mg/m³ and the highest concentration was 7.44 mg/m³.

The pattern of activities to be covered includes exposure, frequency and the duration of exposure. The working hours of each work location are not the same. In addition to the working hours, other variables that must be considered are the number of working days and long working hours in the home industry shoe of Tambak Oso Wilangun.

Table 2: Distribution of Descriptive Frequency of Pattern of Workers Activity of Shoemaker in Tambak Oso Vilagge Wilangun Surabaya 2016

| Info. | (tE) | Amount | | (fE) | Amount | | (Dt) | Amount | |
|----------|------------|--------|-----|-----------|--------|-----|-----------|--------|-----|
| | | n | % | | N | % | | N | % |
| | ≤ 8 hours | 1 | 5 | ≤ 265 day | - | - | ≤ 25 year | 10 | 50 |
| | >8 hours | 19 | 95 | > 265 day | 20 | 100 | > 25 year | 10 | 50 |
| Total | | 20 | 100 | | 20 | 100 | | 20 | 100 |
| Mean | hours /day | 10.55 | | day/year | 346.75 | | year | 24.93 | |
| Std. dev | | 3.086 | | | 30.680 | | | 10.957 | |
| Med | | 9.50 | | | 365 | | | 24.50 | |
| Min | | 6 | | | 260 | | | 3 | |
| Max | | 17 | | | 365 | | | 43 | |

Table 2 illustrates the frequency distribution of exposure time, exposure frequency, and the duration of exposure. Exposure time (tE) is categorised into two ie ≤ 8 hours / day and > 8 hours / day.

The result showed that 1 worker (5%) had an exposure time of ≤ 8 hours / day and 19 workers (95%) had an exposure time of > 8 hours/ day. The average exposure time of 10.55 hours/ day shows that each work location has a different exposure time. The exposure frequency (fE) is categorised into two, ie ≤ 265 days and > 265 days. The result of the research is that all workers have an exposure frequency > 265 days. The average worker in a year works for 346.75 days. Exposure duration (Dt) is categorised into two, i.e. ≤ 25 years and > 25 years. The results showed a balanced result between the

two for each of 10 workers (50%). The average duration of exposure was 24.93 years.

Based on the results of the interviews, it is known that workers have worked for a long time before, therefore this needs to be considered because this can give the idea that they are always in an environment that allows for exposure to benzene.

The result showed that one of respondents with serial number 1 had a body weight of 51.4 kg (Wb). Every day they worked 9 hours/day (tE) for 313 days (fE), and had worked for 34 years (Dt). With an inhalation rate (R) of 0.6 m³/hr and the tagv for carcinogenic substances was 10950 days. The result of the benzene air measurement showed a concentration of (C) 0.04 mg/m³, so the amount of non-carsinogenic intake (intake) was:

$$= \frac{0,04 \text{ mg/m}^3 \times 0,6 \text{ m}^3/\text{hours} \times 9 \text{ hours/day} \times 313 \text{ hours} \times 34 \text{ years}}{51.4 \text{ Kg} \times 10950 \text{ day}}$$

$$= 0,004084 \text{ mg/kg.day}$$

The known benzene intake per day for the first worker was 0.004084 mg/kg.day. As for the calculation of the carcinogen intake using the formula and value of the same variable, but using the *tavg* for carcinogenic substances, the result was 25550 days. Here is the calculation of the carcinogenic intake per day for the workers:

$$= \frac{0,04 \text{ mg/m}^3 \times 0,6 \text{ m}^3/\text{hours} \times 9 \text{ hours/day} \times 313 \text{ day} \times 34 \text{ year} (1)}{51.4 \text{ Kg} \times 25550 \text{ day}}$$

$$= 0,0018 \text{ mg/kg.day}$$

The know benzene intake per day for the first worker is 0,0018 mg/kg.day.

If $ECR > 10^{-5}$, then the concentration of benzene exposure may cause a carcinogenic health effect.

The risk characteristics for cancer effects can be determined by multiplying the value of cancer-causing substance intake with CSF values with the following formula:

$$ECR = \text{Intake Karsinogenik } (I_k) \times CSF \quad (2)$$

If $ECR \leq 10^{-5}$, then the concentration of benzene exposure has not made the workers be at risk of causing carcinogenic effects.

From the ECR calculation, it is known that the ECR value for the current exposure is 5 years for the 30 workers with an $ECR > 10^{-5}$. As many as 20 people (100%) are at risk of the health effects of cancer.

After the risk assessment was done and got results that are beyond the threshold value, the next thing that was done was to conduct risk management. This was done to minimise and even eliminate the risk of danger posed by the hazard in the workplace.

Table 3: Percentage of current Excess Cancer Risk (ECR) value, 5 th, 10 th, 15 th, 20 th, 25 th, and 30 th Shoemakers in Tambak Oso Village Wilangun Surabaya 2016.

| Exposure | ECR | Amount | | Total |
|-----------|--------------------|--------|-----|-------|
| | | N | % | |
| ECR First | $ECR \leq 10^{-5}$ | 0 | 0 | 20 |
| | $ECR > 10^{-5}$ | 20 | 100 | |
| ECR 5 th | $ECR \leq 10^{-5}$ | 0 | 0 | 20 |
| | $ECR > 10^{-5}$ | 20 | 100 | |
| ECR 10 th | $ECR \leq 10^{-5}$ | 0 | 0 | 20 |
| | $ECR > 10^{-5}$ | 20 | 100 | |
| ECR 15 th | $ECR \leq 10^{-5}$ | 0 | 0 | 20 |
| | $ECR > 10^{-5}$ | 20 | 100 | |
| ECR 20 th | $ECR \leq 10^{-5}$ | 0 | 0 | 20 |
| | $ECR > 10^{-5}$ | 20 | 100 | |
| ECR 25 th | $ECR \leq 10^{-5}$ | 0 | 0 | 20 |
| | $ECR > 10^{-5}$ | 20 | 100 | |
| ECR 30 th | $ECR \leq 10^{-5}$ | 0 | 0 | 20 |
| | $ECR > 10^{-5}$ | 20 | 100 | |

In relation to carcinogens, the risk management used is the value of ECR by applying the formula as follows:

$$ECR = I_k \times CSF \quad (3)$$

$$I_k = \frac{ECR}{CSF} \quad (4)$$

$$\frac{C \times R \times tE \times fE \times Dt}{Wb \times tavg} = \frac{ECR}{CSF} \quad (5)$$

Based on the above calculation formula of carcinogenic effect, it can be used to find the safe value of C, t, and D safe as follows:

$$C \text{ safe} = \frac{Wb \times tavg \times ECR}{R \times tE \times fE \times Dt \times CSF} \quad (6)$$

$$tE \text{ safe} = \frac{Wb \times tavg \times ECR}{C \times R \times fE \times Dt \times CSF} \quad (7)$$

$$Dt \text{ safe} = \frac{Wb \times tavg \times ECR}{C \times R \times tE \times fE \times CSF} \quad (8)$$

For the full calculation, the results can be seen in the following table:

Table 4: The result of calculating the value of safe exposure of benzene carcinogenic health effect on benzene shoes worker in Tambak Oso Village Wilangan Surabaya 2016

| No. Worker | C (mg/m ³) | C safe (mg/m ³) | tE (hours/day) | tE safe (hours/day) | Dt (year) | Dt safe (year) |
|------------|------------------------|-----------------------------|----------------|---------------------|-----------|----------------|
| 1 | 0,04 | 0.004 | 9 | 0.93 | 34 | 3.53 |
| 2 | 0,04 | 0.005 | 15 | 1.88 | 20 | 2.50 |
| 3 | 0,04 | 0.004 | 17 | 1.79 | 16 | 1.69 |
| 4 | 0.06 | 0.003 | 8 | 0.40 | 40 | 2.02 |
| 5 | 0.06 | 0.002 | 14 | 0.58 | 36 | 1.49 |
| 6 | 0.06 | 0.008 | 10 | 1.40 | 17 | 2.39 |
| 7 | 0.06 | 0.006 | 8 | 0.74 | 30 | 2.77 |
| 8 | 0.06 | 0.053 | 8 | 7.06 | 3 | 2.65 |
| 9 | 0,15 | 0.007 | 8 | 0.36 | 25 | 1.12 |
| 10 | 0,15 | 0.009 | 6 | 0.37 | 24 | 1.46 |
| 11 | 1,12 | 0.002 | 13 | 0.02 | 43 | 0.08 |
| 12 | 1,12 | 0.016 | 12 | 0.18 | 8 | 0.12 |
| 13 | 1,12 | 0.003 | 9 | 0.02 | 43 | 0.12 |
| 14 | 1,27 | 0.003 | 15 | 0.04 | 23 | 0.06 |
| 15 | 1,27 | 0.007 | 8 | 0.04 | 20 | 0.11 |
| 16 | 1,27 | 0.005 | 10 | 0.04 | 27 | 0.10 |
| 17 | 1,27 | 0.004 | 9 | 0.03 | 31 | 0.11 |
| 18 | 2,91 | 0.007 | 10 | 0.02 | 25 | 0.06 |
| 19 | 7,44 | 0.008 | 14 | 0.02 | 20 | 0.02 |
| 20 | 7,44 | 0.017 | 8 | 0.02 | 14 | 0.03 |

From the above data, the researchers took the safe value by choosing the safe cancer risk from the calculation data most likely applied by the workers of shoe craftsman in Tambak Oso Village Wilangan, Surabaya. Safe was 0,003 mg/m³, t_E safe equals 7.06 hours/ day and Dt Safe is 3.53 years.

Table 5: Have Known about JKK (*Jaminan Kecelakaan Kerja*)

| ECR Respondens | Have Known about JKK | | Amount |
|--------------------|----------------------|----------------|-----------------|
| | Yes | No | |
| > 10 ⁻⁵ | 5 (25,00%) | 15 (75,00%) | 20 (100,00%) |
| ≤ 10 ⁻⁵ | 0 (0,00%) | 0 (0,00%) | 0 (0,00%) |

In Table 5 above, the respondents who are ECR> 10⁻⁵ or are not carcinogenically safe 75,0% do not know about JKK and 25,0% 25,0% have known about JKK.

Table 6: Have Known about JKM (*Jaminan Kematian*)

| ECR Respondens | Have Known about JKK | | Amount |
|--------------------|----------------------|----------------|-----------------|
| | Yes | No | |
| > 10 ⁻⁵ | 5 (25,00%) | 15 (75,00%) | 20 (100,00%) |
| ≤ 10 ⁻⁵ | 0 (0,00%) | 0 (0,00%) | 0 (0,00%) |

In Table 8 above, for the respondents who are ECR> 10⁻⁵ or are not carcinogenically safe 75,0% do not know about JKM and 25,0% 25,0% have known about JKM.

Table 7: Workers Insurance (BPJS Employment)

| ECR Respondens | Have BPJS | | Amount |
|--------------------|--------------|-----------------|--------------|
| | Yes | No | |
| > 10 ⁻⁵ | 0 (0,00%) | 20 (100,00%) | 20 (100,0%) |
| ≤ 10 ⁻⁵ | 0 (0,00%) | 0 (0,00%) | 0 (0,00%) |

In Table 7 above, for the respondents who are ECR> 10⁻⁵ or who are not carcinogenically safe, 100% have no insurance with BPJS Employment.

Table 8: Pos Upaya Kesehatan Kerja (Pos UKK) / Post Work Health Effort

| ECR Responden | Has Pos Upaya Kesehatan Kerja (Pos UKK) | | Amount |
|--------------------|---|-----------------|-----------------|
| | Yes | No | |
| > 10 ⁻⁵ | 0 0,00% | 20 (100,00%) | 20 (100,00%) |
| ≤ 10 ⁻⁵ | 0 (0,00%) | 0 (0,00%) | 0 (0,00%) |

In Table 8 above, for the respondents who are $ECR > 10^{-5}$ or are not 100% carcinogenic in the home industry of shoes in Romokalisari Surabaya do not have Pos Upaya Kesehatan Kerja (Pos UKK) or Post Work Health Effort.

Table 9: Why not have BPJS Ketenagakerjaan?

| Why not have BPJS ketenagakerjaan | Respondens | | Amount |
|-----------------------------------|------------|-----------|----------------|
| | Yes | No | |
| No information | 5 | 75 | 20 (100,0%) |
| | (0,00%) | (100,00%) | |
| No socialitation | 20 | 0 | 20 (100,0%) |
| | (100,00%) | (0,00%) | |
| No enough money | 20 | 0 | 20 (0,00%) |
| | (100,00%) | (0,00%) | |

In Table 9, for the 20 respondents, 100,0% said that they had never been given information about BPJS but 100,0% also said that they had never been socialited by BPJS and had no enough money.

4 DISCUSSION

The measurement of benzene concentration was done at 8 sampling points at the location of shoemaker workers. Kelurahan Tambak Oso Wilangun in Surabaya showed the highest concentration of 2,333 ppm equal to 7.44 mg/m³ and the lowest was 0,0129 ppm equal to 0,04 mg/m³. The measured benzene concentration at each point was different. The high-measured benzene concentration is due to several things including the production of the shows and the glue used which also follows the amount of shoes produced.

The exposure time describes the number of hours worked per day in the work environment. The results of the study showed that the lowest worker worked at work for 6 hours per day, and the highest worked for 17 hours per day. The results of the study above show that the threshold value of normal working hours the standard as 7 hours of work a day or 6 days a week, or 8 hours of work a day or 5 days a week. The highest working time is 17 hours a day due to high orders and fast production deadlines so that the workers strive to meet the target order.

The frequency of exposure indicates the time that the workers spend working in the shoe-making industry within the space of 1 year. The results

indicate that the workers spend the least time or 260 days/year and the highest 365 days/year.

The calculation of the risk level of individual cancers at the current time is that for up to 30 years, as many as 20 people (100%) have the results of the ECR calculation of $> 10^{-5}$. The results explain that at the present time, exposure of up to 30 years are all at risk of cancer health and are in unsafe conditions against benzene exposure.

The concentration of benzene exposure towards the shoemaker workers in Tambak Oso Wilangun of Surabaya is influenced by the air condition at the worker's location as well as the materials in the form of shoe glue which is used in the shoe production process. From the calculation of the value of health risk, control of non-cancer effects and the effects of cancer on safe exposure of benzene to sharecropper workers in Kelurahan Tambak Oso Wilangun in Surabaya 2016 obtained a safe value of (C) of 0,003 mg/ m³, safe snack time (tE) of 7,06 hours/day, exposure frequency (fE) of 322 days/year and an exposure duration (Dt) of 3.53 years.

Based on the research results, 100% of the respondents have no insurance. This can not protect workers from exposure to benzene-causing cancer because the ECR is greater than 10^{-5} which means a high risk with major consequences. In the United States, ECR 10^{-5} is established as a carcinogenic limit for workers. In Shingga, workers working in industries with an ECR larger than 10^{-5} should be protected, among others, by having medical insurance.

According to Presidential Regulation of the Republic of Indonesia No. 12 2013 on Health Insurance, health insurance is a guarantee of health protection for the participants so they can benefit from health care and have protection in meeting their basic health needs. A participant is any person, including foreigners, who work for a minimum period of 6 (six) months in Indonesia, and who have paid the contribution. From the observation, it is known that 100% of the workers do not guaranteed Health Insurance. The workers exposed to benzene have a high risk of leukemia because there is no protection against their health.

According to Kountur 2008, in Tualeka, A.R. (2016), the high risk control is because the consequences are carried out with the transfer of risk, among others, by the insurance. Thus, there is the need to control the risk of exposure to benzene workers such as insurance with BPJS Employment. In addition, in the area, there must also be Post Work Health Efforts. With insurance, it will not reduce the probability of the occurrence of the risk

but it will transfer the risk of the impact of benzene exposure from the workers to the insurer. Thus, the workers are not harmed by the losses borne by the insurer. According to the Ministry Manpower Regulation RI No.1 2006 about Insurance for Manpower in the informal sector who must have insurance.

More of the manpower in the informal sector have no BPJS insurance because the company has never done any solicitation in the home industry, and they have no money. Information about BPJS for the manpower in the informal sector is important to increase the knowledge about BPJS and to change the behaviour so then the workforce become members of BPJS.

5 CONCLUSION

Workers in the insecure home shoe industry are not encountering enough carcinogenic ingredients to encounter the high consequences of cancer. 100% of the shoe industry workers do not have insurance so they do not get protection due to their exposure to benzene, which is a cause of cancer.

The lowest benzene concentrations were present at work site 1 of 0.04 mg/m³ and the highest concentration was found at work site 8 of 7.44 mg/m³.

For the calculation of the cancer risk rate (ECR), most workers have an ECR value > 10⁻⁵, meaning that at the time of the study, there were workers in unsafe conditions due to benzene exposure. The safe limits for the workers are as follows: safe concentration (C) 0.003 mg/m³, safe travel time (tE) 7.06 hours/day, exposure frequency (fE) 322 days/year and exposure duration (Dt) 3.53 years.

The workers have a high risk of cancer because the benzene safe exposure time of only 7.06 hours/day and the duration of safe work is only 3.53 years.

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Number and Types of Complication in Type 2 Diabetes Correlated with Outpatient Treatment Cost Using BPJS Self-Funded Scheme in Islamic Hospital Jombang

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Keywords: BPJS, Complication, Diabetes, Outpatient, Treatment cost.

Abstract: The treatment cost of type 2 diabetes outpatients with complications is estimated to exceed the cost of uncomplicated diabetes. However, Ina CBG's claim was generalised regardless of the diabetes type case (IDR 155.000/visit). This study aims to determine the correlation between the number and type of complications in type 2 diabetes patients to treatment cost and their conformity with Ina CBG's claim. The research was conducted by way of a cross-sectional study. Secondary data was taken from type 2 diabetes outpatients using a BPJS self-funded scheme in RSI Jombang from 1st January-31st December 2014 with 110 samples analysed by Kruskal Wallis, Spearman Rho and Chi Square. There was a positive and significant correlation between the number and type of complications in type 2 diabetes with the treatment cost ($r=0.414$, $p=0.001$; $r=0.430$, $p=0.001$). There was a significant difference ($p=0.001$) between the average cost of diabetes without complications (IDR 99.049 ± 9.316) with one complication (IDR 112.722 ± 20.468) and with two complications or more (IDR 120,711 ± 18,512). It was concluded that there was increase in the average cost of diabetes outpatients with complications in RSI Jombang but not to the point of exceeding Ina CBG's claim.

1 INTRODUCTION

Diabetes mellitus is a metabolic disease characterised by hyperglycemia resulting from defects in insulin secretion, insulin action, or both. The chronic hyperglycemia of diabetes is associated with the long-term damage, dysfunction, and failure of various organs, especially the eyes, kidneys, nerves, heart, and blood vessels (American Diabetes Association, 2007). Shaw et al., (2010) estimated that the world prevalence of diabetes among adults aged 20–79 years was 6.4% (285 million) in 2010, and will increase to 7.7% (439 million) by 2030. The prevalence of diabetes mellitus in productive age urban Indonesians was 4.6% (Mihardja et al., 2014).

The treatment cost of type 2 diabetes is associated with the progression of the disease and its complications (Vaivadait & Padaiga, 2014). In the previous health insurance system, PT. Askes reported that type 2 diabetes management costs more

than 22.4 million USD in 2010. The patient management of uncomplicated diabetes requires \$40 USD/patient/year and complicated patients require a higher cost of \$800 USD/patient/year (Soewondo, Ferrario & Tahapary, 2013). However, Ina CBG's (Indonesian National Social Health Insurance reimburse package) claim for type 2 diabetes outpatients was generalised regardless of the complication frequency (IDR 155.000/visit). Healthcare facilities were disallowed to charge fees to BPJS (Badan Penyelenggara Jaminan Sosial/ Indonesian National Social Health Insurance) payers. Health care facilities are not allowed to ask the fee of the patient as long they get the benefit of health care according to their human rights (Law of Ministry of Health, 2014). Outpatient treatment costs for BPJS self-funded payers should not exceed Ina CBG's claim. Some hospitals have charged additional costs to the patient under a consent for them to gain better treatment. BPJS self-funded payers who have been diagnosed with type 2

diabetes are at risk of paying more outside Ina CBG's scheme.

In Jombang Islamic Hospital, type 2 diabetes occupied the top most common diagnosis in the Outpatient Department and more than 70% patients were using the BPJS self-funded scheme. Therefore, this study aims to determine the correlation between the number and type of complications in type 2 diabetes patients with treatment cost and its conformity with Ina CBG's claim in RSI Jombang.

2 METHODS

This research was using retrospective study based on the data collected from medical records and treatment bills per visit from type 2 diabetes outpatients in 2014. Treatment bills included were internist specialist consultation fees, drug use costs (for seven days) and ancillary examinations (laboratory and radiology). The population was the outpatients in the Internal Medicine Clinic of Islamic Hospital Jombang using the BPJS self-funded scheme. The inclusion criteria was that they had been diagnosed with type 2 diabetes and the

exclusion criteria was uncompleted data or a patient that had been co-diagnosed with malignancy, tuberculosis, and HIV. There were 110 samples taken from the population who met the criteria.

The number of complications was grouped into three categories; type 2 diabetes without complications, diabetes with at least one complication and diabetes with two complications or more. The types of complications were grouped into four categories. Type 2 diabetes without complication, microvascular complications, macrovascular complications, and both complications. The treatment cost was classified into three categories: low (<IDR 100.000), moderate (IDR100.000-120.000) and high (>IDR 120.000).

Statistical data analysis was performed using statistic software. Spearman's test was used to evaluate the correlation between the number of complications in type 2 diabetes with treatment cost ($p=0.05$) while the difference was analysed by Kruskal Wallis and Mann-Whitney ($p=0.05$). Chi Square and Contingency Coefficient was used to evaluate the correlation between the type of complications in type 2 diabetes with the treatment cost.

Table 1: Sample characteristic distribution (n=110)

| Characteristic | n | % |
|--------------------------------|----|-------|
| Gender | | |
| Male | 42 | 38,2 |
| Female | 68 | 61,8 |
| Age (years) | | |
| <40 | 4 | 3,64 |
| 41-45 | 10 | 9,09 |
| 46-50 | 15 | 13,64 |
| 51-55 | 21 | 19,09 |
| 56-60 | 29 | 26,36 |
| 61-65 | 15 | 13,64 |
| 66-70 | 11 | 10 |
| >70 | 5 | 4,54 |
| Number of Complication | | |
| Without complication | 17 | 15,45 |
| One complication | 59 | 53,65 |
| Two complications or more | 34 | 30,9 |
| Type of Complication | | |
| Without complication | 17 | 15,45 |
| Microvascular | 44 | 40 |
| Macrovascular | 28 | 25,45 |
| Microvascular & Macrovascular | 21 | 19,1 |
| Treatment Cost per Visit (IDR) | | |
| <100.000 | 29 | 26,36 |
| 100.000-120.000 | 52 | 47,28 |
| >120.000 | 29 | 26,36 |

3 RESULTS

A total of 110 samples were included in the analysis. The demographic profile of the patients has been shown in Table 1. There was a greater proportion of women diagnosed with type 2 diabetes (61.8% women vs. 38.2% men). Most of the patients were 56-60 years old (26.36%) and 51-55 years old (19,09%). In total, 53.65% of patients with type 2 diabetes had at least one complication, with 40% having microvascular only and 25,45% having macrovascular only complications. Despite having the complications, all of the treatment costs did not exceed Ina CBG’s claim (<IDR 155.000).

3.1 Number of Complications Correlated with Treatment Cost

The average treatment cost per patient increased gradually with the number of complications from IDR 99.049 ± 9.316 in patients without complications to IDR 112.722 ± 20.468 in patients with one complication and IDR 120.711 ± 18.512 in patients with more than one complication. There was a positive and significant correlation between the number of complications in type 2 diabetes with the treatment cost (r=0.414, p=0.001) and there was also a significant difference between the average cost of diabetes without complications, with one complication and with two complications or more (p=0.001).

Table 2: Average treatment cost per patient per visit with number of complications

| No | Number of Complication | Mean |
|----|---------------------------|-------------------------------|
| 1 | Without Complication | 99.049 ± 9.316 ^a |
| 2 | One Complication | 112.722 ± 20.468 ^b |
| 3 | Two Complications or more | 120.711 ± 18.512 ^c |

Different notation shows significance difference *p<0.05

3.2 Type of Complication Correlated with Treatment Cost

There was a positive and significant correlation between the type of complications in type 2 diabetes with treatment cost (r=0.430, p=0.001). Patients with both microvascular and macrovascular complications had higher costs (IDR 124.449 ± 21.133) compared to those with either microvascular (IDR 115.828 ± 22.057) or macrovascular (IDR 108.747 ± 12.430) complications, and also within type 2 diabetes without complications (IDR 99.049 ± 9.316).

Table 3: Average treatment cost per patient per visit with the type of complication

| No | Type of Complication | Mean |
|----|---|------------------|
| 1 | Without Complication | 99.049 ± 9.316 |
| 2 | Microvascular Complications | 115.828 ± 22.057 |
| 3 | Macrovascular Complications | 108.747 ± 12.430 |
| 4 | Microvascular and Macrovascular Complications | 124.449 ± 21.133 |

*p<0.05

4 DISCUSSION

This was the first study conducted in RSI Jombang that analysed type 2 diabetes complications and its correlation with treatment cost. Most of the patients in RSI Jombang were BPJS payers and the payment scheme for BPJS reimbursement package used in Ina CBG’s claim. Ina CBG’s claim for type 2 diabetes outpatient was generalised regardless of the complications (IDR 155.000/visit). Thus, it is important to know the correlation between the number and type of complication in type 2 diabetes with treatment cost so that it can be managed efficiently.

The treatment cost of type 2 diabetes is associated with the progression of the disease and its complications (Vaivadait & Padaiga, 2014). This study found that there was a positive and moderate correlation between the number of type 2 diabetes complications and the average cost per visit (r=0.414, p=0.001). Therefore, it can be concluded that increase number of complications related with higher average cost per visit. A study in India also found that the total costs for patients without complications reached INR 4.493 (USD 92.15) compared to INR 14.691.75 (USD 301.32) for patients with complications (Yesudian, et al., 2014). Therefore, it is important for patients and hospitals to maintain blood sugar levels in type 2 diabetes patients to reduce the risk of them developing complications so then the treatment cost can be lowered.

A previous study in Singapore proved that microvascular and macrovascular complications tend to increase the cost of care (Shuyu, et al., 2015). Another study by Dimitrova et al., (2015) showed increase of diabetes management cost for microvascular complication by 23% and macrovascular complication by 31%. Similar result was found in this study. It was confirmed that there was a positive and moderate correlation between the type of complications in type 2 diabetes with the

average cost per visit ($r=0.430$, $p=0.001$). There were significant cost increases in relation to both microvascular (IDR 115.828 ± 22.057) and macrovascular complications (IDR 108.747 ± 12.430) compared with no complications (IDR 99.049 ± 9.316). Highest cost was found in type 2 diabetes with both microvascular and macrovascular complications (IDR 124.449 ± 21.133). Result of this study confirmed the previous study results that patients with both microvascular and macrovascular complications had a higher cost than patients without both complications (Henrikson, et al., 2000). Previous study in Indonesia also showed that microvascular and/or macrovascular complication increased the treatment cost up to 130% compared with non-complicated diabetes (Andayani *et al.*, 2010).

On average, annually treatment cost for diabetic patient with microvascular complication cost \$1900 more than non-complicated diabetes while macrovascular cost \$3900 more (Nichols et al., 2008). Thus, type 2 diabetes complications impact on treatment cost should be considered by hospitals to provide appropriate treatment and prevention for both microvascular and macrovascular complications. Prevention and early treatment can save the diabetes treatment cost up to \$6836 annually (Palmer *et al.*, 2004).

In addition, there was a significant difference between the average treatment cost of type 2 diabetes with microvascular and macrovascular complications. The average treatment cost was higher in type 2 diabetes with microvascular complications. Contrary to the study in the US whereas macrovascular complications were the major component of type 2 diabetes costs compared to microvascular complications (Caro, Ward & O'Brien., 2002). This may be due to the hospitalisation costs were included in the previous study because macrovascular disease-related hospitalisations were more common in patients with type 2 diabetes related to unregulated diabetes (Dimitrova, et al., 2015). Moreover, the direct cost for hospitalisation purposes (inpatient care) for type 2 diabetes was the largest expenditure (Vaivadaite & Padaiga, 2014). Whereas in this research, no hospitalisation cost was included.

BPJS self-funded payers have the possibility of illegally charged with additional fees outside the Ina CBG package ranged from IDR 4.000-2.000.000 (Gultom, 2015). In this study, the highest average cost per visit was found in type 2 diabetes patients with two or more complications (IDR 120.711 ± 18.512), and also in relation to both microvascular

and macrovascular complications (IDR 124.449 ± 21.133). Neither exceeded the outpatient reimburse package from Ina CBG's claim (IDR 155.000). This suggests that despite the increase in the average cost per visit for type 2 diabetes outpatients with complications, Ina CBG's package can still be adequate in RSI Jombang. This study confirmed that the BPJS outpatient reimburse package for type 2 diabetes with complications has covered the total costs spent by RSI Jombang. Therefore, additional fees are unnecessary (not needed) for now. This because the hospital already has good policies and efficient procedures (medical examination and drug selection) to give appropriate treatment. Therefore, as long as the hospital can practice these good management process, no additional fees should be needed. This achievement is important since in 2019, all hospital in Indonesia should participate in BPJS scheme (Mboi, 2015). In return, this will improve hospital efficiency for BPJS treatments.

5 CONCLUSIONS

This study concluded that there was a positive and significant correlation between the number of complications in type 2 diabetes with the average treatment cost of the patients (BPJS self-funded payers) in the Internal Medicine Clinic of RSI Jombang. The hospital must strive to improve treatment efficiency in order to control treatment costs. This study also found that the BPJS outpatient reimburse package was sufficient enough to cover type 2 diabetes and its complications treatment in RSI Jombang, regardless that the average cost was increased.

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Household Income and Unbalanced Diet Among Urban Adolescent Girls

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Keywords: Adolescent girls, Dietary intake, Income, Urban.

Abstract: Dietary intakes are important for adolescent girls' growth and development. Not all adolescents have an adequate daily intake, particularly in urban areas which have a high disparity of household income. This study was aimed to examine the relationship between household income and dietary intakes among adolescent girls in urban areas. This cross-sectional study included 132 subjects aged 12-16 years old, conducted in Junior high school in Surabaya City, East Java, Indonesia. Dietary intakes were obtained by using 24-hour dietary recall method. Spearman's rank correlation was applied to analyse the association between household income and dietary intakes. High disparity of household income was found in this study with median IDR 4,000,000 (\approx \$308). Adolescent girls had low dietary intakes with median as follows, energy 1235kcal, protein 45.1g, fat 46.1g, carbohydrate 141.6g, iron 5.0mg, calcium 182.8mg. The proportion of energy from carbohydrate was 49.5%, fat 34.9% and protein 14.8%. There was a significant correlation between household income with protein intake ($p=0.010$, $r=0.224$) and energy proportion from protein ($p=0.043$, $r=0.177$). Generally, adolescent girls eat an unbalanced diet, with less carbohydrate and high fat. Urban adolescent girls with low household income have a low protein intake.

1 INTRODUCTION

Dietary intakes are important for adolescent girls' growth and development. Adolescence is a crucial time for puberty and body image development. Negative body image, which includes body dissatisfaction, is a strong predictor of disordered eating behaviours. Bad eating behaviour can lead to malnutrition (Reel et al, 2015). Not all adolescents have an adequate intake (Badan Penelitian dan Pengembangan Kesehatan, 2014). Poor intake can lead to malnutrition (Branca et al, 2015), delay in or faster sexual maturation (Soliman et al, 2014), and not reaching optimal catch up growth (Modan-Moses et al, 2012). Adolescent eating behaviour is influenced by personal factors, physical, social environment (Salvy et al, 2012) and socioeconomic factors (El-Gilany and Elkhawaga, 2012).

There have been many studies about dietary intake and its determinants among female adolescents (de Andrade et al, 2016), including association between socioeconomics and diet quality (Darmon and Drewnowski, 2008). Few studies have been

conducted on dietary intake and its correlation with household income in Surabaya City with high income disparity. The purpose of this study was to examine the relationship between household income and dietary intakes among adolescent girls in urban area.

2 METHODS

This cross-sectional study included 132 subjects aged 12-16 years old, conducted in Santa Agnes and Unggulan Bina Insani junior high school in Surabaya City, East Java, Indonesia. The two school represent the diversity of household socio-economic in urban area (low-high income household). Dietary intakes were obtained by using 24-hour dietary recall method. Energy and nutrient intakes were calculated by Nutrisurvey (2007). Descriptive analysis was determined by median, minimum, maximum and proportion. Energy proportion from carbohydrate, fat and protein were categorised into

two groups (carbohydrate: <55% energy and ≥ 55% energy; fat: < 30% energy and ≥ 30% energy; protein: < 15% energy and ≥ 15% energy) (Hardinsyah et al, 2014). Spearman’s rank correlation was applied to analyse the correlation between household income and dietary intakes and p value <0.05 was considered statistically significant.

3 RESULTS

High disparity of household income and dietary intake was found in this study. Household income median was IDR 4,000,000 per month (1 USD = around IDR 13,000). The lowest household income was IDR 500,000 (≈\$38) and the highest was IDR 50,000,000 (≈\$3846) per month. Table 1 shows that dietary intake of adolescent girls in urban areas was below the adequacy level. Adolescent girls had low dietary intakes with median as follows: energy 1235kcal, protein 45.1g, fat 46.1g, carbohydrate 141.6g, iron 5.0mg and calcium 182.8mg. High disparity in dietary intake can be seen from the lowest intake and the highest intake.

Table 1: Median of household income and dietary intake

| Variable | Median (min; max) |
|------------------------------|---------------------------------|
| Household income (IDR/month) | 4,000,000 (500,000; 50,000,000) |
| Dietary intake | |
| Energy (kcal) | 1235 (374; 4027) |
| Protein (g) | 45.1 (8.8; 171.5) |
| Fat (g) | 46.1 (4.2; 185.1) |
| Carbohydrate (g) | 141.6 (24.9; 821.0) |
| Iron (mg) | 5 (0.8; 71.0) |
| Calcium (mg) | 182.8 (25.6; 1886.8) |

Based on the proportion of energy from carbohydrate, fat and protein, adolescent girls have an unbalanced diet. Table 2 shows that energy proportion from carbohydrate was 49.5%, fat 34.9% and protein 14.8%. More than half of adolescent girls have a low energy proportion from carbohydrate and protein, contrarily with energy proportion from fat. Generally, adolescent girls eat an unbalanced diet with less carbohydrate, protein and high fat.

Table 2: Energy proportion

| Energy Proportion (%) | n (%) |
|-----------------------|-----------|
| Carbohydrate | |
| < 55% energy | 85 (64.4) |
| ≥ 55% energy | 47 (35.6) |

| Median (min; max) | 49.5 (10.9; 90.5) |
|-----------------------|-------------------|
| Fat | |
| < 30% energy | 48 (36.4) |
| ≥ 30% energy | 84 (63.6) |
| Median (min; max) | 34.9 (4.5; 70.9) |
| Energy Proportion (%) | n (%) |
| Protein | |
| < 15% energy | 69 (52.3) |
| ≥ 15% energy | 63 (47.7) |
| Median (min; max) | 14.8 (2.7; 28.5) |

Correlation between variables in this study can be seen in Table 3. Protein intake (p=0.010, r=0.224) and energy proportion from protein (p=0.043, r=0.177) have a positive correlation with household income. There was no significant correlation for energy, fat, carbohydrate, iron and calcium with household income.

Table 3: Correlation between dietary intake, energy proportion and household income

| Variable | r | p |
|---|--------|-------|
| Intake of energy (kcal) | 0.083 | 0.346 |
| Intake of fat (g) | 0.054 | 0.535 |
| Intake of protein (g) | 0.224 | 0.010 |
| Intake of carbohydrate (g) | 0.054 | 0.535 |
| Intake of iron (mg) | 0.159 | 0.069 |
| Intake of calcium (mg) | 0.025 | 0.780 |
| Energy proportion from carbohydrate (%) | -0.043 | 0.627 |
| Energy proportion from fat (%) | -0.009 | 0.920 |
| Energy proportion from protein (%) | 0.177 | 0.043 |

4 DISCUSSION

Household income of adolescent girls are very diverse, from IDR 500,000-50,000,000. This high disparity income can lead to high differences of food access. The median of adolescent household income was higher than Surabaya minimum wages (IDR 3.296.212). Higher incomes enhanced the sustainability of food access (Adom, 2014).

Table 1 shows that adolescent nutrient intake was below the recommended dietary allowance (RDA). RDA for adolescent girls was: energy 2125kcal, protein 69g, fat 72g, carbohydrate 292g, iron 26g and calcium 1200mg. Low nutrient intake can cause suboptimal growth (Alshammari et al, 2017) and development (Solimin et al, 2014).

Unbalanced diet among adolescent girls is found in this study with a high energy proportion from fat

(>30%) and low energy proportion from carbohydrate (<55%) and protein (<15%). Adolescents eat a lot of fried food, so they have a high energy proportion from fat. Table 3 shows that there was a significant association between protein intake and energy proportion from protein with household income. This implies that parents with higher incomes can fulfil their children's protein intake better than those of low incomes. Animal sources of protein have a better quality than non-animal protein. But, animal protein prices are more costly than non-animal. Muzayyanah et al. (2017) revealed that increase in household income can improve the animal protein consumption. Darmon and Drewnowski (2008) in their review stated that socioeconomic status can influence diet quality and diet cost. People with lower socioeconomic status have a lower diet quality than higher ones. There was no significant association between other nutrient intake with household income. This may be because a result of the homogeneous data of nutrient intake.

Limitation of this study was dietary intake collected using 24-hour recall. This method has recall bias and is not representative for micronutrient intake. The trained enumerator questioned and probed to reduce the recall bias and food picture were used to visualise the portion size.

5 CONCLUSIONS

Adolescent girls in urban area eat an unbalanced diet, with high fat and less carbohydrate. Urban adolescent girls with low household income have a low protein intake.

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E-Health Implementation in Support of Hospital Service at Indonesia of Health National Insurance Era

Study on MHR at DMS Surabaya

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Keywords: E-Health, Hospital, Outpatient, Misfile Health Records.

Abstract: E-health is an Outpatient queuing management system at Dr. M. Soewandhie Hospital. This system provided by Surabaya City Government for supporting the implementation of Health National Insurance. On the other hand, its success requires support from Dr. M. Soewandhie Hospital in term of health records availability when service is performed. Based on observations made on 23 to 27 January 2017 found 718 misfile health records with an average of 144 ones per day. This research focuses on finding cause of misfile health records. We observed 257 ones during June to July, 2017 by purposive sampling method. The result shows that the most significant cause of misfiling health records based on observation is the doctors not complete yet health records from inpatient room. Based on the interview outcome, all of respondents agree at the most significant cause led to misfiling is human error due to wrong sub shelf and the best effective to avoid the problem by building up electronic health record and fixing problem at shelving and space. We suggest to design and launch intervention program to improve readiness providing health record and it suppose to be an effective long term follow up to assess the sustainability of intervention.

1 INTRODUCTION

Universal health coverage is defined as ensuring that all people have access to needed promotion, preventive, curative and rehabilitative health service, of sufficient quality to be effective, while also ensuring that people do not suffer financial hardship when paying to these service. Universal health coverage has therefore become a major goal for health reform in many countries, including Indonesia (WHO, 2017). To Indonesia, it is not just about to carry out a priority objective of WHO. It is a part of the implementation of the 1945 constitution as well (Mboi, 2015).

Indonesia launched National Health Insurance called Jaminan Kesehatan Nasional (JKN) in January 2014, a way to achieve universal coverage. It is initially cover around 120M population who are already engaged in various social health insurance (SHI) schemes under a fund management agency called BPJS. In the year 2019, Indonesia targeted all population is around 250M people to be coverage. Once when this goal is achieved, JKN will be the largest program that

coverage the highest population in the world (WHO Indonesia, 2017).

Thailand became exemplary leader for achieving universal coverage among South East Asian Nation. Moreover, Thailand could benefit all citizens with comprehensive health service. While Philippines also gave an excellence lesson with its health service not only portable to utilized inside the country but it could use outside one as well. Although it is not a comprehensive one, Philippines are able to eliminate the threat of impoverishment due to illness for most of the population (Thabrany, H., 2015).

Government of Surabaya city has concerned in developing e-government which one of the innovation is called as e-health. E-health is an outpatient of queuing management system. It is an integrated health system that had been implementing to 62 Primary Health Services and 2 hospitals owned by government of Surabaya city. One of them is dr. M. Soewandhie Hospital (Regulation of Mayor of Surabaya Number 5 Year 2013).

On the other hand, this implementation required well preparation from hospital particularly in

availability health record of future patient who would be service at the certain date and time. When patient who already queuing by e-health system came at the hospital, filing staff of health record division is supposed to be prepare patients' health record at least a night before the actual admission. In consequence, at the certain day when they are attending to hospital and health records are not ready yet due to misfiled, it would make them cannot receive hospital service at certain time that had promised as seen as screen on e-health.

Based on our observation on 23 to 27 January 2014 found that a total 718 misfile health records and 144 ones on the average of ones. Therefore, in this paper we focused to analyse the causes of misfile health records of patients who already registered to queuing system by e-health.

Once a health record is declare as misfiling one, at the end step of procedure to find out one, if there is a dead lock, filling staff must provide a new health record as a solution of misfiling. Therefore, it able to create duplication of existing health record. Moreover, it make ones to make the data of become hard to be synchronous (Karlina et al., 2016).

2 METHODS

This research focuses on finding cause of misfile health records. We observed 257 misfile health records during June to July, 2017 by purposive sampling method. List of patients who will visit in the outpatient tomorrow, will be prepared his medical record by filing officer on D-1. The health record found will be marked and the undiscovered will be crossed. We will track on the service day where it was found and then addressed the cause and the issues due to in misfiling.

3 RESULT

We conducted interview in order to determine the cause in a great number misfiling events. Result of the interview compiled in the Table 1.

Table 1: Interviewed outcome with respondents in term significant cause of misfile health records events

| Respondent | Interview outcome |
|---|---|
| Filling staff 1 (1 st respondent) | Health records did not return yet from inpatient rooms |
| | Health records have moved from the main of filling shelf |
| | Health records have located at wrong sub shelf |
| | Health records have been at poly specialist for surgery preparation |
| Filling staff 2 (2 nd respondent) | Those health records are owned by new patients |
| | Health records have been at poly specialist for surgery preparation |
| | Health records did not return yet from inpatient rooms |
| Filling staff 3 (3 rd respondent) | Health records have located at wrong sub shelf |

Table 1 describe how different considerations in term significant cause of misfile health records events among 3 filling staffs. Overall, 2 respondents gave several cause of factors while the other gave only one cause. Both respondent 1 and 2 are agree to 3 of significant due to ones. They are health records still at inpatient room, at poly specialist for surgery preparation, and owned by new patients. Based on table 1, they contributed at 36%, about 4%, and 5% respectively. Moreover, 3 respondents agree to significant causes of ones are health records have located at wrong sub shelf. While it seems only 2% of it significant due to ones.

In conclude, the most problem based on their point of view are the most highest significant and the lowest significant as showed at table 1. In other words, their answer only significant with incompleteness health record at inpatient room by doctors. Comparing their answer within data that we observed afterward, we also then interviewed toward the best solution to keep away misfile health records events. The interview outcome are presented by table 3. Based on observation in June to July 2017, we analyse 257 misfile health records.

Table 2: Factors and issues contributing in misfiling at outpatient service of DMS Hospital

| Factors and issues | Total misfile health record per day | Percentage (%) |
|---|-------------------------------------|----------------|
| Doctors | | |
| a. They do not complete yet health records from inpatient room, so they do not return yet to filling room. Consist of two issues: | | |
| 1. Return to health record room by 2x24 hours | 21 | 8 |
| 2. Return to health record room by more than 2x24 hours | 71 | 28 |
| b. They do not complete yet health records from emergency room | 47 | 19 |
| Shelving and space | | |
| Room is an adequate and resulting overloaded files. Therefore, they moved from main filling shelf | 57 | 22 |
| Patients | | |
| Attending hospital without ID, resulting double numbers | 32 | 12 |
| Filling staffs | | |
| a. Wrong sub shelf | 6 | 2 |
| b. Declared health record as a misfile when in fact it is due to new patients category | 14 | 5 |
| System | | |
| Health records at Poly specialist (pro surgery, incompleteness health record post surgery) | 9 | 4 |

Table 2 show factors and issues that considering misfiling health records incidents in the month June to July 2017 with its percentage. Overall, doctors contributed to the most significant factor in misfiling ones incidents while system is the lowest contribution to them. The most significant issue are health records not returning yet from inpatient room to filling room, totally at 36% and most of them as big as 28% is due to incompleteness of ones for more than 2x24 hours. Incompleteness ones are also happening both at emergency room and poly specialist, we can show from table above it is represented by 19% and about 4% respectively. Alongside with them, the second highest frequency is being moved from main filling self (22%) due to overload of ones. In this research also found an issue that need to be concern are double numbers of ones (12%). In conclude, doctor has a factor and incompleteness ones is the most significant effect in misfiling ones.

Moreover, We interview 3 respondents regarding to find significant cause of misfile health records events according to their opinion.

Table 3: The best effective way to avoid misfile health records events according to respondents

| Respondent | Interview outcome |
|--|---|
| Filling staff 1 (1 st respondent) | make the filling room wider or move into wider room |

| | |
|--|--|
| Filling staff 2 (2 nd respondent) | Maintain and develop the system that has been applied, both in the work and electronic system. Moreover, it also needs to increase amount of the shelves |
| Filling staff 3 (3 rd respondent) | The electronic health record should be become hospital's priority cause of every patients' history will be recording in it. Therefore if health records are declared misfile it can be solve by looking into it. |
| Head of health records division (4 th respondent) | It needs to realisation electronic health record urgently so that if there are misfile health records events, service still can be running without complain due to respond time of it from patients; doctor and others persons in charge can access every data on it |

Table 3 describe how different consideration in term the best effective way to avoid misfile health records events among 4 respondents. 2 respondents are agreeing at build up electronic health record while 2 others have different idea toward the best solution of it. Electronic health record must be hospital's priority regarding respondent 3 and 4 due to several benefit that can be provided by it. For instance, misfile health record can be tracking on it; pursuit the respond time of it if there are misfile health records happening so service still can be running without complaint from patients.

While others approve at increase amount of the shelves (respondent 2) and make the filling room become wider or move into wider room (respondent 1). In conclude, we believe that the best solution based on their idea is making a way out on problem of the shelving and space by building up electronic health record and appropriate filling room.

4 DISCUSSION

Misfiling health records are responsibility filling staff. Firstly; the result shown that the most significant cause is doctor factor due to incompleteness ones. On the other hand, based on interviewed with the 3 filing staffs, the all agreed on their owned mistakes due to place at wrong sub shelf. That is the smallest percentage that shows at table 2. On the other words, the interview outcome has different side with observation data that we take in the month June to July 2017. It also means that misfiling incidents have never checked or evaluated before by them therefore they did not aware about the cause of these evident. Good medical record keeping is at the forefront of medical practice. Complete and accurate medical records will meet all legal, regularly and auditing requirements (Ebirim NL., Buowari YO., 2013).

Completeness health record is the presence of all necessary information of patients based on standard and all entry are dated and signed; it must be completing by 2x24 hours. Health record completeness is a key performance indicator that is associated with delivery of health services in the hospital. Improving health record completeness service is an important step towards improving the quality of hospital. It can also provide valuable information to help measure progress and effectiveness (Kasu T, Haftom A, Yemane G, and Birhanu J, 2017).

Secondly; the highest cause of misfile due to doctors who have not completed the medical record more than 24 hours. This cause related to centralization system in keeping health record management. This means that each patient has only one health record, whether they receive outpatient services or inpatient will be placed in a single file. So when the patient who has been discharge from hospital, then make visits for control in outpatient at the other day and filling staff not found health record at filling room. It will end up with result in misfile medical records. This is one of the shortcomings of the centralized system. The

finding of Kasu T., Haftom A., Yemane G., and Birhanu J., 2017 projects suggest that a simple of intervention availing inpatient health record format and training hospital provider improves the inpatient health record completeness. Thirdly, the solution from their point of view is how to build adequate filing space and change from health record to electronic health record. However, shelving and space is the second largest factor that cause in misfiling health record. Cortes PL, and de Paula Cortes EG, 2011 the most cases resulted in multiple patients folder and led to misfiling was shown to be shelving and space, staff and logistic. and there was significant reduction in the use of multiple folder for five months intervention period by electronic health record implementation.

The electronic health record, with its advance storage, accessibility and linkage capacities, can be leveraged to reduce diagnostic errors by providing quick access to information, the ability to share assessments in real time between clinicians and with patients and advanced capabilities to follow up test result and track medication, whilst also providing access to electronic sources of knowledge information at the point of care (schiff and Bates, 2010).

Hence, electronic health record have potential to improve patient safety, and the efficiency and effectiveness of healthcare delivery (Callen J., 2014). Based on the best way to avoid misfiling, Teviu EAA et al, 2012 state that proper filing of patient's health records ensures easy retrieval and contributes to decreased patient waiting time at the hospital and ensures continuity of care. Moreover, studied show in other developing countries have observed their record keeping systems to be in adequate with about half (52,2%) of the records retrievable within one hour, some records were poorly designed and there is use of multiple patient health records by patients (Aziz S and Rao MH, 2002; Kerry TP, 2006 in Teviu EAA et al, 2012).

In the term of satisfaction using electronic health record, study shown that patients believe that electronic health record enabled more personal time with their providers by improving the quality of visit. Patients could benefit by reducing the incidence of various provider asking the same question in previous visit by nurses or physicians (Rose, Richter, & Kapustin, 2014).

5 CONCLUSION

Overall, the most significant cause of misfiling health records based on observation is the doctor while the highest issue is the health records have not returned to filing room for more than 2x24 hours. Based on the interview outcome, all of respondents agree at the most significant cause led to misfiling is human error due to wrong sub shelf and the best effective to avoid the problem by building up electronic health record and fixing problem at shelving and space. We recommended to design and launch intervention program to improve health record completeness and it supposed to be an effective long term follow up to assess the sustainability of intervention.

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The Effectiveness of National Health Insurance Membership Services at Social Security Agency Office in South-East Sulawesi Province

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Keywords: Effectiveness, Membership services, National health insurance.

Abstract: Health Financing in Indonesia is still a major health problem especially for the poor. Through the National Health Insurance program, it is expected that all of the Indonesian people can access health services without constrained by the cost. Analyze the effectiveness of Health Insurance membership services at Social Security Agency office in Southeast Sulawesi Province. This study used survey approach with a qualitative design. This study conducted at Social Security Agency office in Southeast Sulawesi Province. Respondents were selected purposively, consist of Social Security Agency Officials and member. Data was collected by triangulation method and data analysis used content analysis matrix. Even though the perspective about National Health Insurance services was viewed from the patient said that it has been effective generally, but there still ineffectiveness factors. Mostly, because of the complicated service mechanism, the difficulty of service requirements, the length of waiting time for services, and less of facilities due to a limited staff of Social Security Agency office in South Sulawesi Province. This, it can be concluded that there is still lack of administrative mechanism and human resources aspect of membership service in Social Security Agency office, South Sulawesi Province. Therefore, the Social Security Agency expected to develop policy and services management to improve the effectiveness of National Health Insurance membership services.

1 INTRODUCTION

"Health is a Fundamental Human Right" is the concept of the World Health Organization (WHO) to ensure for each people can live healthy to more productive. The rights of each people obviously reflect two absolute obligations for each individual or institution who seek and provide health services for being healthy and maintain healthily. Therefore, every country has the obligation to ensure these rights are fulfilled and also accepted by the entire population (Maidin,2013).

Health insurance is a guarantee in the form of health protection for participants to get the benefit of health care and protection to meet the basic health needs are given to every person who has paid contributions or dues paid by the government. This guarantee is called the National Health Insurance for all residents of Indonesia shall be insured people

managed by BPJS including foreigners who have worked for a minimum of six months in Indonesia and have paid contributions (MoHRI,2013).

The National Health Insurance is a financing scheme pre-effort, which means that health financing was issued before or in a state hospital. The pattern of financing pre-effort embracing the law of large numbers and risk collective. So that risks can be disseminated widely and effectively reduced, then this financing pattern requires a large number of participants. Therefore, in practice, the National Health Insurance requires all residents of Indonesia participated in such large numbers that the law can be met. Risk embrace occurs when a number of individuals at risk have agreed to raise the risk of loss with the aim of reducing the burden (including the cost-loss/claims) are to be borne by each individual (Azwar,1996; Murti,2000).

The National Health Insurance (JKN) participants are divided into 2 groups: (1) The beneficiary contribution (PBI), which includes the poor communities; and (2) Not beneficiary contributions (Non-PBI), which include formal and informal workers and their families. Health insurance contributions are the amount of money paid regularly by the participant, employer and/or the government's health insurance program. On the basis of contributions paid each participant is entitled to receive the benefits of health insurance that is both personal health services, including promotion, preventive, curative, and rehabilitative services including drug services and medical materials consumables in accordance with the medical needs required (MoHRI,2013).

Effectiveness is range effort a program as a system with limited resources and means to accomplish its goals and objectives without crippling it means and resources and without giving any unnatural pressure on its implementation (Steers,2005). According to book Behaviour, Structure, Processes mentions that measurement of the organization effectiveness including; 1). Production is an organization's ability to produce the quantity and quality of output according to environmental demands. 2). Efficiency is the ratio between the output to the input.3). Satisfaction is a measurement to show the extent to which the organization can meet the needs of the community. 4). Excellence is the level where the organization can and really responsive to internal and external changes. 5). Development is a measure the ability of the organization to improve its capacity to cope with the demands of society. Factors that influence the effectiveness is 1). Characteristics of the organization. 2). Characteristics environment. 3). Feature workers. 4). Policies and management practices (Gibson,2006).

Membership problem of National Health Insurance PBI still are in some areas one in South-East Sulawesi registered as participants PBI as many as 253 157 Life (74%), while the number of poor according to BPS data in 2014 as many as 342 263 of peoples, in this case, shows that as many as 89 106 people (26 %) have not joined the PBI (BPS Sultra,2014). This is in line with research findings in the early study file, that there are still many poor and underprivileged patients who came for treatment to the General Hospital BLUDs Bahteramas South-east Sulawesi, the outpatient services have not been registered for the PBI for some reason in the service of membership JKN complexity, lack of knowledge of the patient, and is recommended by the hospital to become a participant JKN.

In connection with the participation of patients JKN PBI, acquired a reality are still many problems

as the testimony of General Hospital BLUDs officer Bahteramas South-east Sulawesi Province who say the problem of membership PBI because the patient does not understand, and there are still many patients who do not have a card of JKN from poor families because they have not been recorded by social Security Agency (BPJS) of Health.

Problems of health insurance membership can be seen from several studies including research Triyono and Soewartoyo says that the majority of informal workers untouched from social security programs employment (Triyono, 2013; Soewartoyo,2013). In addition to health care referral issues, other issues that need to be prepared to welcome the National Health Insurance is membership (Yuningsih,2013). Therefore, the purpose of this study was to analyze the effectiveness of the services the Health Insurance Participation In Social Security Agency Office (BPJS) of Health Southeast Sulawesi province.

2 METHODS

The study using survey approach, with using qualitative designed, a cross-sectional study is one form of observational studies (non-experimental). Informants in this study were participants JKN, BPJS Officers and employees of the Bank in Kendari (South-East Sulawesi). Selection of informants using a purposive technique. Data collection using literature, observations, review documents and also interview. Data analysis using matrix content analysis.

3 RESULTS

Results of in-depth interviews will then be elaborated into the formulation of the problem points that have been determined as follow:

3.1 How Terms of Service in Registration Process of National Health Insurance Membership by Society

There are still some problems based on the findings of in-depth interviews showed that the process of self-service membership card given to participants. There is still a denial of service because the candidates of the participants are not able to meet the terms of service in the process registration according to the terms that have been required by the BPJS provisions.

In terms of ease of servicing the membership independently, participants complained about the

complexity of the registration file. For example the candidate have to written statement from both parents (difficult for candidates who have parents who are far away in a different area), are required to have an ATM/bank, are required to have a certificate of domicile (difficult for candidates who are outside the area of origin identity card or KTP), separation of service BPJS and banks (office service is not the roof) made it difficult for service payment of dues beginning BPJS as proof of registration of membership. Separation of BPJS services and Bank services will the presence of service for participants. Bank in BPJS office depends on the availability of human resources BPJS Bank itself, the length of time, the time that card is active about two weeks so that the card would not be used immediately in the health service, as well as statements from the following informant;

... in that time I came mismanagement, not accepted because there is what it is, the less ... Family Identity card(RTA, 28 Years)

... the requirement is not ease to pack, should have Family Identity card, ID cards, photos, turning then to the bank again and again to BPJS, bother to pack ...,(THI, 35 Years)

... the requirements are complicated, because many of the conditions, then the distance BPJS to the bank, after paying must return to BPJS, then wait for the lifetime of the card about 2 weeks .. ,(AHL, 23 Years)

3.2 How Terms of Dues Service for NHI's Member by Social Security Agency

Another problem of the findings of in-depth interviews showed that participants were not burdened with a number of dues BPJS because every person is free to choose the class of service in accordance with the rates they can cover. On the other hand, participants who classified able to state is not an issue size of contributions throughout the service obtainment health meet or exceed the expectations of the participants. But for participants who are less able to feel burdened with dues main BPJS families who have many dependents. In the case where payment of dues BPJS participants felt easy because BPJS dues payment systems are now using an auto-debit system that costs taken directly through the account so that participants do not need to bank/post and with auto-debit services can prevent participants forget the payment of dues. What is more, there are still obstacles in the payment of membership dues because participants can only make payment of dues BPJS when experiencing

pain. Therefore, BPJS inform participant data delinquent BPJS in the primary healthcare with the purpose of facilitating controlling /denial of patient care before entering the health care basic level advanced, as well as statements from the following informant;

... my husband's just a driver, it is hard for us because we are five people on my family (SMI, 48 Years)

... not a problem for me about the charges, the most important is the hospital services good ...,(THI, 35 Years)

... about the contribution are later adjusted,... actually it was not burdensome but affordable because accordance with the service and can choose the tariff class suit for everyone ...,(SRI, 43 Years)

Similarly, other findings from in-depth interviews found that in card services BPJS participants felt obstacles in the form of domicile of those who came from outside the region. The statement of the parents, within the banks-BPJS route, are quite far, the lifetime of the old card, mandatory unbanked /ATM so that these complaints would be a material improvement for the BPJS service quality improvement. In terms of efforts officer helps service participation, participants stated that no effort was good and clear of personnel in dealing with complaints of participants, although the complaint submitted directly. In terms of ease of service complaints, response channel officers carried out either directly or through email, post, hotline is always on standby, as well as statements from the following informant;

...the obstacles are, turns the first payment in the bank, the bank no longer take care of us in order affidavit that I take care of BPJS stamp duty, must use a statement that the father and mother of this entry, must open an account using an ATM card, and I had to return the from BPJS office in to the Bank again, must ask for a letter of domicile ...,(NBH, 24 Years)

... old card active period, a period of one month can only be active ...,(RYD35 Years)

... the barriers of distance to the bank, then the conditions convoluted so procedures required to the bank,...,(DMN, 29 Years)

3.3 How Terms of Service by Social Security Agency Officers for NHI's Member

In-depth interview findings obtained also that in terms of the attitude of the officers, the facilities, the number of officers, waiting time and information services officer attitude participants felt good, the wait time service good, easy information services, but some things that become problems such as cramped waiting room service, seating is limited, the number of officers is less, means and facilities are still lacking, and this time BPJS office continues developing balustrades service resources, as well as statements from the following informant;

„the attitude is very response, timeouts nice, the facilities are still lacking in the waiting room
„(DPI, 30 Years)

„ the number of officers seems pretty lacking
„(LNA, 30Years)

„ fast service, Just waiting room small
„(TJO, 28Years).

4 DISCUSSIONS

BPJS as a public service, in service BPJS membership, requires the convenience of the service management and the accomplish of the public interest as well without the injured party in the service including avoiding their rejection of membership services. By doing the refusal of service member it will hinder the achievement of good public services.

the coveted public service is the ease of taking care of the interest of getting a reasonable service, the same behaviour without partial and treatment honest and forthright (Moenir,2001). In addition, he also added that the smooth running of the service rights depends on the willingness of workers to the obligations imposed, systems, procedures, and methods are inadequate, the organization of the ministry was completed, the revenue officer or employee sufficient for their needs, abilities or skills employees, and adequate working facilities.

Still the problems of service membership independent in terms of denial of service the membership for their inability to applicants meet the requirement file services of membership in a short time, this shows that the service system of membership BPJS in particular the requirements of membership still needs to be evaluated by the entire stakeholder to take appropriate measures and the

need to build a service model that is easy, fast and connected to government agencies related to the membership management BPJS, for example, the need for a realignment of the length of active time card BPJS (long wait for active cards for two weeks so that the card would not be used as soon as possible in healthcare) with a view side benefits to participants and the benefits for institutions manager. The need to develop the integration / connectivity services registry offices (services KTP, KK) with the BPJS, and the bank it is intended that the entire data service needs to be monitored together easily without force/charge to people who forget to bring a file requirements or incompetence communities meet the requirements of membership file in quick time. In another sense that the people who come to the registration service of the membership did not experience difficulties or delays service membership in both the accomplish of the requirements, including other requirements such as having to have a written statement from both parents (for candidates who have parents who are far away), the obligation to have a letter of domicile (for candidates who are outside the area of origin KTP) and others. This is in line with research Lestari that the administrative services are considered complicated, convoluted, and less information (Lestari,2010).

In terms of barriers, understaffed bank services is the management of banks need to adapt to the conditions and needs of the service, with the intention that the service does not make it difficult for the ministry of membership dues and registration. Similarly, in terms of service, the bank should not impose the will of the applicants to have had an ATM/bank, but the need for the bank giving a service to applicants, whether the service payment of contributions made directly through auto-debit or through payment in cash, or through other methods e.g. union dues BPJS integrated with payment of electricity bills/water / or union account payment of other taxes. This is in line with research that there are obstacles in the form of procedural administrative services, technical constraints, constraints of human resources, and socio-cultural community (Haeruddin,2010).

When the BPJS cooperating with the bank as collecting fund membership dues, the aspects of ease and speed of services should be tailored to the local community. This is important so that dues payments service is not a barrier in service members. As the results to concerning Analysis attitude Informal Workers Non PBI Not Yet Registered Program National Health Insurance (JKN) 2014 In Brebes city found that of 347 respondents showed with 90, 5% of informal workers non-PBI Brebes city states

agree with their cooperation with banks and BPJS in BPJS dues payment services (Purwandari,2014).

Dues BPJS is the tariff to be paid by each participant to the BPJS independently of each month, the amount of its contribution based on the class selection of service desired by someone. According to the Presidential Regulation No. 19 The year 2016 regarding the Second Amendment to Presidential Regulation No. 12 The year 2013 on Health Insurance. The regulation stipulated in change fees for participants Not Receiver Wage Workers (PBPU) with details: Class 1 the amounts of fees of Rp 59,500 rose to Rp 80,000, class 2 amounts of fees from Rp 42,500 to Rp 51,000 and Grade 3 amounts of fees did not increase. Participants are required to pay health insurance contributions to BPJS later than 10 (ten) each month. If the date ten (10) falls on a holiday, then the dues payable on the next working day (PP Regulation No. 12,2013).

Non-burdened participants with the amounts of fees BPJS, this is in line with the principle of mutual cooperation BPJS, in the sense of mutual subsidy among those who fall into the category of the rich to the poor category, between the patient's rich and poor patient so that the model sharing service/financing will help to accomplish the operationalization of health services the main burden of financing by the government. With insufficient health funding both from the public and the government it is becoming one measure of the success of programs BPJS current health and future, because historically travel health insurance (health insurance) in Indonesia still face key problems adequacy of health funding, so that with the JKN now then access, quality of care, equity and availability of health resources are expected to work better towards the future towards achieving health coverage 2019.

BJPS service fare classes are varied, the concept is very profitable government and society, because by itself participant will choose a suitable tariffs for himself and his family in accordance with the existing financial capability, on the other hand, the absence of coercion to the people to choose a higher class of service of its capabilities, it also will give freedom to the people to conduct mutation of membership to various levels as desired class of service and good economic conditions to class and non-PBI.

This is consistent with research that 87.1% states are willing to become a participant of health insurance, total premiums 93.3% want the maximum amount of Rp 25,000 / month/person, as much as 93.3% want the amount of the premium inpatient unit 3 the maximum class 25.000 / month/person (Djuhaeni;Gondodiputro;Setiawati,2010). There are

83.3% of informal workers agree with the Participation of non-PBI. And 73.2% of non-PBI informal workers agree with Membership required. While 59, 4% agreed with 25,500 premium class for the inpatient unit 3. A total of 55% agreed with 49,500 premium class for the inpatient unit 2. A total of 56, 2% agree with 59,500 premia for inpatient room class 1 (Purwandari,2014). The factors affecting the health insurance program participation are factor income, knowledge and education (Triyono;Soewartoyo,2013). ILO study that 22.04% of informal workers are willing to pay social insurance premiums, 8.07% found the national social insurance premium is the responsibility of the employer; 34.39% believe the responsibility of the state and 18.86% found premium pay social security is the responsibility of workers, employers, and governments (ILO,2004).

However, the problems that occur in the field there are participants complained fees are mainly families who have many dependents, if it is constantly happening then chances are that the participants and their families will do the arrears-arrears payment of dues BPJS, and should it need to do education, and advocacy to the community to provide an understanding of the mutation to ease the burden of membership dues BPJS.

Thus, participants who have registered as participants Non-PBI and feel unable to make a payment dues BPJS expected to can perform mutation of membership as provided in Rule BPJS No. 1 of 2014 on article 27 paragraph 1 and 2 and Article 30 on health insurance (BPJS,2014)

The concept of payment of dues through the system auto-debit will essentially facilitate service payment of dues each month, with system it also will benefit the participants of the transport costs because it does not need to go to the bank counter, from the time do not need to queue at the bank, in terms of labour was efficient because participants do not have to deal with the bank, and most importantly, will prevent the participant forgets to make payments including payment arrears prevented the participants do. In general, an auto-debit system very well is applied as more BPJS participants in terms of ease of payment. With the system auto-debit also be advantageous than the manual system because the banks and BPJS will easily monitor payment arrears of participants, so that information can auto-debit system used to prevent patients get health care and on the other hand can control the billing process payment of membership dues.

Still the participants who frequently delinquent dues BPJS due to intentional factor or other factors, so the willingness of patients to pay payment including penalties when sick, show that lack of awareness or lack of patient understanding of the

importance of health and the importance of the program JKN for the community, it could be this is the case because the program has not socialised JKN well. The need for the role of government and society, primarily related institutions BPJS manager to find the right model to address their arrears so that the future payment of dues BPJS no impact on the survival JKN program in the future. This is in line with research that the insurance awareness classified as moderate 41%, hence the need to done by the health insurance funds to be able to educate a wider range of people in order to increase public awareness in insured healthcare (Sakinah, 2014)

Existence of barriers to the service requirements of membership either in the form of letter of domicile for those who come from outside the region, a statement of the parents, this is effective only for candidates from outside the area will make it difficult for participants to complete all requirements, this condition can lead to potential participants will choose to continue the service registration membership or terminate such registration. When participants chose to discontinue the registration then when he/she get health care will be fabricated using BPJS services, by itself it will be forced to use a common course of patient care dues health care more expensive. But when he went to the registration of membership he must incur huge costs to obtain compliance with requirements such as having to deal with the urban village office / local village, must meet with parents for approval, and could be candidates to commit fraud administrative completeness of the files in order to avoid the cost of obtaining file completeness.

In terms of distance bank and office BPJS far shows that the absence of an agreement or the absence of integrated services prepared jointly between the bank and BPJS, if this condition persists then the efficiency of the time, cost and labour was detrimental to the applicants because they have completed all stages of the service will be a delay of even a membership service when some of the participants decided to suspend or terminate the registration on the grounds that it faces the difficulty of servicing.

The distance between the bank and BPJS difficult and much will affect the community to come to the bank because of the distance and cost of travel. By him that the need for evaluation and repair service stages and good coordination between BPJS and the bank to find a suitable service model that can facilitate the service participants. Similarly, in an effort to solve the problems attendant care faced by the participants in order to give a good response so that the barriers in the service would be solved and prevent service delays.

In case any officer attitude is good, the wait time service is good, the service information easily will be carrying in the service process and add value to the service personnel, so that the service member will pass easily and participants will feel comfortable, relieved, happy even to feel satisfied for all those services. But if the ministry had received had the opposite outcome than the participants will feel upset, uncomfortable even consider the service received was not in accordance with expectations is by itself the participants will tell other potential participants about the quality of those services.

With the waiting room service cramped, seating is limited, the number of officers is less, means and facilities are lacking, will have an impact on the speed, accuracy, and smooth service, on the other hand, would be detrimental to the participants because seating is limited, participants had to stand waiting queue. With the number of those with less than, the service will slow this can cause queues. Likewise with limited means and facilities which will hamper the service, so that participants feel annoyed frustrated, stressed, and not be satisfied because of long service. By him that BPJS parties to continue to conduct an evaluation to improve service management and service resources continue to develop in order to create good customer service and satisfy the participants. This is consistent with research that the public service there was limited because of the facilities inadequate, lack of human resources and employee discipline (Musdiansyah,2014).

5 CONCLUSIONS

Services JKN participation in BPJS Office has been effectively carried out. But there are still many problems in the implementation both in terms of regulation, service management, behaviour and readiness of resources, therefore the need for policy improvement and service management to improve the effectiveness of JKN membership services.

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Cost of Prevention Dengue Hemorrhagic Fever in Gianyar, Bali

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Keywords: Dengue fever, Cost of prevention, Health Department Gianyar.

Abstract: Dengue Hemorrhagic Fever (DHF) is a disease caused by *Aedes aegypti* mosquito bites. In 2016, Gianyar District is one district in Bali has become area with highest dengue fever case in Bali. Up to now there is no complete data and publication of the costs incurred by the government. The purpose of this study is to determine the cost of prevention and control program of dengue disease in Gianyar District Health Office as a baseline data to determine the economic burden due to DHF. This research is descriptive research with mixed methods approach using secondary data and interview technique. Study found that fund spent by Departement of Health Gianyar District amounted to 91% for vector control, the cost incurred for communication, information, and education was 8,5% and the lowest cost was surveillance of 0,7% of total cost of prevention in Gianyar Regency. This is calculated as IDR 2.203.172.875,00 in 2016. The most widely applied cost for vector control is for fogging purposes which reached 96,3% of total DBD vector control with the cost of the three largest activities were for officer fee, ULV, and fogging insecticide. The highest level of expenditure was on prevention and control is fogging. This activity is the most widely used alternative of DHF control although it is realized that fogging is not effective to prevent DHF. This study suggests that more effective innovation prevention and control programs are needed, and to obtain maximum results further research can be done using a broader perspective to calculate the total cost of prevention of DHF.

1 INTRODUCTION

Dengue Haemorrhagic Fever (DHF) is one of the infectious diseases transmitted by mosquito bites that are found in many tropical and subtropical regions around the world (Guzman, 2010). Globally in 2012, based on morbidity and economic impact for a country especially in developing country DHF has become more important to be handled than Malaria (Dubler and Duane, 2012; Senanayake and Manouri, 2014). According to Senanayake (2014), knowing the economic impact of DHF can be useful for formulating policies ranging from prevention program planning and further research priorities (Senanayake and Manouri, 2014). Kongsin et.al (2010), also stated that considering the costs incurred as a result of the handling of vectors as well as humans such as fogging, program implementation, health promotion activities, and DHF surveillance will be very useful in public health (Kongsin et al, 2010).

In Asia especially in Indonesia, estimation of the cost of prevention are difficult to ascertain. This is because the DHF case information is less clear due to incomplete reporting of some cases that occur⁵. In 2016, incidence rate of DHF per month in Bali province is 486,2 per 100.000 population, this number increased compared to 2015 with dengue IR 269 per 100.000 population (Dinas Kesehatan Provinsi Bali, 2016). The economic burden occur due to DHF has become the responsibility of each local government. Puskesmas plays pivotal point in handling prevention and control of DHF budget. An integrated information on the economic costs of vector control and other extras costs include plague management costs are not available for policy maker (Baly et al, 2011). Therefore, it is important to conduct a research of cost-prevention analysis of dengue haemorrhagic disease because DHF is one of the causes of many deaths in Gianyar District. This study was conducted to complement the limited empirical evidence in relation to the estimated cost

of dengue disease, as local data collection will provide more accurate information.

2 METHODS

This study is a cross sectional study with mixed methods sequential explanatory design. Based on the characteristics of sequential explanatory combination method, the first phase of the study using quantitative methods and in the second stage using qualitative methods. Thus a combination of research was conducted to answer the formulation of quantitative problems in order to complete each other. The method is used because lack of data available on how well vector, surveillance and IEC controls. This research had been approved by the ethical commission with ethical clearance number 762/UN.14.2/KEP/2017 from Research Ethical Commission Udayana University Medicine Faculty/ Sanglah Hospital, Denpasar. This research was conducted at Gianyar Regency starting from March until April 2017. The study use primary and secondary data. Quantitative data is gained from secondary data from Department of Health (DOH) Gianyar and qualitative data is gained form in-depth interview. Sample is chosen purposively with five informants and use triangulation technique to validate data.

3 RESULTS

3.1 Cost of Vector Control in 2016

Based on interview with staff from DOH Gianyar, study found that there are three activities undertaken by DOH Gianyar Regency to control DHF vector in 2016 namely Environmental Management, Abatization, and Fogging

Table 1: Cost and Percentage of Vector Control of Dengue Disease in DOH Gianyar 2016

| Control of Dengue Vectors Year 2016 | | |
|-------------------------------------|------------------|------|
| Activity | IDR | % |
| Environmental Management | 13.550.000,00 | 0,68 |
| Abatization | 60.000.000,00 | 3,0 |
| Fogging | 1.925.020.000,00 | 96,3 |
| Total | 1.998.570.000,00 | 100 |

From Table.1 can be seen that total cost incurred by DOH Gianyar for vector control is Rp.

1.998.570.00,00 with the highest percentage for fogging activity that is equal to 96,3%

3.2 Cost of Communication, Information and Education 2016

This study found that DOH Gianyar and some related agencies spent Rp. 188.218.000,00 to develop posters, brochures, leaflets, brochures, booklets, messages for health education purposes, partnering with cross-sector agencies, radio broadcasts, print media, potential partners consisting of non-governmental organizations as a means of promoting the danger of DHF.

3.3 Cost of Surveillance Program 2016

Data on surveillance costs are obtained from secondary data. While the flow and surveillance system of Dengue Haemorrhagic Fever in DOH Gianyar obtained from in-depth interview.

"... there is supervision, official travel, ... there for the web every week is made. There is STP (integrated surveillance of puskesmas), the same format from the center under the ministry is distributed to the puskesmas ... by name by case ... integrated report ... "(R.02)

Table 2: Cost of Surveillance at DOH Gianyar 2016

| Activity | IDR | % |
|--------------|---------------|-----|
| Buying Goods | 1.400.875,00 | 9 |
| Meeting | 2.304.000,00 | 14 |
| Supervision | 12.680.000,00 | 77 |
| Total | 16.384.875,00 | 100 |

The cost of surveillance is fully utilized by the DOH Gianyar Regency, there is no fund given to the Puskesmas because community health center has become is a public service agencies primary health care policy (BLUD) institution. The public service agencies primary health care policy has been implemented to all primary health care in Gianyar district since 2010 (Indrayathi et al, 2014).

3.4 Cost of Prevention of Dengue Hemorrhagic Fever (DBD) in DOH Gianyar 2016

Based on in-depth interview and secondary data available in DOH Gianyar, this study found that cost of prevention of DHF is Rp. 2.203.172,875. Detail is as follow:

Table 3. Cost of Prevention of DHF in DOH Gianyar 2016

| DHF Prevention and Control Program DBD Year 2016 | | |
|--|------------------|------|
| Activity | Rp | % |
| Vector control | 1.998.570.000,00 | 91% |
| Communication, Information and Education | 188.218.000,00 | 8,5% |
| Surveillance | 16.384.875,00 | 0,7% |
| Total | 2.203.172.875,00 | 100% |

Based on table.3, it can be seen that the most fund is for vector control as much as Rp. 1.998.570.000,00 or about 91% of the funds for the P2DBD program at the DOH Gianyar Regency. Followed by communication, information and education, and surveillance with Rp188.218.000,00, and Rp 16.384.875,00 respectively.

4 DISCUSSIONS

DHF is the most important vector-borne disease in terms of disease and economic burdens. The government has invested substantially for dengue prevention program. This is because Dengue creates a real economic burden for society. Cost of prevention is a disease prevention activity that uses the resources needed to perform various intensive activities undertaken by the parties concerned to prevent and control the disease. DHF prevention and control activities are surveillance, periodic larvae in houses, larvacide use in water storage containers, peripheral insecticide spraying against adult mosquitoes (fogging), health education/ promotion related to disease prevention⁹.Based on the secondary data collection, it can be concluded that the large cost incurred by the DOH Gianyar in 2016 for P2DBD (DHF Prevention and Control) activities is Rp. 2.203.172.875,00. These costs are spent on vector control consisting of environmental management, abatization, and fogging. Environmental management activities consist of PSN (Mosquito Nest Eradication) and PJB (Periodic larva monitoring) by Jumantik cadres in the working area of DOHGianyar.The cost incurred for Jumantik incentives in 2016 is Rp. 13.550.000,00 or equal to 0.68% of the total cost incurred for vector control in 2016. The incentive given to Jumantik is given by the Gianyar District Health Office directly without going through the puskesmas. Based on DOH Gianyar District report, the activity that absorbed most of APBD funds managed by DOH Gianyar

Regency is fogging which is 96,32% from total cost of DBD vector control. As can be seen from table.1 that the cost is high enough for the fogging activity. This is because fogging is an activity that is routinely done every year and is realized to spend high cost with low effectiveness in preventing dengue disease. But fogging is still done to prevent and control the vector of dengue fever which aims to kill infective adult mosquitoes quickly and break the chain of dengue virus spread carried by mosquitoes¹⁰. This fogging activity is not only an alternative to vector control in Indonesia but also in Cambodia which costs 500,000 USD every year. While Thailand spent 4.87 million USD each year for the fogging activities. The fees vary depending on the policies of each country in the P2DBD⁹

However, there are several concerns about the use of insecticides in dengue prevention, namely the development of mosquito resistance, environmental risks, and the transient variable efficacy of peridomesticarea spraying¹¹. According to WHO, education programs / programs to the public about prevention and control of DHF more effectively can raise awareness about the importance of prevention and control activities to be done independently by community rather than fogging¹².The DOH Gianyar also conduct health promotion activities to prevent DHF.

There are several health promotion activities undertaken by the DOH namely advocacy, business development, and community empowerment. The activities not only targeting community groups but also for policy advocacy and foster relationships with partners in the process of disseminating information to the community about DHF .By raising public awareness through education activities against the dangers of dengue fever and doing activities of prevention and control of dengue fever is the choice to avoid this infectious disease ¹¹. However, the fund provide for health promotion through communication, information and education program in Gianyar District not as much as fund for fogging activity. This approach may be driven by public expectations of government reaction to dengue outbreaks in the district area rather than higher expectations of proactive actions to prevent dengue outbreaks.

There are several limitations to this study. The cost of prevention perspective is limited to the public sector only especially from DOH Gianyar District perspective. The study did not include the cost of dengue vector activities paid for by private corporations (e.g., fogging activities surrounding hotels, factories, and warehouses) and private

households (e.g., fogging conducted in elite residential area) also not included community mosquito prevention activities conducted by non governmental organizations (NGO). Most cost data for communication, information and educational are borne from interview since the DOH Gianyar office does not the written document.

5 CONCLUSIONS

The cost of prevention borne due to DHF is Rp2.203.172.875,00. In 2016, spending for Dengue Prevention and Control activity at the DOH Gianyar Regency is the highest fund compared to other diseases. Fogging is the most costly alternative option from year to year that costs the most from other preventive activities from supporting equipment, human resources and chemicals used. Although fogging is not effective to prevent dengue fever, fogging activities are still done to kill infective adult mosquitoes to prevent rapid transmission but also driven by public expectations of government reaction to dengue outbreaks. The cost has increased notably over time, primarily due to price inflation and the increasing prevalence of DHF. Data on DHF costs in Gianyar will help indicate how much money could potentially be reallocated to other control approaches as they become available. DHF disease creates a real economic burden for society. The community in Gianyar area has been reliant on a government funding for prevention and control program.

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Factors Related of Changing First Level Health Facilities (FKTP) on JKN Mandiri Participants in Denpasar City

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Keywords: Factors, Changing, FKTP, JKN Mandiri, Denpasar.

Abstract: The desire to change first health level facilities (FKTP) is a form of patients dissatisfaction and will be a step on the loyalty of patients in utilizing health services. In 2016, there was a significant increased of participants JKN Mandiri who made the change FKTP on June is 453 peoples to become 504 peoples on November in 2016. Based on interviews with BPJS Kesehatan Denpasar obtained data regarding the complaints of JKN participants in Denpasar City include services that are less friendly, less informative, long queues, rejection of patients outside the region and unserved patients for treatment outside working hours FKTP. The purpose of this study is to know factors related of changing FKTP on JKN Mandiri participants in Denpasar City. The design of this study used crosssectional analytic with sample size is 108 peoples. The sampling technique was done by consecutive sampling at several FKTP in cooperation with BPJS Kesehatan in Denpasar City. The data was collected by questioner and analyzed by univariate, bivariate (*chi-square*) and multivariate (*regresi logistic*). Based on the result of mutivariate, there was a correlation between facility availability ($p = 0,005, 95\% \text{ CI} = 2,05-56,57$), waiting time ($p = 0,000, 95\% \text{ CI} = 5,98-233,68$), distance ($p = 0,000, 95\% \text{ CI} = 3,66-51,92$), moved residential ($p = 0,022, 95\% \text{ CI} = 1,34-43,01$) and service of doctor ($p=0,005, 95\% \text{ CI}=2,02-55,32$) with the intention to change FKTP. While the most dominant factor on the desire change FKTP is waiting time ($p = 0,000$ and *Adjusted OR* = 37.38). For the FKTP side, it is better to improve the quality of service provided to JKN participants and for BPJS Kesehatan can increase the assessment of FKTP which cooperate with it in terms of FKTP credentialing and recredentialing.

1 INTRODUCTION

The First Level Health Facility (FKTP) is a facility that provides primary health care for JKN participants, including Puskesmas, Doctor Practice, Dental Practice, Primary Clinic, and Class D Pratama Hospital. First-Level Health Facility (FKTP) will be used by JKN participants to conduct first-time treatment (BPJS Kesehatan. 2014). BPJS Kesehatan also facilitates for JKN participants who wish to change FKTP, with a minimum requirement of having to wait 3 months since registered in previous health facility. With the existence of these rules, in fact many JKN participants who want to change FKTP.

Based on the data of BPJS Kesehatan Denpasar participants who perform changing FKTP more dominated by participants JKN Mandiri. According to data from BPJS Kesehatan Denpasar there was a

significant increase of participants JKN Mandiri in Denpasar City who made the changing FKTP in June as many as 453 people and become 504 people in November 2016 (BPJS Kesehatan Denpasar, 2016). This situation indicates lack of quality of service provide by FKTP that impact on satisfaction of JKN patient. Based on interviews with BPJS Kesehatan Denpasar, JKN participants in the Denpasar City mostly complained about services that are less friendly, less informative, long queues, rejection of patients outside the region and unserved patients for treatment outside FKTP working hours. This is an indication of problems in satisfaction of JKN patient.

Research by Widiastuti (2015) also states that there is a significant relationship on the type of FKTP selected with the satisfaction of JKN patients. Dissatisfaction of patients or communities in using health services tends to lead to non-compliance of patients in treatment activities, not following advice

and moving to other FKTP (Pohan, 2006). From preliminary study by interviewing 50 JKN participants who had been changing FKTP in BPJS Kesehatan Denpasar found that, there are several factors influencing FKTP movement such as: distance to FKTP, doctor service at FKTP, facility available at FKTP, service time in FKTP, waiting time to get service at FKTP, and moved residential. The purpose of this study is to determine the factors associated with the desire to change FKTP on participants JKN Mandiri in Denpasar City.

2 METHODS

This study is a quantitative analytical research with cross-sectional design. This study was conducted for 3 months (March-May 2017) in Denpasar City. This study using non probability sampling with consecutive sampling technique. Sample were selected from 8 FKTP with 108 samples. The inclusion criteria for study participant included JKN Mandiri 1) participants registered in FKTP BPJS Kesehatan Denpasar and at least have been visit FKTP for 1 time 2) Aged at least 17 years old and 3) able communicate and willing to be a respondent. The data was collected by questioner and analyzed by univariate, bivariate (*chi-square*) and multivariate (*regresi logistik*). The research had been approved by the ethical commission with ethical clearance number 834/UN.14.2/KEP/2017 from Research Ethical Commission Udayana University Medicine Faculty/Sanglah Hospital, Denpasar

3 RESULTS

3.1 Respondent's Characteristic

| Variable | Desire to change | | | |
|-------------------|------------------|------------|------------------|------------|
| | Want to change | Percentage | Do not to change | Percentage |
| Age | | | | |
| >37 years | 15 | 31,25% | 33 | 68,75% |
| 17-37 years | 25 | 41,67% | 35 | 58,33% |
| Education | | | | |
| Low(<SMA) | 7 | 33,33% | 14 | 66,67% |
| High(≥SMA) | 33 | 37,93% | 54 | 62,07% |
| Occupation | | | | |
| Not Working | 14 | 33,33% | 28 | 66,67% |
| Working | 26 | 39,39% | 40 | 60,61% |
| Total | 40 | 37,04% | 68 | 62,96% |

Figure 1: Respondent's Characteristics

Characteristic description of respondents based on the desire to change FKTP is done by using crosstab between dependent variable (age, education, and occupation) with the desire to change FKTP. The results show more respondents want to change FKTP dominately by respondents aged 17-37 years (41,67%), high education (≥SMA) and working participant with percentage respectively (37,93%) and (39.39%).

3.2 Result Of Bivariate Analysis Factors Related with Desire to Change FKTP on JKN Mandiri Participants in Denpasar City (n=108)

| Variable | Desire to change FKTP | | Crude OR | 95% CI | p value |
|--------------------------|-----------------------|------------------------|----------|------------|---------|
| | Want to change (%) | Not want to change (%) | | | |
| F. Availability | | | | | |
| Incomplete | 8 (66,67%) | 4 (33,33%) | 4 | 1,96-19,2 | 0,0242 |
| Complete | 32 (33,33%) | 64 (66,67%) | Ref | | |
| Doctor's services | | | | | |
| Bad (skor<10) | 10 (71,43%) | 4 (28,57%) | 5,33 | 1,37-24,8 | 0,0043 |
| Good (skor>10) | 30 (31,91%) | 64 (68,09%) | Ref | | |
| Service time | | | | | |
| Not suitable (skor<2) | 5 (83,33%) | 1 (16,67%) | 2,42 | 1,55-13,78 | 0,0157 |
| Appropriate (skor>2) | 35 (34,31%) | 67 (65,69%) | Ref | | |
| Waiting time | | | | | |
| Old (>60min) | 13 (86,67%) | 2 (13,33%) | 15,88 | 3,1-150,2 | 0,0000 |
| Not long (≤60 min) | 27 (29,03%) | 66 (70,97%) | Ref | | |
| Distance | | | | | |
| Far (>5 km) | 20 (74,07%) | 7 (25,93%) | 8,71 | 2,93-27,5 | 0,0000 |
| Near (≤5km) | 20 (24,69%) | 61 (89,71%) | Ref | | |
| Moved Residential | | | | | |
| Ever | 11 (78,57%) | 3 (21,43%) | 8,21 | 1,93-48,2 | 0,0006 |
| Never | 29 (30,83%) | 65 (89,17%) | Ref | | |

Figure 2: Bivariate Analysis Result

Result of bivariate analysis using *chi square* there are 6 variables that have a significant relationship ($p < 0.05$) with changing FKTP namely facility availability ($p=0,0242$, 95% CI=1,96-19,2, Crude OR=4), doctor services ($p=0,0043$, 95% CI=1,37-24,8, Crude OR=5,33) service time ($p=0,0157$, 95% CI=1,55-13,78, Crude OR=2,42), waiting time ($p=0,0000$, 95% CI=3,1- 150,2, Crude OR=15,88) , distance ($p=0,0000$, 95% CI=2,93-27,5, Crude OR=8,71) , and moved residential ($p=0,0006$, 95% CI=1,93-48,2, Crude OR=8,21)

3.3 Final Model Result of Multivariate Analysis Factors Related with Desire to Change FKTP on JKN Mandiri Participants in Denpasar City (n=108)

| No | Variable | 95% CI | | | P value |
|----|-------------------|-------------|-------|--------|---------|
| | | Adjusted OR | Lower | Upper | |
| 1 | F. Availability | 10,78 | 2,05 | 56,57 | 0,005 |
| 2 | Doctor service | 10,56 | 2,02 | 55,32 | 0,005 |
| 3 | Waiting time | 37,38 | 5,98 | 233,68 | 0,000 |
| 4 | Distance | 13,78 | 3,66 | 51,92 | 0,000 |
| 5 | Moved residential | 7,60 | 1,34 | 43,01 | 0,022 |

Figure 3: Final Model Result

Multivariate test with logistic regression showed that five variables which be significantly related to the desire of change FKTP are facility availability ($p = 0,005$, 95% CI = 2,05-56,57, Adjusted OR=10,78), waiting time ($p = 0,000$, 95% CI = 5,98-233,68, Adjusted OR=37,38), distance ($p = 0,000$, 95% CI = 3,66-51,92, Adjusted OR=13,78), moved residential ($p = 0,022$, 95% CI = 1,34-43,01, Adjusted OR=7,60) service of doctor ($p=0,005$, 95% CI=2,02-55,32, Adjusted OR= 10,56) with the intention to change FKTP. The waiting time variable has a chance of 37.38 times higher than the other variable *Adjusted OR* = 37,38 (95% CI: 5,98-233,68). Statistically predictable, waiting time is the most dominant variable affecting the willingness of changing FKTP on JKN Mandiri participants in Denpasar City

4 DISCUSSION

4.1 Description Desire to Change FKTP Based on Socio demography

Result of research indicate as much (37,04%) respondent want to change FKTP and based on socio demographic characteristics, respondents who want to change FKTP more dominantly by respondents aged 17-37 years (41,67%), high education (\geq SMA) and working participant with percentage respectively (37,93%) and (39.39%). This is in accordance with research conducted by Indriyani (2013) which states adult age (> 40 years) tend to be more loyal in utilizing health services in a health service. Conversely, younger people (≤ 40 years old) tend to

be less loyal to utilize health services and want to seek new health services (Indryani, 2013).

The results of this study are also in line with research Khudhori (2012) which states the higher the client's education, the level of satisfaction and loyalty in utilizing health services is lower and tend to want to seek new health services (Khudhori, 2012). This is well-founded, because usually a low-educated client does not have too high expectations of others. Conversely, a highly educated person usually has high expectations of others over him.

While in terms of work, clients who are already working tend to be less loyal to health services provided and want to seek new health services. This is because they already have income and they tend to prefer to seek health services more optimal without taking into account the cost (Khudhori, 2012).

4.2 Relationship of Facility Availability with the Desire to Change FKTP

Research indicate that there is significant correlation between facility availability in FKTP with the desire to change FKTP. This research finding in line with research by Indryani (2013) which states the facility availability has a relationship with the loyalty of antenatal care patients at Puri Cinere Hospital (Indryani, 2013). Incomplete availability of facilities in a health service, so the fewer people who want to use health services and have an impact with the desire to seek other health services.

In JKN era the application of credentialing at present it is quite difficult, especially in meeting the requirements indicators as they relate to large budgets in completing tools and facilities, while the amount of capitation they will receive is not worth the cost they spend to provide it complete facilities, so some FKTP that do not have complete facilities this makes some respondents prefer to move to FKTP which has complete facilities (Ulandari & Indrayathi, 2016).

4.3 Relationship of Doctor's Service with the Desire to Change FKTP

From result of research indicate there is significant relation between doctor service at FKTP with desire to change FKTP. The results of this study are in line with Hanif's (2011) theories which states that doctors have a very important role in the process of health services both treatment, healing, and health care of patients, so the better the patient's perception of the doctor, the better the impact on patient health

and utilization of health services. Where the better the doctor's service then the possibility of patients will return again to treatment at the doctor, and the less good the doctor's service then the possibility of patients want to find a new doctor (Hanif, 2011).

4.4 Relationship of Service Time with the Desire to Change FKTP

Research indicate that there is no relation between service time in FKTP with the desire to change FKTP. Further research conducted by Dinik (2008) also shows that there is correlation between suitability of service schedule in Bringin District Health Center of Semarang with level of patient satisfaction which progressively according to service schedule hence more high level of patient satisfaction (Dinik, 2008). This level of patient satisfaction will lead to loyalty of patients in utilizing health services, where patients will tend to reuse health services if the promised service schedule in accordance with their working time and if the service schedule is less appropriate then patients prefer to seek new health services (Dinik, 2008).

Based on the result of the research, the service time in FKTP shows that 94.44% is in accordance with the work schedule. This means that most participants are satisfied with the service time in FKTP. This is why there is no relationship between time of service with the desire to change FKTP.

4.5 Relationship of Waiting Time with the Desire to Change FKTP

Research indicate that waiting time has significant relationship and become the most dominant factor with the desire to change FKTP. The results of this study are in line with research conducted by Bambang (2011) which mentions the waiting time has a strong relationship with patient family satisfaction and impact on loyalty of patients in utilizing health services.

Based on the research (Aisyah, 2015) mentioned that long waiting time in health service is due to high number of patient visits, lack of officers at registration booths, limited space available, and also due to lack of medical personnel (doctors, midwives, nurses) to service patients who come. Where if the waiting time to get medical services quickly then patients will tend to re-utilize the FKTP and if the time to get medical services too long, then the patient will likely have a desire to seek new health services.

4.6 Relationship Distance with the Desire to Change FKTP

The results of the analysis test also shows that there is a significant relationship between the distance to FKTP with the desire to change FKTP. The results of this study are in line with research conducted Meylanie (2010) which states that there is a significant relationship between access to health facilities with the selection of health service.

The farther the geographical location of the FKTP is from residence, the more respondents who want to change FKTP and the closer the geographical location of the FKTP from the residence causes the fewer who want to change FKTP. This is what makes distance is one of the important considerations in choosing health services and the emergence of the desire to change FKTP if the health facilities far from residence.

4.7 Relationship Moved Residential with the Desire to Change FKTP

The result of the analysis also shows that there is a significant correlation between moving residential with the desire to change FKTP. At the time of the survey, it was because there were still many participants of JKN Mandiri in Denpasar City where their residence was not permanent, they moved due to work, lecture / school, and had a new house. This is what makes them have the desire to get health care insurance in a new residence. Based on research Rahmad (2016) also shows patients who have moved residence tend to choose health services close to his new residence. This is what causes a significant relationship between ever moved residential with the desire to change FKTP on the participants JKN Mandiri in the city of Denpasar.

As for the limitations of this study are On the questionnaire, the answer to the question of availability of facilities and distance, the respondent can not predict exactly the availability of facilities in his FKTP and distance from residential address to FKTP. So there are some respondents can only give answers in accordance with its estimates.

There are several limitations to this study. Some of the respondents can not predict exactly the distance from their residential address to the health facilities (FKTP). It might affect the results of the study due to respondents bias. Moreover, respondents do not really know what is the requirement of facilities in FKTP so the answer really based on their

subjectivity not the standard of credentialing from BPJS Kesehatan.

5 CONCLUSIONS

Most respondents (37.04%) want to change FKTP and there is a relationship between the availability of facilities in FKTP, waiting time at FKTP, distance to FKTP, doctor service at FKTP and move domicile with the desire to change FKTP. The most dominant factor is the waiting time, so that for FKTP can improve the quality of service provided to the JKN participants such as conducting training to medical personnel, increasing human resources, especially medical personnel and improving facilities and infrastructure, and for BPJS Kesehatan can improve FKTP assessment which cooperated with it in credentialing and recredentialing of FKTP.

BPJS Kesehatan can also immediately apply Presidential Regulation No. 19 of 2016 article 29 reaffirmed on BPJS Regulation No. 1 of 2017 concerning Equitable of Participants in First Level Health Facilities so that the number of registered participants in each FKTP can be evenly distributed to overcome waiting time to get service in the old FKTP.

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Willingness Survey of the Informal Workers in Bangli Regency about National Health Insurance (JKN) Program

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Keywords: Willingness, Informal workers, National health insurance (JKN) program.

Abstract: The subsidized members (PBI) dominated the membership of the National Health Insurance Program (JKN) in Indonesia, including in Bangli Regency. In 2016, the membership of JKN in Bangli Regency was only 42,92% and membership of non wage earners (PBPU) only 4,32%. The low number of PBPU in JKN program because socialization not yet optimal and also because willingness of informal workers to join JKN program still very low. This study aims to explore factors which influence to willingness of informal workers to join JKN program and to find out the reason of postponement to be JKN participant. The study was observational analytic with cross-sectional design. The subject of this study is informal workers at Selat and Penganan Village Subdistrict Susut in Bangli Regency who have not join JKN yet, this study was set up by multi stage random sampling (96 respondents) and they were selected proportionally. The data was collected with questionnaire and analyzed with quantitative method approaches (univariate, bivariate used chi square and multivariate used Poisson Regression). Research found that 66,67% respondents want to participate in JKN program. While based on Poisson Regression, indicate that the main factor which influenced participation on JKN is education (Adjusted PR=5.15, 95%CI=1.57-16.92) and benefit perception (Adjusted PR=2.41, 95%CI=1.20-4.823). Furthermore, and the most reason of respondents tend to postpone membership are busy working and no time to register in BPJS Kesehatan Office. Education and benefits perception altogether influenced the willingness to participate JKN program. Therefore, it is necessary to provide information by emphasizing the benefits perception of JKN programs in various education level, as well as registration and payment of JKN program with “jempot bola system” (BPJS Kesehatan’s officer should actively gain the premium from the participants).

1 INTRODUCTION

Health development is an effort to be implemented by all components of the Indonesian nation. It aims to increase awareness, willingness, and healthy living ability for everyone to achieve the highest degree of public health, as an investment for human resources development that are productive socially and economically. Therefore, the government held a program called national health insurance (JKN)¹. The membership of JKN in Indonesia is dominated by the subsidized members (PBI) category is 67.75%, while the non wage earners (PBPU) membership is least than other members², similar conditions also apply in Bangli Regency, Bali Provincial. The membership of JKN PBPU category is 4.36%³. In Bangli Regency, the lowest number of JKN participations is in Susut Sub district with only

35.50% participation³. The low participation of JKN indicates that there is no willingness to follow JKN program⁴. Willingness determines a person's ability to participate in community activities or programs in the community, including the JKN program⁵.

Willingness can be only to form if society has awareness of the program, awareness is the possession of knowledge or be aware of the situation and something⁶. According to the behaviour change theory of Health Belief Model (HBM) describes that attitudes of individuals to adopt new behaviours that are preceded by the formation of willingness, willingness is used as a predictor factor of behaviour, so if you want to predict individual behaviour then it should be assessed willingness, thus the higher the individual wants so that the easier it will be for the individual to adopt new behaviors⁵. According to King in Surharyat (2015) states that

the willingness with action should be consistent, so that what will become indifference willingness be reflected in his behaviour, but if there is inconsistency between the willingness and action means there is an outside inhibiting factor of the individual concerned that causes to delay in making decisions to adopt new behaviors⁷.

Based on the results of descriptive research conducted by Wisudarma et al (2015) stated that the low level of willingness of the community to follow the JKN program with percentage is 25%, the study explained that the head of the family who has a family member > 4 peoples known not agree to register all members his family in the JKN program, the negative perception of the head of the household related to the membership aspect and the contribution of the program has low willingness to register as JKN participant⁸. Based on that, the researcher wanted to study about willingness survey of the informal sector workers to follow JKN program in Bangli Regency.

2 METHODS

This study is quantitative analytical with cross sectional design. This research is done at Selat and Pengiang Village Subdistrict Susut in Bangli Regency from April to May 2017. The sample in this research is 96 respondents. Respondents in this research are those who work in informal sector at Selat and Pengiang Village with the inclusion criteria: family head who have not been a participant of JKN, and willing to fill out the questionnaire. Sample selected through multi stage random sampling technique. The research instrument used is questionnaires that have been tested before the research is done. The data was collected and analyzed by using STATA SE 12 software. The analysis was univariate analysis which resulted the frequency distribution and proportion of each dependent and independent variable, bivariate analysis with chi square to find out the relation of independent variables with dependent variable and multivariate analysis with Poisson regression test to find out the most influential variable. This research had been approved by the ethical commission with ethical clearance number 1015/UN.14.2/KEP/2017 from Research Ethical Commission Udayana University Medicine Faculty/Sanglah Hospital, Denpasar.

3 RESULTS

3.1 Respondent's Characteristic

Based on the socio-demographic characteristics, the majority (53.13%) of respondents has age >40 years old, with the average of age is 40 years and the age of the respondent between 21 years to 63 years, most of respondents (88.54%) are female, most respondents had graduated the lower senior high school with percentage is 64,58%, most of them (47,92%) have professions as artisans of wood carvings of Balinese Catton, based income most of respondents (54,17%) have less minimum payment of Bangli Regency, based on family size indicate most respondents (54,20%) have family members bigger than 4 peoples, and most respondents (66.67%) want to join JKN program.

3.2 Perceptions Of Respondents About JKN

Based on the perception variable, there are 5 perception variables studied in this research, namely perception of susceptibility, perception of severity, perception of threat, perception of benefit and perception of barriers, obtained result that most (62,50%) respondents feel high susceptibility, Which is high if suffering from disease as much as 68.75%, besides respondents who have high perception of threat as much as 54.17% , in addition most (68.75%) of respondents who have high perceived benefits if joining JKN program, this is expected to increase the chance of willingness of respondents to follow JKN program, the possibility is also reinforced with findings that most respondents have low barriers perception if follow JKN program as much 56.25%.

3.3 Socialization about JKN Which Accepted by Respondents

Based on the description of socialization most (38.54%) of respondents often get information about JKN, from source of information mostly (78.13%) respondents receive information from peers or family, the rest of them receive information from media (TV, radio and newspaper), primary care providers, and other sources, such as the internet and hospitals.

Table 1 Result of bivariate analysis about relation of socio-demographic factor, perception, and socialization with willingness to follow JKN program (n=96)

| Independent variable | Willingness to follow JKN | | Crude PR | 95% CI | p value |
|---------------------------|---------------------------|-----------|------------|--------------|---------|
| | Willing | Unwilling | | | |
| Age groups | | | | | |
| > 40 years | 37 | 14 | 1.457 | 0.822-4.150 | 0.1931 |
| 21-40 years | 27 | 18 | <i>Ref</i> | | |
| Sex | | | | | |
| Female | 7 | 4 | 0.9058 | 0.391-2.095 | 0.8210 |
| Male | 57 | 28 | <i>Ref</i> | | |
| Education | | | | | |
| ≥ Senior high school | 31 | 3 | 5.302 | 1.742-16.128 | 0.001 |
| < Senior high school | 33 | 29 | <i>Ref</i> | | |
| Occupation | | | | | |
| Do a business | 18 | 5 | 1.7014 | 0.7041-3.906 | 0.176 |
| Free workers | 46 | 27 | <i>Ref</i> | | |
| Income | | | | | |
| High | 35 | 9 | 2,1623 | 1.1201-4.175 | 0.0138 |
| Low | 29 | 23 | <i>Ref</i> | | |
| Family size | | | | | |
| Little | 27 | 9 | 1.53333 | 0.800-2,938 | 0.1800 |
| Many | 37 | 23 | <i>Ref</i> | | |
| Susceptibility perception | | | | | |
| High | 43 | 17 | 1.4705 | 0.741-2,569 | 0.1800 |
| Low | 21 | 15 | <i>Ref</i> | | |
| Seriousness perception | | | | | |
| High | 52 | 14 | 2.825 | 1.696-4.898 | 0.0001 |
| Low | 12 | 18 | <i>Ref</i> | | |
| Threat perception | | | | | |
| High | 41 | 11 | 2.2562 | 1.227-4.148 | 0.0059 |
| Low | 23 | 21 | <i>Ref</i> | | |
| Benefit perception | | | | | |
| High | 51 | 14 | 2.4933 | 1.477-4.2952 | 0.0001 |
| Low | 13 | 18 | <i>Ref</i> | | |
| Barrier perception | | | | | |
| Low | 40 | 14 | 1.6530 | 0.935-2.9283 | 0.0810 |
| High | 24 | 18 | <i>Ref</i> | | |
| Socialization | | | | | |
| Often | 47 | 11 | 2.9138 | 1.592-5.3300 | 0.0001 |
| Seldom | 17 | 21 | <i>Ref</i> | | |

Based on the result of bivariate analysis showed that there are six variables related to willingness to follow JKN program, namely education (Crude PR=5,3 and 95% CI=1,742-16,120), income (Crude PR= 2,1623 and 95%CI=1.1201-4.175), seriousness perception (Crude PR = 2,825, and 95% CI=1,696-

4,898), threat perception (Crude PR = 2.2562, and 95% CI=1.227-4.148), benefits perception (Crude PR=2.4933, and 95% CI=1477-4.2952), socialization about JKN (Crude PR = 2,9138, and 95% CI =1,592-5,330).

Table 2 Final model of multivariate analysis of socio-demographic factors, and perceptions and socialization of JKN with willingness to follow JKN (n = 96)

| Variable | Adjusted PR | 95% Confidence Interval | | p value |
|-----------------------------|-------------|-------------------------|-------|---------|
| | | Lower | Upper | |
| Education | | | | |
| High (≥ Senior high school) | 5.15 | 1.57 | 16.92 | 0,007 |
| Low (< Senior high school) | <i>Ref</i> | | | |
| Perception of Benefit | | | | |

| Variable | Adjusted PR | 95% Confidence Interval | | p value |
|---------------------------------|-------------|-------------------------|-------|---------|
| | | Lower | Upper | |
| High (If total score \geq 12) | 2.41 | 1.20 | 4.823 | 0,013 |
| Low (If total score < 12) | <i>Ref</i> | | | |

Based on the result of multivariate analysis showed that there are only two variables which altogether influenced the willingness to join JKN program that is education (Adjusted PR = 5.15, 95% CI = 1.57-16.92) and variable of perception of benefit (Adjusted PR = 2.41, 95% CI = 1.20-4.823).

3.6 Cause of Delay Joining JKN

Based on the reason to delay, most of them 34.38% have not registered as JKN participants because they are busy working so limited time and opportunity to register to BPJS Health Office. Additionally, other respondents have not registered due to negative perception on the quality of service had been heard by respondents from friends who have used health services with JKN cards such as a convoluted referral system and the length of the queue into consideration of respondents have not signed up to be participant of JKN.

4 DISCUSSION

Based on the results of willingness survey, found that most (66.67%) respondents want to join the JKN program. Multivariate analysis showed that educational variable was the most influencing factor on willingness to join JKN program with Adjusted PR= 5.15 and p value <0.05, it shows that respondents who have higher education have a chance to join JKN program 5.15 times higher than less educated person.

According to Kumar et al (2011), the level of education affects the level of awareness of crop insurance in India, as a form of risk transfer⁹. Research on Litbang Kompas (2014) in Sakinah (2014) also proves that the higher of education person have awareness of the importance insurance is better than less educated person, in other words the higher education will have better knowledge about being healthy, by becoming a participant of health insurance¹⁰. The results of finding in the field revealed that the respondents who have higher education have better knowledge or understanding of the importance of JKN program in order to prevent catastrophic health expenditure. It is proven from the survey results revealed that there are some respondents who are highly education already have

private insurance. Therefore, it is necessary to provide information about the importance of JKN program at various levels of education level from primary, secondary, to university to form positive and permanent attitude about the program and expected students are able to inform to the parents or guardians who will indirectly affect membership in JKN program especially PBPU category.

This research also found that there is no significant relationship between age and willingness to follow JKN, this is also found in research by Affi (2014) states that there is no relationship between the age of consciousness insurance¹¹, and there is no relationship between the sex with willingness to follow JKN, similarly Litik (2007) states that there is no relationship between sex and community-based insurance ownership¹². The work is also not related to the willingness to join JKN, this finding also found in the study of Lestari (2016) states that there is no job relationship with JKN membership¹³. Furthermore, income also unrelated to the willingness to join JKN this is also found in the Mhere (2013) study in Zimbabwe found that household income does not affect the public health insurance disposal¹⁴, in addition the number of family members is also not related to the willingness to follow the JKN, this is in line with research from Siloho (2016) which states that the number of families is not a determinant factor willingness to pay JKN¹⁵.

The majority of respondents have a high perception in terms of susceptibility, seriousness, threats of disease, with each proportion is 62.50%; 68.75%; and 54.17%. the most (68.75%) of respondents have high benefit perception if follow JKN program, while perception of low barrier is 56,25%. The result of multivariate analysis of perceptual variables in this study shows that only the benefits perception that have a significant influence on willingness to follow the JKN program, high benefit perception has the opportunity to encourage the willingness of respondents to join the program JKN 2.41 times bigger than the respondents who have low benefit perception. Research by Elviera and Siswi (2013) states that the perception of benefits has the strongest effect is 2.94 times higher to encourage a person to conduct preventive behaviors¹⁶, besides Tiaraningrum research (2014) on the motivation of JKN Mandiri membership in Surakarta City get the result that 80% realized the

benefits of the importance of health in life and is 86% said participation in JKN¹⁷. Finding of this study also in line with Health Belief Model (HBM) theory in which the intention (willingness) and changes of individual behavior is influenced by the belief in the benefits and perceived barrier. Perceptions of high benefits and low barriers perceptions are likely to be dominant factors that encourage respondents to have willingness to follow JKN program, the change is supported by finding high vulnerability, threat, and severity, and most respondents have been informed about JKN. According to Kurt Lewin in Subari (2014) states that the willingness or change in person's behavior is influenced by the driving factors and inhibitors, if the perception of benefits on a program is high, then this will lead to the formation of willingness and behavioral changes desire¹⁸.

The findings in this study indicate that JKN program is already quite popular in the community, it is proved that most respondents have often received information about JKN. The source of information on the JKN program most received by respondents came from friends or family, this finding is in line with research by Tiaranigrum (2014) stated that the culture of Indonesian society such as still the family as the first place to obtain health information and the study also explain the respondents who received information from 35,50% more families to participate in JKN Mandiri¹⁸, but to increase the willingness to follow JKN program needs to be educated by cooperating education sector and community leaders through the delivery of messages more specifically such as the magnitude of the risk of disease and the cost of treatment if suffering disease and various information about the importance of JKN program need to be packed more interesting so that people have enthusiasm and high willingness to join JKN program. Most of the causes of the respondents have not signed up to be a JKN participant because they are busy working so there is no time or opportunity to go to BPJS Kesehatan Office, therefore it needs closer registration system and payment of premium JKN with "jemput bola" system means that BPJS Kesehatan officers has collect the premium directly to community or cooperating with LPD and cooperation in local village. Indrayathi et.al (2015) found that Informal workers stated that the registration system at BPJS Kesehatan office seem to be one of the obstacles them to register as a participant JKN. Informal sector workers generally want to be a participant and collection premium of participants using "jemput bola" system or working with the village institution

for example LPD (Village Credit Institutions is one institution that has been attached to the traditions of the people in Bali) and Koperasi Unit Desa because many do not know where is the BPJS Kesehatan (Indrayathi, et al., 2015). Furthermore, information about JKN obtained by respondents was not complete therefore it is important to invite potential group in society like community leaders and religious leaders to participate in socialization about JKN program. This is because of cultural belief that people in rural area tend to imitate the behavior of their community leader. Bad experience of respondent friend about quality services when using JKN also hamper their willingness to join JKN.

5 CONCLUSIONS

Most of the informal sector workers are willing to join the JKN. Factors that influence the willingness to follow the JKN program are the level of education followed by perception of benefits of JKN. Respondents mostly delay to join the program because of busy with their jobs and no time or opportunity to go to BPJS Kesehatan Office. It is expected that BPJS Kesehatan can be socialized the program to various level of education starting from primary, middle, to university institutions to form a positive and permanent attitude about the importance of JKN program. Additionally, BPJS Kesehatan in Bali should working closely with LPD and Koperasi Unit Desa since this institution available in every village in the province of Bali and highly developed and trusted by local communities.

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Barriers to Treatment Adherence to Hypertension: A Qualitative Study with *PBI* and Non-*PBI* Patients of a *Puskesmas* in Surabaya

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Keywords: Hypertension, Treatment Non-adherence, *BPJS Kesehatan*, Community health centre (*Puskesmas*).

Abstract: Non-adherence to hypertension treatment has been reported as being a major problem, leading to an increased incidence of cardiovascular diseases. A qualitative exploratory multi-case study has been designed to identify factors influencing treatment non-adherence for *BPJS Kesehatan* members with hypertension at a selected community health centre (*Puskesmas*) in Surabaya. Semi-structured interviews were conducted with four patients who were beneficiaries of the contributions (*PBI*) and four non-*PBI* patients who were purposively selected based on gender, age, blood pressure readings, and the frequency of visits to the *Puskesmas*, as recorded in the *Puskesmas*' system for information and management (*SIMPUS*). Thematic analysis showed that patient-related factors, including misperception and poor knowledge about hypertension, were mostly identified as the barriers to non-adherence. Such barriers were deemed as a consequence of insufficient information given by the health providers. Lack of family support, common use of herbal medicines and unhealthy traditional foods were reported as socio-cultural barriers. Finally, the enormous number of patients served and the limited number of medicines received at the *Puskesmas* were identified as the health system-related barriers. Additionally, unfamiliarity with the *BPJS* program for patients with chronic conditions (*PROLANIS*) was found. The re-arrangement of national health insurance programs, thus, is a considerable need in order to offer great benefits for hypertensive patients.

1 INTRODUCTION

The increased prevalence of hypertension, a primary risk factor of cardiovascular disease, has been reported in developed and developing countries as the majority of patients with hypertension are less likely to non-adhere to treatment (WHO, 2013). To overcome such an issue, the long-term management of chronic diseases in the primary health care setting is crucial and well-developed organisational health care by the government is expected to address the challenges of chronicity (Beaglehole, et al., 2008).

The Indonesian government has implemented universal health coverage since January 2014 organised by *Badan Penyelenggaraan Jaminan Sosial Kesehatan (BPJS Kesehatan)* to help improve access to health care services and to reduce out-of-pocket health expenditure (WHO, 2014). Pharmacists who participated in a previous study expect that such a strategy may enhance the delivery of continuity in care (Puspitasari, et al., 2015). For example, through participation with *BPJS Kesehatan*, members with chronic diseases can be

helped in the management of their chronic disease (*Program Pengelolaan Penyakit Kronis [PROLANIS]*). The participation of all family members in *BPJS Kesehatan* and the involvement of patients with hypertension in regular treatment has been stated by the Ministry of Health in 2016 as 2 out of 12 healthy family indicators (Kementerian Kesehatan RI, 2016).

BPJS Kesehatan memberships are classified into beneficiaries of the government's contribution (*Penerima Bantuan Iuran [PBI]*) and non-*PBI* (*Indonesia Government, 2016*). The government covers monthly fees for *PBI* members, while the non-*PBI* classification consists of members whose monthly payment is made by their employer (*BPJS Askes*) and members who make individual monthly payments (*BPJS Mandiri*).

Despite the government's existing strategies to manage chronic diseases, the findings of a previous study revealed that the majority of patients with hypertension, including *BPJS Kesehatan* members, at a community health centre (*Pusat Kesehatan Masyarakat (Puskesmas)*) with the highest

prevalence of hypertension in Surabaya were identified to non-adhere when it comes to visiting the *Puskesmas* regularly (unpublished work) as expected every 7-10 days. In comparison to patients who were *PBI* members, non-*PBI* members were less likely to adhere to make regular visits to the *Puskesmas*. Although published articles show that non-adherence to hypertension treatment can be categorised into factors related to patient, the disease, medicine, health provider, health-system and socio-culture, it was unclear about the factors affecting non-adherence to hypertension treatment for *BPJS Kesehatan* members (WHO, 2013; Tsiantou, et al., 2010; Albrecht, 2011; Osamor and Owuni, 2011). Therefore, a study identifying the factors influencing treatment non-adherence for *BPJS Health* members with hypertension in *Puskesmas* was designed.

2 METHODS

A qualitative multi-case study was applied to explore the barriers to treatment adherence for patients with hypertension who were members of *BPJS Kesehatan* and visited *Puskesmas* to receive health services. A *Puskesmas* in Surabaya with the highest prevalence of hypertension (unpublished work) had been approached to obtain a list of patients with hypertension who were non-adherent when it came to visiting the *Puskesmas* for treatment. The *Puskesmas*' system for information and management (*SIMPUS*) was utilised to identify the patients with hypertension who met the selection criteria: 1) members of *BPJS Kesehatan*, either *PBI* or non-*PBI*; 2) having a frequency of *Puskesmas* visits between 3 and 24 times during the study period from March to August 2016; 3) having unstable blood pressure readings (normal/grade 1/grade 2) as recorded in *SIMPUS*; 4) full home address was recorded in *SIMPUS* to enable visit for conducting the interviews; and 5) willing to participate in the study. A participant information sheet was directly handed to each selected patient, followed with an explanation about the study. Once a patient had agreed, a date and time for a face-to-face, semi-structure interview was arranged at their convenience and a consent form was completed. An interview protocol that was developed based on a literature review of published articles on the factors related to non-adherence was used during the interviews (WHO, 2013; Tsiantou, et al., 2010; Albrecht, 2011; Osamor and Owuni, 2011). All interviews were audio-recorded and transcribed *ad*

verbatim. Coding was conducted using thematic analysis, followed by a verification of the themes by the researchers.

3 RESULTS

A total of 1,240 patients with hypertension were recorded in the *Puskesmas*' *SIMPUS*, consisting of 199 members of *BPJS Kesehatan PBI* and 542 members of *BPJS Kesehatan non-PBI*. After considering the study's selection criteria, 22 and 40 members of *BPJS Kesehatan PBI* and non-*PBI*, respectively, were likely to be participants. Prior to home visits to conduct the interviews, a list of priority participants was prepared. The decision was then made to finally select the informants, including four members of *PBI* and four members of non-*PBI*, representing different gender and groups of age (≤ 60 or >60 years old).

Case 1. A 61-year old female, member of *PBI* who was diagnosed with hypertension since she was 25 years old and who has been diagnosed with diabetes mellitus in the last four years. As captopril 25mg tablets had been previously prescribed causing side effects that led to her non-adherence, her doctor replaced them with nifedipin tablets. Taking several different tablets did not affect her adherence to take medicines. She believed that antihypertensive agents should not be taken when normal blood pressure was reached. As a house wife, she had plenty of time to make frequent visits to the *Puskesmas*. Despite that, she felt uncomfortable in doing so as she had to spend an additional budget for public transport. When her prescribed medicines were running out, she usually depended on the mobile *Puskesmas*. She was not aware of *PROLANIS*.

Case 2. A 45-year old male, member of *PBI* who was diagnosed with hypertension two years ago. Experiencing side effects of several antihypertensive agents affected his adherence, therefore his doctor replaced his medicines with amlodipin 5mg tablets. He understood that hypertension required regular treatment, but he often forgot to take his medicine. He also could not stop taking his favourite unhealthy food that was a trigger for his hypertension. Although his doctor often reminded him to visit the *Puskesmas* regularly, he objected as there was often a long wait due to the great number of patients being served at the *Puskesmas* which was time-consuming. Moreover, he expressed his dissatisfaction at the limited number of medicines that he received from the *Puskesmas* for only a 7-10 day treatment course. As a result, he preferred to get his medicine at a

nearby community pharmacy or consume individually-made herbal medicines. He was not aware of *PROLANIS*.

Case 3. A 45-year old female, member of *PBI* who was diagnosed with hypertension since she was 27 years old. Her doctor prescribed captopril 25mg tablets. She understood that hypertension required regular treatment, but she often felt lazy when it comes to take the same medicine for a long period of time. Due to the great number of patients being served at the *Puskesmas* that made her have a long wait, she decided to get her medicine at a nearby community pharmacy or consume individually-made herbal medicines. She was not aware of *PROLANIS*, but might be interested in participating in the program.

Case 4. A 69-year old male, heavy smoker, member of *PBI* who was diagnosed with hypertension and hypercholesterolemia nine years ago. He realised that his favourite unhealthy food had caused hypertension, but he could not stop eating them. Because of his physical disabilities, he often failed to adhere to his doctor's suggestion to make regular visits to the *Puskesmas* without the help from family members. When he felt that he had increased blood pressure, he consumed individually-made herbal medicines. He was not aware of *PROLANIS* and was not interested in participating due to his physical disabilities.

Case 5. A 49-year old male, member of non-*PBI* (*Askes*) who has lived with hypertension for the last year. His doctor had prescribed captopril 12,5mg tablets and hydrochlorothiazide 25mg tablets. The unpleasant taste of the medicine often made him avoid taking his medicines routinely. He also often felt lazy and bored to do with taking his medicine for a long period. He believed that antihypertensive medicines should not be taken when reaching normal blood pressure readings. To avoid taking the prescribed medicines, he frequently consumed traditional medicines, either individually-made or bought at a nearby traditional medicine stall. The long distance away from the *Puskesmas* and the numerous patients served at the *Puskesmas* caused him to not visit the *Puskesmas* regularly. He sometimes visited a nearby community health sub-centre (*Puskesmas Pembantu*) that served a fewer number of patients, but only provided the most basic health services. As a consequence, he usually paid for the blood pressure checking service and got his medicine at a nearby community pharmacy. He was aware of *PROLANIS*, but never received a proper explanation about the program.

Case 6. A 53-year old female, diagnosed with hypertension about eight years ago who become a member of non-*PBI* (*Mandiri*) in the last two years. Her doctor had prescribed amlodipin 5mg tablet, to be taken once at night. Despite this, she often missed taking the medicines. Prior to being a member of non-*PBI*, she often could not afford to pay for her prescribed brand-name medicines, leading to non-adherence. Her daily activities including taking care of her grandchildren made her miss visiting the *Puskesmas*. As a consequence, she visited a nearby community pharmacy to pay for the medicine. She also reported that she lacked support from her family members to regularly visit the *Puskesmas* and to take her medicine. She was not aware of *PROLANIS* and was not interested in participating in the program.

Case 7. A 70-year old male, member of non-*PBI* (*Askes*) who has been diagnosed with hypertension since he was 45 years old. His doctor had prescribed him amlodipin 5mg tablets to be taken once at night, and hydrochlorothiazide 25mg tablets to be taken once in the morning. Prior to receiving information from his doctor, he believed that the antihypertensive agents were to be taken only when needed. The symptoms of hypertension were unrecognised, therefore he often felt that the medicines were not required. He also reported that he frequently forgot to take his medicine due to the lack of support and reminders from his family members. He was not aware of *PROLANIS* but was interested in participating in the program.

Case 8. A 73-year old female, member of non-*PBI* (*Mandiri*) who has lived with hypertension for the last few years. Her doctor had prescribed captopril 25mg tablets, to take a half tablet twice daily. Her physical disabilities prevented her making routine visits to the *Puskesmas*, particularly when no family members could help her to do so. When the prescribed medicines were running out, she consumed herbal medicines that were bought at a nearby herbal medicine stall. She was not aware of *PROLANIS* and was not interested in participating in the program.

4 DISCUSSIONS

The findings of this study showed that non-adherence to hypertension treatment for *BPJS Kesehatan* members was influenced by six factors as reported in the previous studies (WHO, 2013; Tsiantou, et al., 2010; Albrecht, 2011; Osamor and Owuni, 2011). Despite that, the factors related to the

patient, health provider, health-system and socio-culture were found to be predominant.

Patient-related factors that were commonly found in this study included the patients' likelihood to miss their medicine due to laziness, busyness, forgetfulness and boredom, as mostly reported in other studies (WHO, 2013; Tsiantou, et al., 2010; Albrecht, 2011; Osamor and Owuni, 2011). Poor knowledge about the need of long-term treatment for the hypertension condition was also revealed, and interestingly, it seemed to be related to the lack of information provided by the healthcare professionals. Pharmacists were expected to provide full responsibility for the rational use of medicines were also reported to not highlight the importance of adherence to hypertension treatment.

A weak tendency for interactions between health providers and patients was understandable when a large number of the patients at the *Puskesmas* should be served by a small number of health providers (BPJS, 2017). Moreover, many informants in this study reported that the number of medicines they received was normally only for a 7-10 day course of treatment. As a result, only patients who were unemployed were more likely to adhere to make regular visits as suggested. The *Puskesmas*, as a government health facility to support the success implementation of health insurance, therefore, should consider their policies about procurement and the delivery of medicines, particularly for patients who required long-term treatment to enhance their adherence as international studies have shown the impact of social health insurance on the management of chronic diseases (Cockerham, et al., 2017; Hamar, et al., 2013; Kim & Richardson, 2014).

The *PROLANIS* program that was designed to manage chronic disease was thought to fail due to a low participation from *BPJS Kesehatan* members and their unfamiliarity with the program. Harnessing the untapped potential of health providers, such as community pharmacists, could be an innovative solution to supporting chronic disease management (Puspitasari, et al., 2015) through such a structured program.

Another important factor to consider was the likelihood of the informants consuming herbal medicines. The common use of herbal medicines for patients with hypertension in Indonesia, as also reported earlier, could lead to further problems, not only causing an irregular use of prescribed medicines which challenges the monitoring by health providers, but it also increases the potential for interaction between the prescribed and herbal

medicines, particularly when scientific evidence was insufficient (Pujianto, 2007).

5 CONCLUSIONS

The management of chronic diseases, including hypertension, has been developed by the Indonesian government through the implementation of universal health coverage organised by *BPJS Kesehatan*. Despite that, barriers related to health-system were reported as one of predominant factors influencing non-adherence to hypertension treatment. Therefore, the government along with health professionals should take special considerations to improve health-system to enable reaching the obvious improvements needed in the health services for all Indonesians.

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Analysis of Tobacco Control With Semi-Strong Market Theory for Forecasting in the Future

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Keywords: Control, Tobacco, Theory, Semistrong.

Abstract: Tobacco control policies are analysed as information that gives a signal to the market, particularly those with close affiliations to the tobacco industry. The existence of the cigarette industry has increasingly become a dilemma. It is undeniable that the tobacco industry has consistently contributed a substantial portion to the Indonesian State Budget from year to year, around Rp 40 trillion for 2007, coupled with the absorption of a lot of labour. However, the fact that tobacco products are harmful and have a negative impact on health, being the cause of 5 million deaths per year, makes the world unable to turn a blind eye. Responding to the problem, the WHO in 1999 initiated the Framework Convention of Tobacco Control (FCTC), which is an international agreement on the regulation and control of tobacco for its member countries. However, Indonesia is one of the largest cigarette producing and consuming countries in the world. The purpose in this study is to prove the theory of the semistrong efficient market where securities and prices reflect the relevant content of the information that is available.

1 INTRODUCTION

The economic and social costs incurred by tobacco consumption continue to increase and this burden is largely borne by the poor. In Indonesia, cigarette consumption in 2008 reached 240 billion cigarettes or about 658 million cigarettes per day. This indicates money around Rp 330 billion burned or spent to consume cigarettes in Indonesia in a day. According to WHO data, Indonesia is the third country with the largest number of smokers in the world after China and India. The increased consumption of cigarettes has an impact on the higher burden of smoking diseases and increased mortality from smoking.

The existence of advertising, promotion and sponsorship of cigarettes has triggered a dramatic rise in the number of child and adolescent smokers. The cigarette industry in Indonesia has almost full freedom of promoting its products in various ways. This is very contrary to other countries that actually protect children from the dangers of smoking (TCSC-IAKMI).

The smoking prevalence in Indonesia is very high in all walks of life, especially in men ranging

all the way from children, through adolescents to adults. The trend of smoking continues to increase from year to year. This condition is very worrying. The National Socio-Economic Survey (Susenas) and RISKESDAS data shows that the smoking prevalence for all age groups is experiencing a surge. Based on the Susenas data from 1995, 2001 and 2004 and the RISKESDAS data for 2007 and 2010, the prevalence of smokers is 16 times higher in men (65.8%) than in women (4.2%). Nearly 80% of smokers start smoking before their age has reached 19 years. Generally people start smoking when young and do not know the risks regarding the addictive hazards of cigarettes. The consumer's decision to buy cigarettes is based on a lack of sufficient information about the risks of purchased products, the addictive effects and the impact of their purchases being charged to others.

The addictive behaviour of smoking in Indonesia is similar to drinking alcohol in Indonesia. According to foreign sources, the industrial stocks of alcohol and tobacco are opposed to ethically and socially responsible investments. The issues to do with corporate ethics, and in particular the health aspects of the sector, are still frequently debated.

2 METHODS

This writing has used the method of event study with an emphasis on the market’s reaction to an event. The data used in this paper is secondary data. The data collected includes the names of the listed issuers that are tobacco companies during the observation period, daily stock market prices during the observation period, and the daily composite stock price index during the period of observation. The data collection techniques used in this paper are literature studies focused on events with secondary data collection to do with tobacco control policies in Indonesia and stock return movements from published prices on the IDX and what can be accessed through the Yahoo Finance website.

3 RESULTS

In this paper, the authors tested the reaction of abnormal return during an event adapted from MacKinlay (1997), where the abnormal return calculates each issuer's shares before and after the date of cash dividend announcement. The data obtained was from other historical reports on the IDX period 1992 to 2004. The object of this study is the market reaction in terms of the absence of an abnormal return around the announcement date caused by the information absorbed by investors from the stock dividend policy announcement resulting in a change in the stock prices.

Table 1: Description of abnormal return data

| Description of Abnormal Return Data | | | | | |
|-------------------------------------|----|---------|---------|---------|----------------|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| Before | 39 | -.849 | .168 | -.03269 | .152645 |
| After | 39 | -.150 | .420 | .03197 | .130304 |
| Valid N (listwise) | | | | | |

The market reaction is proxied with an abnormal return. The market is said to react if there is a different abnormal return before and after the announcement of stock dividend that can cause changes in the stock prices significantly.

4 DISCUSSIONS

In the above results, it can be said that the absence of significant differences in the abnormal return before and after the stock dividend announcement shows that there is no market reaction due to stock dividend announcement events. When an announcement event contains information, it causes an abnormal return change around the dividend announcement (Ardiana and Nita, 2014).

This study is not in accordance with the signalling theory that explains that the stock dividend gives a positive signal because the manager of the company will inform of the future prospects the company to the public. Stock dividend does not provide good returns so investors keep on selling their shares. This is because the stock dividend made by the issuers does not provide new information that causes the investors to stay interested in the shares. Stock dividend events conducted by issuers do not have enough information that is anticipated by the market so it does not affect the return obtained by the investors. Stock dividend by issuers is not able to increase investment because investors consider the return expectation to be equal to the actual return obtained. Stock dividend action will only increase the number of shares that are outstanding.

Based on the results of this study, the investors in Indonesia do not regard dividends as an indicator when deciding to buy or sell shares that are owned. This may indicate that investors are less interested in stock returns in the form of dividends and prefer capital gains as returns from any investments made. The return of capital gains is obtained from the difference between the selling price of the shares which is greater than the purchase price of the shares. In this case, the investor does not get any amount of profit above normal. These results support a half-robust efficiency market that indicates a state where the prices reflect not only past prices, but also all published information. In other words, financiers do not gain above normal profit by utilising public information (Jogiyanto, 2003).

Tobacco control policy is an independent variable (X) with interval scale and the indicator is the date of policy announcement (t0). Events studied in this research is tobacco control policy. These policies during the period 2003 to 2012. The observation period used. The period is estimated to be examined for 247 days, from t-252 to t6 before

the day of the event. The event window is researched for 11 days, from $t-5$, t_0 , to $t+5$. Before discussing the variables to be used in the control policy. Return which is the rate of investor return on investment and market return is the reaction rate against. Stock returns the latest results from stock prices. The market index used is the Composite Stock Price Index. Therefore, the variables used to determine the impact on the capital market in Indonesia with the abnormal return of each share. Abnormal return calculation is the difference between the actual return that occurs with the expected return of the investor (expected return). Return of expectation must be estimated and in this research using market model.

5 CONCLUSIONS

The conclusions in this paper are as follows:

1. Based on the results of the first hypothesis testing, it can be concluded that there are abnormal returns obtained by investors in the Indonesian capital market around the tobacco policy announcements in 2003, 2009, and 2012 respectively.
 - a. PP no. 19 of 2003 on Security Cigarettes for Health responded as good news on four days before the announcement, and on the day of the announcement due to the abnormal return positive move.
 - b. The day of the 2003 WHO Framework Convention on Tobacco Control (FCTC) came out as bad news for the market because the abnormal return was negative at $t [-5, -4, -1, 0, +2, +3, +5]$, although the value was not statistically significant.
 - c. The announcement of RI Law. 36 Year 2009 on Health gave a positive impact abnormal return for the market although it is not statistically significant.
 - d. Since PP No. 109 in 2012 on Security of Ingredients Containing Addictive Substances in the form of Tobacco Products for Health was announced, for three days after the announcement, the market received a negative signal with a negative abnormal return value and then moved positively then down again on the fifth day after the announcement.
2. There is an average difference in the abnormal returns before and after tobacco control policies but the value is not significant.
3. By testing One Way Anova, it is noted that the average abnormal return is different and also has a different population variance.

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Barriers to Treatment Adherence to Hypertension: A Comparison Between Members and Non-Members of *BPJS Kesehatan* at Pharmacy in Surabaya

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Keywords: Hypertension, Treatment non-adherence, *BPJS Kesehatan*, Community pharmacy

Abstract: Non-adherence to hypertension treatment is reported as a major problem, leading to the increased incidence of cardiovascular diseases. A qualitative exploratory multi-case study was designed to identify the factors influencing treatment non-adherence for members and non-members of *BPJS Kesehatan* with hypertension patients at two selected community pharmacies (*pharmacy*) in Surabaya. Semi-structured interviews were conducted with three members (participants of the referring back program [PRB]) and three non-members of *BPJS Kesehatan* who were purposively selected based on their prescribed medicines and the frequency of visits to the selected pharmacy. Thematic analysis showed that the barriers to non-adherence identified by *PRB* patients were their busy schedules and the common use of herbal medicines. Not only did the members report both factors; non-members of *BPJS Kesehatan* also reported factors related to medicine (availability and price), health provider (lack of information and two-way interaction), and the unavailability of the health system to improve adherence. Moreover, non-members of *BPJS Kesehatan* were identified to have other patient-related factors (misperception and poor knowledge about hypertension). Despite having more barriers, the non-members of *BPJS Kesehatan* indicated unwillingness to participate as members due to their understanding of the impracticability of the services. Therefore, *BPJS Kesehatan* needs to re-arrange their programs to increase participation and to offer benefits for the hypertensive patients.

1 INTRODUCTION

It has been suggested in the literature that primary health care is the most proper setting to address challenges of chronic disease management (Beaglehole, et al., 2008). Similar to other middle-income countries, Indonesia has implemented the development of a community health centre (*Puskemas*) in each district as a public health care facility (WHO, 2008). Such a facility requires support services either incorporated within the facility or available independently, including clinical laboratory and pharmacy units to allow for provision of comprehensive health services (Indonesia Ministry of Health, 2013a).

In terms of pharmacy, the number of private community pharmacies (*pharmacy*) far out-weighted that of public pharmacies within *Puskemas* (Kementerian Kesehatan RI, 2013b). As the number of patients receiving health services from *pharmacy* was more significant than those in the public sector,

there is a clear need for best quality pharmacy services in *pharmacy*.

To enable improvement of access to health care services and to reduce out-of-pocket health expenditure, since January 2014 the Indonesian government has set universal health coverage organized by *Badan Penyelenggaraan Jaminan Sosial Kesehatan (BPJS Kesehatan)* (WHO, 2014). In the management of chronic diseases *BPJS Health* has provided programs, such as *PROLANIS (Program Pengelolaan Penyakit Kronis)* and *PRB (Program Rujuk Balik)* for its members (Kementerian Kesehatan RI, 2014). *PRB* is provided for patients with chronic diseases who had received treatments from specialists in the hospital setting to obtain a stable condition but still requires continuity of care in the community setting. Among chronic conditions, hypertension has become a priority in the *BPJS Kesehatan* programs because its prevalence has been increasing.

Although the government has set a target to reach participation of all Indonesians in the *BPJS Kesehatan* by 2019, the current participation was suboptimal (CNN Indonesia, 2017). In addition to participation in the *BPJS Kesehatan* to all family members, regular involvement of patients with hypertension in treatments was stated by the Ministry of Health as healthy family indicators (Kementerian Kesehatan RI, 2016). However, based on our unpublished work, nonadherence to hypertension treatments was found among patients who received pharmacy services in *pharmacy* either members or non-members of *BPJS Kesehatan*. Our findings also indicated that patients with hypertension who were not members of *BPJS Kesehatan* were unlikely to visit *pharmacy* for regular treatments, in comparison to their counterparts. It was unclear whether nonadherence among patients with hypertension in *pharmacy* was associated with factors related to patient, the disease, medicine, health provider, health-system, and socio-culture, as published earlier (WHO, 2003; Tsiantou, et al., 2010; Albrecht, 2011; Osamor and Owumi, 2011). Thus, a study was designed to identify barriers to adhere to hypertension treatments for either members or non-members of *BPJS Kesehatan* in *pharmacy*.

2 METHODS

A qualitative multi-case study was applied to explore factors influencing treatment nonadherence for patients with hypertension. Patient data were collected retrospectively (from March to August 2016) from one *pharmacy* with *BPJS Kesehatan* network using an existing software for *PRB* patients (Group A) and one *pharmacy* without *BPJS Kesehatan* network using prescription files (Group B). Potential patients for the study were then selected based on criteria: 1) having frequency of *pharmacy* visits five times or less during the study period, 2) full home address was recorded in the prescription files, and 3) willing to participate in the study. Each selected patient was provided verbal and written information about the study. Once a patient had agreed, an arrangement of a date and time for a face-to-face, semistructure interview was made at the patient's convenience, and a consent form was completed. An interview protocol was used during interviews, which was developed based on a literature review of published articles (WHO, 2003; Tsiantou, et al., 2010; Albrecht, 2011; Osamor and Owumi, 2011) on factors related to nonadherence.

All interviews were audio-recorded and transcribed *ad verbatim*. After coding the data using thematic analysis, the researchers verified themes.

3 RESULTS

GROUP A: A total of 449 patients with hypertension were recorded in the *PRB* software, 104 of them (23,2%) were identified as adherent patients to visit *pharmacy* to get medicines. In addition to the above selection criteria, an auxiliary step was needed to select three out of 335 patients, based on types of prescribed medicines received. Patients receiving Angiotensin Converting Enzyme Inhibitor agents, either alone or in combination with other antihypertensive agents were a priority. A list of priority participants was prepared prior to home visits to finally interview three informants.

Case 1: A 51-year old female who was diagnosed with hypertension since she was 42 years old. She had family history of hypertension. Initially, she had been prescribed with a brand name of lisinopril 10mg tablets, that was replaced with a generic name of lisinopril 10mg tablets since she became a *PRB* patient. Although the number of prescribed medicines received (30) facilitated her to make regular visits to her family doctor and *pharmacy*, she sometimes felt lazy to take her medicines. Despite that, she understood that hypertension could only be controlled by taking regular medicines and adopting a healthier lifestyle. When she felt an increased blood pressure and thought that her prescribed medicines was unable to give a rapid reduction, she made and took herbal medicines in addition to consumption of prescribed medicines. Since she was a staff member of a hospital, she had an easy access for blood pressure checking at her workplace. She was unaware of *PROLANIS*.

Case 2: A 52-year old female who was diagnosed with hypertension since she was 47 years old as well as diabetes mellitus and hyperlipidaemia. She had family history of hypertension. A generic name of lisinopril 5mg tablets that had been initially prescribed for her hypertension were replaced with a brand name of nifedipin 30mg tablets. Although the number of prescribed medicines received (30) facilitated her to make regular visits to her family doctor and *pharmacy*, she sometimes visited other *pharmacies* to get medicines without prescription. She understood that hypertension could be controlled with regular consumption of medicines, supported by having a healthier lifestyle. She was unaware of *PROLANIS*.

Case 3: A 51-year old male who lived with hypertension in the last 15 years. A brand name of lisinopril 10mg tablets that had been initially prescribed were replaced with a generic name of lisinopril 10mg tablets. He worked as a staff member in a hospital so he had an easy access for blood pressure checking at his workplace. The number of prescribed medicines received (30) facilitated him to make regular visits to his family doctor and pharmacy. He sometimes stopped taking his prescribed medicines to check whether or not he could reduce his dependence on the medicines. He also often substituted prescribed medicines with individually made herbal medicines. She was unaware of PROLANIS.

GROUP B: During six months of the study period, six prescription files for patients with hypertension were found to meet selection criteria. A list of priority participants was prepared prior to home visits. As three patients could not be contacted, interviews were finally conducted with the remainders.

Case 4: A 50-year old female who was diagnosed with hypertension two years ago, as well as hypercholesterolaemia and hyperurecemia. She had been prescribed with propranolol 20mg tablets, hydrochlorothiazide 25mg tablets, isosorbide dinitrate 5mg tablets, simvastatin 10mg tablets and allopurinol 10mg tablets for a 30-day treatment. She frequently could not afford to pay for her doctor service and prescribed medicines, leading to nonadherence to make routine visit and take medicines. Despite that, she was reluctant to be a member of *BPJS Kesehatan* because she had observed that the services were unsatisfactory. When her prescribed medicines were running out, she preferred to get her medicines from any pharmacy without prescription despite receiving no medicine information from the pharmacist. Alternatively, she took individually made herbal medicines. She was unaware of unhealthy food that triggers high blood pressure.

Case 5: A 60-year old female who lived with hypertension in the last 10 years, after being diagnosed with stroke and diabetes mellitus. She had been prescribed with amlodipin 10mg tablets and furosemid 10mg tablets for a 30-day treatment. She believed that antihypertension agents should not be taken when blood pressure readings were normal. Although she was a member of *BPJS Kesehatan*, she never took its benefits for her regular hypertension treatment due to its long queue for getting services and its long distance from home. She preferred to get her medicines without prescription at a reachable

pharmacy although she was unlikely to receive information about medicines from the pharmacist.

Case 6: A 53-year old female who lived with hypertension in the last 13 years. She sometimes missed to take her medicines but did not think to be a problem because she believed that antihypertensive medicines should only be taken when needed, i.e. if she got dizziness. She had been prescribed with a generic name of amlodipin 5mg tablets, so the price of medicines was not a cause of nonadherence. Therefore, being a member of *BPJS Kesehatan* was not believed to be important, especially because there was a near pharmacy to get medicines without prescription. When the medicines were running out, she sometimes consumed individually made herbal medicines.

4 DISCUSSION

The findings of this study indicated that six barriers to treatment adherence as published earlier (WHO, 2003; Tsiantou, et al., 2010; Albrecht, 2011; Osamor and Owumi, 2011) were also reported by our informants either members or non-members of *BPJS Kesehatan* who visited *pharmacy* for pharmacy services. Interestingly, factors related patient and socio-culture were found to be predominant for both groups, while factors related to medicines, health provider and health-system only seemed to influence non-members of *BPJS Kesehatan*.

Barriers to adherence that were related to patient reported by our informants in both groups included their laziness, busyness, forgetfulness and boredom to take medicines for a long period of time, as commonly found in previous studies (WHO, 2003; Tsiantou, et al., 2010; Albrecht, 2011; Osamor and Owumi, 2011). In addition, non-members of *BPJS Kesehatan* were likely to have poor knowledge and inaccurate perception of hypertension and its treatment. As reported by our informants who were members of *BPJS Kesehatan* that they received prescribed medicines for a 30-day treatment, they tended to have regular visits to their family doctor and pharmacy. This indicated that their frequent interactions with healthcare providers enable them to get more information related to the disease and its treatment. Moreover, monthly visits as regulated by *BPJS Kesehatan*, especially for *PRB* patients, allow health care providers to provide information and monitor patients' conditions.

It should also be noted that medicine and hypertension-related information was unlikely to be given to our informants who were non-members of *BPJS Kesehatan* when they visited *pharmacy* to get

medicines without prescription. A possible explanation for this was because the pharmacist or pharmacy staff may have perceived that patients collecting types of medicines for long-term treatment have already had a proper understanding about their medicines and condition. Similar to our informants in another study (BPJS, 2015) that patient knowledge was associated with interaction between health providers and patients.

As reported elsewhere (BPJS, 2015), the use of herbal medicines was common among patients with hypertension either those who regularly took prescribed medicines or those who were not. Health care providers should consider such a phenomenon in Indonesia (Pujianto, 2007) as inappropriate use of herbal medicines may lead to further health problems related to their potential interaction with prescribed medicines.

Another interesting finding was the high cost of prescribed medicines that were usually unaffordable for non-members of *BPJS Kesehatan*, preventing them to nonadhere to collect and take their medicines. Interestingly, although they understood that *BPJS Kesehatan* would cover their medicine costs, they were not interested to join *BPJS Kesehatan* as they directly or indirectly observed its unsatisfactory services. *BPJS Kesehatan* may have developed strategies to improve their services (BPJS, 2016), but they would fail without convincing evidence that all members of *BPJS Kesehatan* would get the most benefits from *BPJS Kesehatan*, in comparison to those who have not joined.

5 CONCLUSION

Barriers to hypertension treatment adherence among patients who were non-members of *BPJS Kesehatan* widely varied, in comparison to their counterparts members of *BPJS Kesehatan*. This may indicate that programs offered by *BPJS Kesehatan* seemed to enhance patient adherence to treatment for chronic diseases. Despite that, strategies for improvements are urgently required to offer great benefits for their members. Similarly, flexibility and simplification of services should be taken into consideration to increase memberships of *BPJS Kesehatan* in order to achieve universal health coverage by 2019.

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Transfer of Tobacco Functions as an Effort to Control the Health and Prosperity of Tobacco Farmers

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Keywords: Tobacco control, Health quality.

Abstract: Tobacco production that is still destined for cigarette production proves that tobacco control in Indonesia is still not enforced. Every day, there are 1,172 deaths from tobacco-related diseases. The existence of the tobacco industry is only ranked 48 out of 66 sectors that contribute to employment. This further proves that the presence of tobacco as a raw material for cigarettes will continue to have a negative impact on society and the environment. Therefore it is necessary to switch the functioning of tobacco into a more useful material with minimal risk. The objective of the proposed program is to improve the welfare of tobacco farmers and public health. Therefore the research method used is descriptive and qualitative through an analysis of the literature. The author has come up with the idea of "Lahanku Penghidupanku" as a solution to solve the problem. "Lahanku Penghidupanku" is a series of concepts to encourage healthy and prosperous farmers by bringing together the diversity of the planted crops. Farmers can explore their expertise in farming, not just in tobacco. This is supported by the acquisition of several farmers in Pamekasan who get bigger results from tobacco crops (Rp6-9 million/Ha/ season), like: onion (Rp31,25 million/Ha/season), tomatoes (Rp7,4million/Ha/season), watermelon (Rp11,5 million/Ha/season) and melon (Rp13,5 million/Ha/season). So, farmer's life can be guaranteed to be more successful if the processing of tobacco products can be controlled. The level of the economy can thus increase, which leads to improved health quality.

1 INTRODUCTION

Internationally, Indonesia is one of the ten largest countries producing tobacco leaves. Out of these ten countries, four countries produce nearly 2/3 (more than 4 million tonnes) of the world's tobacco leaf supply totalling about 6.3 million tonnes. The four countries also include China (38%), Brasilia (10.3%), India (9.1%), and America (6.3%). Indonesia contributes about 15,000 tons of tobacco leaves or 2.3% of the world's supply (FAO STAT Agricultural Data Base, 2002).

Tobacco entrepreneurs in Indonesia are as much as 98% among people's plantations and 2% of these are large national estates (Direktorat Produksi Perkebunan Dirjen Bina Produksi Perkebunan Deptan, 2002). According to the data, as much as 75% (173,695 ha) is people's tobacco (chopped). 43.6% (101,095 ha) that was planted in East Java and 26.7% (61.925 ha) in Central Java; the rest was in NTB, DIY, and Bali. A total of 30% of the

people's tobacco (chopped) is used as the raw material for clove cigarettes. Of the various types of people's tobacco, the most widely used is tobacco Madura and Temanggung (Direktorat Produksi Perkebunan Dirjen Bina Produksi Perkebunan Deptan, 2002).

Tobacco production which is still destined for cigarette production proves that tobacco control in Indonesia is still not enforced. At the 15th meeting of the World Conference on Tobacco and Health 2012 in Singapore, Indonesia received satire as being the only country in ASEAN that has not ratified the Framework Convention on Tobacco Control (FCTC). The incident is not without reason. The Indonesian Government is very careful considering that the FCTC has consequences for the national economy such as the profits from the tobacco industry, small and medium industries and state finances.

Every day, there are 1,172 deaths due to tobacco-associated diseases. Strong or weakness of tobacco

control policy will have an impact on the incidence of lung cancer in the future (Stone, 2016). Therefore, in order to respond to public health concerns and the demands of some parts of society, the Indonesian government limits itself to the focus of creating good rules in the field of health related to smoking habits or habits, without disturbing the tobacco economy. This has been the basis for the smoking ban on closed public spaces and the smoking ban for minors.

Government also have the power to regulate the industry and can use the article 6 guidelines of world health Organization's FCTC. An effective tax administration requires monitoring and analyzing the industry behavior so that authorities can respond quickly and effectively. This will enhance their tax collection and improve public health by increasing the effectiveness of tobacco excise taxes (Ross, 2017).

On the other hand, the existence of the tobacco industry itself is only ranked 48 out of the 66 sectors that contribute to the absorption of labour in Indonesia. This further proves that the presence of tobacco as a raw material for cigarettes will continue to have a negative impact on society and the environment. Therefore it is necessary to switch the functioning of tobacco into a more useful material with minimal risks involved. This is also so as to improve the welfare of tobacco farmers and public health.

2 METHODS

The method used in the study was a literature review. The data obtained was presented

descriptively along with the scientific sources to show the raw data that underlies the formation of ideas. The results of the study can then be developed and applied further. The objective of this research is the Madura tobacco farmers viewed from the aspect of culture and the economy of local residents. The information collected is information relating to the general picture of the Madurese tobacco farmers, the efforts that have been developed, the current problems, and the potential that is available to them. The information has been obtained from scientific journals, the internet, and books relevant to the object of research. After collecting and analysing the data, the idea of "Lahanku Penghidupanku" is apparent as a solution to solve the problems in the area. "Lahanku Penghidupanku" is a series of concepts leading towards healthy and prosperous farmers by bringing them together with the diversity of planted crops. The methods used in this program start from the preparation stage to the termination stage, referring to the Dignan Theory. Therefore, it must be ensured that ideas are in accordance with the values that exist in society itself.

3 RESULTS

Madura Island is one of the areas whose population cultivate tobacco plants. The total area of Madura's tobacco reached 51.5% in 2006 and 34.8% in 2010; this is the total area of tobacco in East Java, comparatively. Out of the four districts in Madura Island, Pamekasan District has the largest tobacco area compared to the other districts (Table 1).

Table 1: Land Area (Ha) and Tobacco Production in Madura and East Java 2006-2010

| District | Year | | | | | | | |
|------------|---------|------------|---------|------------|---------|------------|---------|------------|
| | 2007 | | 2008 | | 2009 | | 2010 | |
| | Wide | Production | Wide | Production | Wide | Production | Wide | Production |
| Sampang | 5.261 | 3.119 | 3.620 | 2.056 | 1.775 | 932 | 2.297 | 1.429 |
| Pamekasan | 31.367 | 16.625 | 29.376 | 17.057 | 32.205 | 12.270 | 25.983 | 10.242 |
| Sumenep | 19.412 | 8.930 | 23.355 | 13.210 | 13.419 | 6.575 | 9.836 | 3.139 |
| Jawa Timur | 108.701 | 78.343 | 109.408 | 77.852 | 112.007 | 76.278 | 109.250 | |

Source: BPS, 2011

Table 2: Shared Revenue Share of Madura Tobacco Products Year 2010-2012 (Rupiah)

| Year | District | | |
|------|---------------|----------------|----------------|
| | Sampang | Pamekasan | Sumenep |
| 2010 | 6.437.724.381 | 18.939.623.381 | 13.634.522.381 |
| 2011 | 6.318.031.578 | 23.828.852.235 | 13.009.313.588 |
| 2012 | 8.302.956.321 | 26.552.667.916 | 18.027.736.926 |

Source: Peraturan menteri keuangan (PMK) No:66/PMK.07/2010, PMK No.96/PMK.07/2011, PMK No.46/PMK.07/2012

Tobacco farming accounts for approximately 60-80% of the penance income in Madura (Anonymus, 2007). For the government, tobacco commodities contribute to the region's revenue through the return of cigarette excise tax from the central government. Therefore, tobacco is used as a prime commodity, especially in the Pamekasan and Sumenep districts. This can happen because Madura's tobacco plays an important role in the tobacco industry, due to its role in giving aroma and flavour with distinctive chemical characteristics such as moderate nicotine content, high sugar content, and being aromatic (Murdiyati, et al, 2009).

However, based on data from BPS (2016) on the results of large plantation production based on the type of plant, it was known that the tobacco production of the last five years has decreased. It proves that from the production obtained, the income will decrease and will affect the welfare of the citizens in fulfilling the needs. So, there needs to be subsidy of alternative commodity farming to keep the tobacco farmers business continuity.

Through the "Lahanku Penghidupanku" program farmers form a strong community organisational structure and create cadres delegated into work groups to optimise the agricultural institutions. "Lahanku Penghidupanku" was carried out within a year; the process went through counselling all the way through to termination, as well as requiring outside support and cooperation. The vision that was carried was 'Prosperous Farmers with Improved Health Quality'. The mission was 1) to mobilise the economic and social productivity of citizens based on empowerment and independence and 2) to create a healthy work environment.

Steps that must be done so that the vision and mission can be achieved that is by conducting activities in sustainability. Starting from the potential analysis of the local area; organizing accompanied by partnership, sponsorship and CSR processes to support the implementation of the program; capacity building provided with modules or guidelines for citizens in developing land-processing designs with new crop types (other than

tobacco); the implementation of the program that has been designed previously run with the assistance until the citizens are really able to run the program independently; and evaluation conducted at each stage in order to support the maximum program run. Here is a great concept that is done towards "Lahanku Penghidupanku".

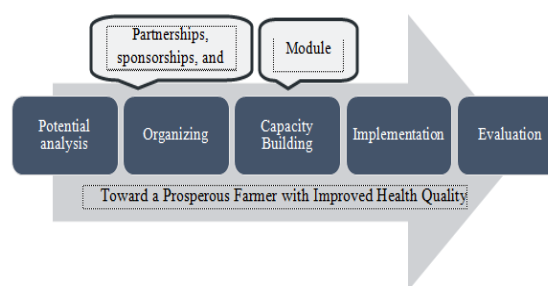


Figure 1: Toward a Prosperous Farmer with Improved Health Quality

In the concept can be seen that each stage is related to each other. If the first stage can be done properly, the next stage can be done more easily. Each stage also has one common goal that is the welfare of tobacco farmers through improving the quality of health.

4 DISCUSSIONS

Substituting tobacco is not an easy task. Rahmat et al (2009), identified several factors that constrain tobacco substitution, namely a) technically, tobacco plants have the advantage of cultivating on dry land and in corresponding climates; b) economically, tobacco commodities have relatively high farm income levels and few other commodities match the level of income despite the high degree of risk; and c) socially in certain areas, the tobacco commodity is a commodity that has become hereditary and has become part of the culture to do the patterns of agriculture.

The recommended substitution commodities should provide relatively similar benefits and they should be at closer to the tobacco profits with the application of technology and market guarantees. The challenge is that the commodity alternatives should be in line with Madura's agro-ecology. In 2010, the Agribusiness Development Program was implemented with the Handling of Tobacco Over Supply through subsidising alternative

commodity farming. The objective is to reduce tobacco plant areas so that the anticipated overproduction of tobacco in East Java can affect tobacco price stability, providing an alternative for tobacco farmers to grow non-tobacco commodities with guaranteed prospects. The data on the realisation of the Tobacco Over Supply Handling activities through subsidies of alternative commodity farming have been shown in Table 3.

Table 3: Realisation of Overcoming Tobacco Over Supply Handling Activities through Alternative Commodity Farm Subsidy 2010

| District | Substitution | Area (Ha) |
|----------|--|-----------|
| Jember | Kacang tanah | 20 |
| Sumenep | Benih jagung local Benih bawang merah | 55 |
| Total | | 75 |

Source: Plantation Office of East Java, 2011

According to Ellis (2000), most rural households in general cannot avoid risks, whether they are caused by humanity itself or due to environmental factors. There have been studies that found an occupational disease in tobacco harvesters, is a form of acute nicotine intoxication by nicotine absorption through the skin from the wet green tobacco plant (Park, 2017). So there is an alternative to tobacco replacement plants for tobacco farmers. According to Fauziyah (2010), there are several crops that have been planted by some farmers in Pamekasan to replace tobacco plants with the result of close to or greater than tobacco crop profit (Rp 6-9 million/ha/season). There are: onions (Rp 31, 25 million/ha/season), tomatoes (Rp 7,4 million/ha/season), watermelons (Rp 11,5 millio/ha/season) and melons (Rp 13,5 million/ha/season).

From tobacco cultivation, it can be seen the cost to be incurred as well as the income and profits earned by the farmers in the planting season of 2011. Farmers get a considerable profit of around Rp40.611.000,00 in the planting season 2011. Recognized by farmers, the price of tobacco in planting season 2011 is the best price in the last 5 years. In addition to rising incomes, the consequence of increasing tobacco prices this year is the increase in the purchase price of production inputs, such as fertilizer, both organic and non-organic, medicines, baskets, and labor wages. So if calculated, the benefits of the same relative and even tend to fall.

The condition of tobacco farming if the current pattern will bring problems for farmers who depend on tobacco, with the assumption that the pattern of

agribusiness remains as it is now where fixed income Rp76.950.000,00. Starting in 2014 the amount of farmers expenditure will be greater than the profit received, the total cost of Rp40,357,907,00 with a profit of Rp36,592,093,00. This condition continues until the year 2021 where at that time the production cost will exceed the income received is Rp80.436.958,00. So in the planting season 2021 tobacco farmers will lose Rp3.486.958,00 (Arfianto, 2012).

By replace planted crops, tobacco farmers will be protected from diseases that can be caused by tobacco plants such as Green Tobacco Sickness (GTS). In addition, based on financial analysis, tobacco farmers can minimize of disadvantage and reduce environmental damage due to tobacco cultivation.

5 CONCLUSIONS

The farmer's life can be guaranteed if the processing of tobacco products can be controlled. Through the "Lahanku Penghidupanku" program, farmers are formed in to a strong community organisational structure and create cadres delegated into workgroups. The establishment of working groups is based on tobacco substitute species; onion, tomato, watermelon and melon. With a prosperous farmer leading the way, the level of the economy can increase which leads to improved health quality.

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The Higher Price of Cigarettes and Students' Intention to Stop Smoking

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Keywords: Cigarettes, Rising price, Intention to stop smoking.

Abstract: The price of cigarettes in Indonesia is one of the lowest in ASEAN. The low price of cigarettes has been one of the triggering factors for the increase in the number of active smokers. We have proposed to raise the price in an effort to reduce smoking behavior. The purpose of this research is to see the effect of increasing cigarettes prices to stop smoking intention. This research is analytical and quantitative. Data collection was done by primary technique through 110 chosen respondents. The instrument for this research was questionnaire. This study was done in the Management Major of Economy and Business Faculty of Airlangga University. The result showed that variable of allowance had strong effect for respondents' smoking behavior. There was no relationship between the rising price of cigarettes and the respondents' intention to stop smoking. Respondents felt that they would buy cigarettes even at the higher price. Respondent also felt comfortable with their smoking behaviour and that it had become a habit to do so.

1 INTRODUCTION

According to the World Health Organization (WHO), there are six million deaths each year caused by cigarettes and there are 600,000 passive smokers who die because of exposure to second hand smoke. In 2030, WHO predicted that there will be eight million deaths from cigarettes every year 80% of which will occur in poor and developing countries (WHO, 2011). Most people first smoked in their teen years (Salim, 2013). WHO recommends increasing the price of cigarettes in order to reduce the number of smokers. The highest price of cigarettes in the world is in Europe, while the lowest price is in the Middle East region. The following table shows the price of cigarettes in ASEAN:

Table 1: Average Prices of Cigarettes in ASEAN

| No | Country | Price of a pack of cigarettes (IUSD=9.115 Rupiah, February 2012) |
|----|-------------------|--|
| 1 | Singapura | USD 8,3 / ± Rp75.000 |
| 2 | Brunei Darussalam | USD 5.9 / ± Rp54.000 |
| 3 | Malaysia | USD 3,32 / ± Rp30.000 |

| No | Country | Price of a pack of cigarettes (IUSD=9.115 Rupiah, February 2012) |
|----|-----------|--|
| 4 | Thailand | USD 2,36 / ± Rp22.000 |
| 5 | Laos | USD 1.46 / ± Rp13.000 |
| 6 | Indonesia | USD 1.24 / ± Rp11.000 |
| 7 | Kamboja | USD 1.19 / ± Rp11.000 |
| 8 | Vietnam | USD 0.74 / ± Rp7.000 |
| 9 | Filipina | USD 0.63 / ± Rp6.000 |

Source: ASEAN Tobacco Tax Report Card, Regional Comparison and Trends, February 2012

One of the government efforts to reduce the number of active smokers is to increase cigarette taxes and legislation. In fact, Indonesia has not focused on reducing the number of smokers. This is due to the lack of strong regulations related to cigarettes. In addition, cigarette tax is one of the state's efforts in increasing and filling the state treasury. In Indonesia, cigarette tax is very low and the price of cigarette is too. That's why a number of smoker tend to raise every year. Especially, smoker teenager feel that they can buy the cigarette and feel free to consume it. In ten years, smoker teenager tend to raise.

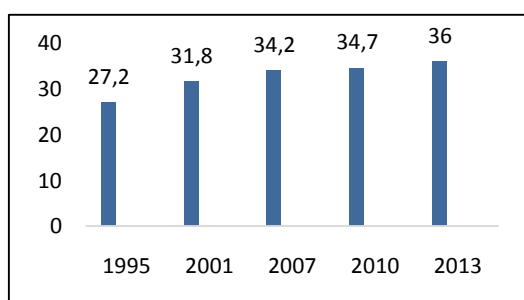


Figure 1: Number of Smokers in Indonesia

Based on Figure 1, it is known that the number of smokers in Indonesia has increased every year. Based on data by Global Youth Tobacco Survey (GYTS), 2,074 respondents of Indonesian students aged 15-20 years showed that 43.9 percent of boys ever smoked. The increased prevalence of smoking in adolescents in Indonesia has caused a seriously cigarettes problem (Tulakom and Bonet, 2003).

According to Basic Health Research (Departemen Kesehatan RI, 2013), the highest active smokers in the 30-34 age group was 33.4%. The number of active smokers at age 20-24 also has a high number of 27.2%. The highest proportion of daily smokers occurs in men by 47.5%. The cigarette market has a large number of consumer in this country. Even the economic crisis in Indonesia has not decreased cigarette consumption, rather, it is increasing (Aan, 2001).

The discussion on raising cigarette prices to Rp50.000 has become a current issue in Indonesia. This is based on the results of Thabrany's (2016) study which found that 72% of 1,000 respondents said they would stop smoking if the price of cigarettes went up to Rp50,000. Thabrany (2016) recommends increasing the price of cigarettes in Indonesia in order to prevent young people from smoking. Not everyone agrees about increasing cigarette prices, especially the cigarette industry (Martiany, 2016). The increase in cigarette prices is considered to reduce morbidity and reduce the amount of cigarette consumption. The increase in cigarette prices is expected to make smokers stop smoking

2 METHODS

This research is analytical quantitative. Data collection was done by primary technique through 110 chosen respondents. All of respondents are smokers. The instrument for this research was

questionnaire. Data analysis was done by multiple logistic regression test. This study was done in the Management Major of Economy and Business Faculty of Airlangga University through January-June 2017.

3 RESULTS

Table 2: Distribution of Respondents at Airlangga University of Management Program, 2017

| | F | % |
|--|------------|------------|
| Allowance | | |
| Low <Rp500.000 | 17 | 15.5 |
| Middle Rp500.000- Rp1.000.000 | 48 | 43.6 |
| High >Rp1.000.000 | 45 | 40.9 |
| Length of Consumption of Cigarettes | | |
| <1 Year | 10 | 9.1 |
| 1-4 Year | 45 | 40.9 |
| >4 Year | 55 | 50.0 |
| Attitude | | |
| Good | 77 | 70.0 |
| Not Good | 33 | 30.0 |
| Behavior Control | | |
| Good | 5 | 4.5 |
| Not Good | 105 | 95.5 |
| Total Respondents | 110 | 100 |

Table 2 shows that more than 80% of respondents have an allowance of more than Rp500,000. Which means they have no difficulty in purchasing cigarettes. Teenager tend to buy the cigarettes and easy to consume it. The price of cigarettes only Rp 10.000/pack (it is about US\$1).

Almost all respondents stated that they had been smoking for more than one year. The longest was more than four years with 50.0% of respondents. This means they were smoking before they studied at Airlangga University. They still do smoking in Airlangga University and tend to smoke in the campus area.

Mostly, respondents had a good attitude about the benefits if they stopped smoking. But, although they have a good attitude, they are still smoking. This is happening because of addiction.

Only 4.5% of respondents had good behavior control. This could be the biggest problem in getting them to stop smoking cigarettes. Behavior control in this research means their perception about the availability of cigarettes and the increase in their price.

Table 3: Cross-tabulation Between Allowance and Attitudes Against Smoking Habit Behavior Among Respondents in Prodi Management University of Airlangga Surabaya, 2017

| Allowance | Attitude | | | | Total | |
|------------------------------|----------|------|------|------|-------|-----|
| | Not Good | | Good | | | |
| | N | % | N | % | N | % |
| Low <Rp500.000 | 13 | 76.5 | 4 | 23.5 | 17 | 100 |
| Middle Rp500.000-Rp1.000.000 | 38 | 79.2 | 10 | 20.8 | 48 | 100 |
| High >Rp1.000.000 | 26 | 57.8 | 19 | 42.2 | 45 | 100 |
| Total | 77 | 70.0 | 33 | 30.0 | 110 | 100 |

Table 3 shows that respondents with a low allowance tend to have a bad attitude. Respondents with middle and high category of allowance are able to budget well for essential needs and still buy cigarettes.

Table 4: Cross-tabulation Between the Period of Consumption of Cigarettes with Attitudes Against Smoking Habit Behavior Among Respondents in Prodi Management Airlangga University Surabaya, 2017.

| Length of consumption of Cigarettes | Attitude | | | | Total | |
|-------------------------------------|----------|------|------|------|-------|-----|
| | Not Good | | Good | | | |
| | F | % | F | % | F | % |
| <1 Year | 7 | 70.0 | 3 | 30.0 | 10 | 100 |
| 1-4 Year | 32 | 71.1 | 13 | 28.9 | 45 | 100 |
| >4 Year | 38 | 69.1 | 17 | 30.9 | 55 | 100 |
| Total | 77 | 70.0 | 33 | 30.0 | 110 | 100 |

Almost all respondents, more than 69%, have a bad attitude about cigarettes' impact.

Table 5: Cross -tabulation Between Allowance and Smoking Behavior Control Among Respondents in Airlangga University Management Program, 2017.

| Allowance | Behavior Control | | | | Total | |
|------------------------------|------------------|-----|------|------|-------|-----|
| | Not Good | | Good | | | |
| | N | % | N | % | N | % |
| Low <Rp 500.000 | 1 | 5.9 | 16 | 94.1 | 17 | 100 |
| Middle Rp500.000-Rp1.000.000 | 1 | 2.1 | 47 | 97.9 | 48 | 100 |
| High >Rp1.000.000 | 3 | 6.7 | 42 | 93.3 | 45 | 100 |
| Total | 5 | 4.5 | 105 | 95.5 | 110 | 100 |

Table 5 shows respondents who have money tend to have poor behavioral control.

Table 6: Cross-tabulation of Period of Cigarettes Consumption and Behavior Control Among Respondents in Airlangga University Management Program, 2017

| Length of Consumption of Cigarettes | Behavior Control | | | | Total | |
|-------------------------------------|------------------|-----|------|------|-------|-----|
| | Not Good | | Good | | | |
| | N | % | N | % | N | % |
| <1 Year | 1 | 10 | 9 | 90 | 10 | 100 |
| 1-4 Years | 2 | 4.4 | 43 | 95.6 | 45 | 100 |
| >4 Years | 2 | 3.6 | 53 | 96.4 | 55 | 100 |
| Total | 5 | 4.5 | 105 | 95.5 | 110 | 100 |

Table 6 shows that respondents who have a long period of cigarette consumption tend not to have good control behavior. They find difficulties when they want to stop smoking.

Table 7: Cross-tabulation of Attitude and Intention to Stop Smoking Among Respondents in Airlangga University Management Program, 2017

| Attitude | Intention to Stop Smoking | | | | Total | |
|----------|---------------------------|------|-----|------|-------|-----|
| | No | | Yes | | | |
| | F | % | F | % | F | % |
| Not Good | 25 | 32.5 | 52 | 67.5 | 77 | 100 |
| Good | 22 | 66.7 | 11 | 33.3 | 33 | 100 |
| Total | 47 | 42.7 | 63 | 57.3 | 110 | 100 |

Table 7 shows that respondents who have good attitude tend to have an intention to stop smoking. However, respondents who do not have a good attitude tend to not have intention to stop smoking. This is compatible with theory that people who have good attitude tend to have good behavior. This study confirm this theory.

Table 8: Cross-tabulation Between Behavior Control with Intention to Stop Smoking Among Respondents in Airlangga University Management Program, 2017

| Behavior Control | Intention to Stop Smoking | | | | Total | |
|------------------|---------------------------|------|-----|------|-------|-----|
| | No | | Yes | | | |
| | N | % | N | % | N | % |
| Good | 1 | 20.0 | 4 | 80.0 | 5 | 100 |
| Not Good | 46 | 43.8 | 59 | 56.2 | 105 | 100 |
| Total | 47 | 42.7 | 63 | 57.3 | 110 | 100 |

Table 8 shows that the majority of respondents have good behavior control to intend to stop

smoking. The result of logistic regression analysis shows that the variable that influences the attitude is the variable of allowance. It can be seen from the result of significance, which is 0.028, which is smaller than α (0.05). The variable of length of cigarette consumption has no effect on attitude and behavior control. This can be seen from the results of significance greater than α (0.05). From the result of logistic regression analysis there is influence of attitude variable to the intention to stop smoking and there is no influence between the behavior control variable with the intention to stop smoking. It can be seen that the significance value of attitude variable is smaller than α (0.05). These variables are further influenced in the possibility of respondents who have the intention to stop smoking. Variables that have no effect on the intention to stop smoking are behavior control variables. These variables have a significance value greater than α (0.05). Regression model was obtained based on the calculation of probability value of behavior to quit smoking among the respondents who have good attitude of 0.676 rather than respondents who have bad attitude

4 DISCUSSION

This study states that the allowances earned by the respondents are in enough categories to meet the needs for one month, including the need to buy cigarettes. In accordance with research conducted by Maharani (2014)⁹ that there is a strong relationship between the amount of allowance to smoking behavior. The relationship shows the direction of the positive relationship. This states that the higher the amount of allowance, the greater the increase in the smoking behavior in adolescents. Respondents who smoked felt that they were still able to buy cigarettes.

This suggests that the allowance variable can show a well-behaved behavior. Cigarette consumption does not affect the attitude and behavior control. The variable of length of cigarette consumption is the time from the respondent first consuming cigarettes until now. Most of the respondents in this study had consumed cigarettes for more than four years. This suggests that the variables of length of cigarette consumption have not been able to determine the extent of the ability to control attitude and behavior control to intend to quit smoking.

The analysis was conducted to determine the effect of attitudes and the behavior control on the intention to stop smoking. The results showed that not all variables have an effect on the intention to

stop smoking. The result shows that attitude variable significantly influences intention to stop smoking. The B value for the attitude variable is 1.426, and states the probability of behavior to quit smoking in the respondents who possess it. Amounting to 1,426, this shows a probability of behavior to quit smoking in respondents who have a good attitude of 0.676 as opposed to respondents who have a bad attitude. Attitudes towards behavior are considered as major factors that can affect a person's behavior. Attitude is determined by individual beliefs about the consequences of a behavior.

This result is different from the research conducted by Prof Habullah Thabrany. In the results of his research, he mentioned that 72.3% of smokers agreed that the price of cigarettes at Rp50.000 / pack or more would make smokers quit smoking. In this study, the majority of respondents said that if the price of cigarettes increased they would still not stop smoking. This is because the respondents felt that they were addicted to smoking behavior. In this case, the respondents also said that they preferred to reduce the number of cigarettes they consumed than to stop smoking. Almost all respondents stated that they preferred not to eat rather than not having to smoke for a day. Raising the prices of cigarettes is not considered a matter that needs to be regretted for cigarette consumers. Respondents said that no matter how expensive their cigarettes were, they could still afford them. This can be seen from the low price of cigarettes in Indonesia where the average price per pack is Rp11.000

5 CONCLUSION

The respondents consisted of 110 active smokers among students of Airlangga University Management Program. Most of the respondents came from the students of 2013. The majority of the respondents' allowance was between Rp500.000-Rp1.000.000 each month. The majority of respondents had been consuming cigarettes for more than four years. The increase of cigarette prices will not affect the intention to stop smoking among the respondents in the Airlangga University Management Program. The allowance affects attitudes, but the variables of length of cigarette consumption do not affect attitude and behavior control. The attitude variable influences the respondents' intention to stop smoking. Behavior control variables do not affect the intention of quitting smoking

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Reviving School Food Safety Teams at Elementary Schools Based on the Quality of Street Foods

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Keywords: Children, E.coli, School food, Food safety.

Abstract: The snacking habit of street food among school children has become a general habit in all socio-economic levels in society. Street foods are expected to contribute energy and other useful nutrients for growing school children (Manalu, 2016). The objective of this study was 1) to assess the quality of street foods in Elementary School with the indicator of Escherichia coli bacteria and 2) to recommend revitalising the school food safety team. The type of research was an observation that is descriptive with a cross-sectional design. The location was chosen based on the highest prevalence rate of diarrhoea in Surabaya. The research sample consisted of 109 street foods (including beverages) in 4 Elementary Schools. The results showed there were 42 (38.5%) food and beverages contaminated with potentially pathogenic E.coli bacteria and 4 (3.7%) food and beverages contaminated with pathogenic E.coli bacteria. It is expected to establish or revive the School Food Safety Team (TKP) to ensure that the food and drinks sold in the canteen and around the school are safe and healthy to consume.

1 INTRODUCTION

School children are the next generation and strategic assets for development. Thus they are expected to be healthy, intelligent and productive. The quality of children as the next generation is determined by two factors, namely education and health (Syahrul, 2017^a).

The snacking habit of street foods among school children has become a general habit in all levels of society. This snacking habit is very popular among school children and very difficult to eliminate because the students need a food intake while at school. Snack on elementary school children contributes 25% of daily energy with the morning snacking period contributes the least energy. The foods most commonly consumed are water, snacks and sweets (Dantong, Wang, et al., 2016). In Indonesia, streets food can contribute 10-20% nutrients toward student daily consumption. Street food divide into main dishes, snacks and beverages (Syafitri, Y., et al. 2009). Street foods generally do not fulfil health standards and have more risks to do with containing chemical or biological substances (February, 2010). On the other hand, street foods are

also beneficial for children's nutrition if they choose healthy and proper food.

The objective of this study was 1) to assess the quality of street food at Elementary Schools with an indicator for Escherichia coli bacteria and 2) to recommend reviving the school food safety team.

2 METHOD

The type of research was observational and descriptive with a cross-sectional design. The location was chosen based on the highest prevalence rate of diarrhoea in Surabaya. The research sample consisted of 109 street foods (including beverages) in 4 Elementary Schools. Each type of food was sampled up to 100 g and beverages up to 100 ml. The data was analysed descriptively to describe the study variables. The school criteria was that it had a canteen. The definition of a canteen is a place where food is provided in an elementary school where all of the kids go to eat.

3 RESULT AND DISCUSSION

3.1 Location of Street Food

The types of street food purchased at school were main meals, snacks, beverages and fruits. Most of the children buy snacks and beverages. The various types of street foods are growing rapidly in Indonesia (Winarno, 2004). Street foods are both diverse and nutritious in order to improve the nutritional quality of the food consumed. The location of the street food being sourced was the school's canteens, stalls in the schools, stalls outside of the schools and food vendors.

3.2 Quality of Street Food

Details of the number of food and beverages number are: 28 samples from SD Negeri Kupang Krajan I, 31 samples from SD Negeri Petemon X, 24 samples from SD Negeri Sidotopo VIII and 26 samples from SD Negeri Sidotopo I.

The food and beverage samples were examined at the Nutritional Laboratory Faculty of Public Health, Airlangga. From the laboratory test results, there were 42 (38.5%) items of food and beverage contaminated with potential pathogenic *E.coli* bacteria and 4 (3.7%) items of food and beverage contaminated with pathogenic *E.coli* bacteria. The complete results can be seen in Table 1.

Table 1: The Laboratory Test Results

| Type of Food and Beverages | Potential Pathogenic <i>E. coli</i> | Pathogenic <i>E. coli</i> |
|----------------------------|-------------------------------------|---------------------------|
| School canteen : | | |
| - candied mango | + | - |
| - fried tempe | + | - |
| Stalls in school : | | |
| - ice tea | + | - |
| - ice red syrup | + | - |
| - ice wawan pink | + | - |
| - ice marimas | + | - |
| - intestines satay | + | - |
| - noodle | + | - |
| - omelet rolls | + | - |
| - green beans ice | + | - |
| - coconut milk ice | + | - |
| Street vendors : | | |
| - fried banana | + | - |
| - meatball and sauce | + | - |
| - ice cao | + | - |

| Type of Food and Beverages | Potential Pathogenic <i>E. coli</i> | Pathogenic <i>E. coli</i> |
|----------------------------|-------------------------------------|---------------------------|
| Stalls outside school: | | |
| - pop ice | + | + |
| - coconut ice | + | - |
| - ice "kopyor" | + | - |
| - soy milk | + | + |
| - Ice cao | + | - |
| - ice manado | + | - |
| - ice saridele | + | - |
| - ice marimas | + | - |
| - glasses noodles | + | - |
| - ice tea | + | + |
| - ice jelly | + | - |
| - ice milk | + | - |
| - fried meatball and tofu | + | - |
| - shrimp sauce | + | - |
| - peanuts sauce | + | + |
| - cireng sauce | + | - |
| - ice syrup | | |

Note: (+): positive *E. coli* and (-): negative *E. coli*

3.3 Food Safety Team at Primary School

Elementary school age (about 6-12 years old) is the age where child really love to play and buy snacks at the school and in the area around the school. Therefore, there are many health problems that could infect elementary school-aged children (Syahrul, 2017^b). A health problem that often occurs is food-borne diseases. Food-borne disease is a disease caused by consuming food and/or drink that is contaminated due to a variety of microorganisms or microbial pathogens (Cary and Deepak, 2000).

By considering the condition of the snacks that are often purchased by children, including the high-risk conditions, it is advisable for parents to set an example by choosing healthy and safe snacks when going out with the children and when bringing gifts after work. Teachers also need to educate children about safe and healthy snacks.

The problem of school children encountering street food sellers in terms of personal hygiene, how to manage health, the manner of presentation, storage, the quality of the food and the habits of the child are still not good. Policies related to management and supervision in schools has been carried out from the centre of government (National Food and Drug Board, Ministry of Health, 2016). It is expected to establish or revitalise the School Food Safety Team (TKP) to ensure that the food and drink

sold in the canteen and around the school are safe and healthy to consume.

The role of the School Food Safety Team is to 1) do data collection from the food vendors and to sample the available kinds of food and beverage; 2) socialise food security for the school community; and 3) monitor the implementation of good food handling, processing and serving in the school canteen, include in the outer area around the school (National Food and Drug Board, Ministry of Health, 2013).

4 CONCLUSIONS

The results of laboratory tests indicate that many food and beverages of school children contaminated with *E. coli* bacteria. So it's a suggestion for school, it is expected for them to establish or revive the School Food Safety Team (TKP) to ensure that the food and drink sold in the canteen and around the school are safe and healthy to consume.

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Problems in Poor Paediatric Pneumonia Case Findings in Sumenep

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Keywords: Paediatric pneumonia, Case finding, Remote islands.

Abstract: Sumenep is one of the districts in Indonesia with various geographical features. This district not only has a mainland, but also remote archipelago. The number of paediatric pneumonia cases is high in Sumenep, while new case findings are still low. The remote conditions between regions mean that the healthcare workers are limited when it comes to actively finding new cases of pneumonia which will lead to delayed treatment. This study has analysed the factors that inhibit health workers in remote areas when it comes to performing pneumonia case finding. This is an observational analytic research study with a cross-sectional design. The samples in this study are 21 *Puskesmas* (public health centres) across Sumenep located in 18 mainland sub-districts and 9 island sub-districts. This study shows that a lack of knowledge is the only responsible factor that affects the health workers' performance in finding new cases of pneumonia ($p=0,029$; $\beta=0,148$). Surprisingly, limited upgrading skills for health workers and the high workload is that often complained about does not significantly influence performance.

1 INTRODUCTION

The World Health Organization denoted that there are at least 151.8 million incidents of pneumonia in individuals under five in developing countries as well as 4 million cases in developed countries every year. Almost 10% are severe pneumonia that needs hospitalisation. This forgotten killer of children has increased in Indonesia. Even though prompt treatment is a success when it comes to combating the disease, it cannot always be done due to the low number of new case findings. In order to improve prompt treatment, the Indonesian Ministry of Health has forced primary healthcare workers to actively find new cases of paediatric pneumonia. Through this active method of case finding, health workers will sweep every corner of their coverage area to identified suspected children. Geographical problems then existed that obstruct the active case finding.

East Java, as the province with largest population in Indonesia, is also haunted by high paediatric pneumonia. There is only one district in East Java that has successfully reached the target of paediatric pneumonia case finding. Moreover, with the various geographical features, Sumenep faces challenges in finding new cases across its remote

archipelago region. The coverage of the new case finding method of paediatric pneumonia was only 7.59% in 2015.

Sumenep and other remote areas in Indonesia have an experienced health worker shortage. There is enough evidence that geographic location is related to the high retention of health workers in remote areas (Russell et al., 2013). Other studies by Gross et al. (2012) have also explained that health workers in remote areas tend to experience weak health infrastructure and health system failures. This condition refers to the high work load. Moreover, a study by Mkoka et al. (2015) showed that health workers in remote areas potentially have low motivation to work because they feel abandoned and lost within the unsupportive system that they serve, and the difficult working and living environments.

The difficult access to the coverage area and the high risk of poor employee retention makes it possible to decrease the *Puskesmas*' performance not only in relation to paediatric pneumonia case finding but also other *Puskesmas* tasks. This study analyses how knowledge, upgrading skill experience, motivation and workload will impact the *Puskesmas* performance in the context of paediatric pneumonia case finding.

2 METHOD

This is an observational analytic study with a cross sectional design. The data collection was conducted from July to August 2016. The population in this research study were *Puskesmas* (Primary healthcare facility in sub district level) in Sumenep, which amounted to 30 *Puskesmas*. The sample population of this study was selected based on a stratified random sampling technique resulting in 24 *Puskesmas*. The sample was proportionally based on the criteria of the geographical condition of the *Puskesmas*. It selected 17 *Puskesmas* located in the mainland, 3 *Puskesmas* in remote islands, and 4 *Puskesmas* in the highly remote islands. Unfortunately, 1 *Puskesmas* in remote areas and 2 *Puskesmas* in very remote areas were excluded from the research sample due to high storms causing the researcher to not be able to safely reach the location of the *Puskesmas*.

The respondents consist of 5 people each *Puskesmas* have a job as a pneumonia program manager. The technical officers consist of doctor, midwife, nurse, and health promotion officer at the *Puskesmas*. The knowledge, upgrading of skills and experience, work motivation, and workload were calculated on average to represent the condition of the *Puskesmas*. A multiple linear regression test was used to find the influence between the independent variables with the achievement of the *Puskesmas*' performance in relation to new case finding.

3 RESULT AND DISCUSSION

The Sumenep region consists of not only land, but also islands. The land area is approximately as large as 1.146.93 square kilometres (54.79%) consisting of 17 districts. Although called 'the land' overall, there is still a small island in this region. The archipelago of Sumenep covers 946.53 square kilometres (45.21%) which includes 126 inhabited and uninhabited islands in 9 districts. Many islands in Sumenep are still anonymous.

The access to health services in Sumenep is highly correlated with the provision of health facilities. Sumenep already has hospitals, *Puskesmas* and private clinics as well as several other health facilities. *Puskesmas* are the primary healthcare facility managed by the District Health Office to ensure that every person even in the more remote areas of Sumenep will be able to access qualified primary healthcare. The development of *Puskesmas* in each sub-district is expected to improve the health

status of people not only through curative but also through preventative actions.

Unfortunately, the availability of health workers at the *Puskesmas* in Sumenep is still very limited. With a large and difficult to reach area, there are only 43 general practitioners (GPs) available with ratio of 4.29 GPs per 100,000 populations. This ratio is still far below the ideal ratio of 40 GPs per 100,000 populations. The ratio of nurses also only reaches 38.43 per 100,000 populations, below the ideal ratio of 117.5 nurses per 100,000 populations. The midwife ratio also reaches only 51.04 per 100,000 populations, which means that it is still under the ideal 100 per 100,000 population.

3.1 Factors of new case finding performance

The *Puskesmas* performance in relation to the new finding of cases of paediatric pneumonia is still low. The majority of *Puskesmas* only can reach new case findings no more than 30% per month. The low achievement of new case discovery finding means that prompt treatment for patients cannot be done earlier. Many cases that should be able to be treated precisely in the earlier phases are instead found in the later stages. The *Puskesmas* performance in paediatric pneumonia case finding is the result of teamwork specially formed to tackle the paediatric pneumonia in Sumenep. The team consists of 5 health workers who have their respective duties according to their scientific fields. The team consists of a program manager, doctor, midwife, nurse, and health promotion officer.

This study shows that the majority of the team's knowledge about pneumonia and its prevention is still low. Only 8 teams in *Puskesmas* have good knowledge about pneumonia case finding activities. The low knowledge of the *Puskesmas* officer in performing the task potentially ruins the performance of the case finding task. Knowledge is fundamental and important, and must be owned by someone before doing a certain job. Moreover, the lack of knowledge is on what is meant by infant pneumonia (47.6%). Most health workers are also unable to answer correctly about how to calculate the estimated cases of paediatric pneumonia (81.0%). Table 1 shows the tendency of this low knowledge in the *Puskesmas* performance.

Table 1: *Puskesmas* factors of new case finding performance

| | Case Finding Performance | | | | Total | |
|------------------|--------------------------|------|------|------|-------|-----|
| | Poor | | Good | | n | % |
| | n | % | n | % | | |
| Knowledge | | | | | | |
| Poor | 1 | 100 | 0 | 0 | 1 | 100 |
| Moderate | 12 | 100 | 0 | 0 | 12 | 100 |
| Good | 6 | 75 | 2 | 25 | 8 | 100 |
| Skills upgrading | | | | | | |
| Never | 10 | 90.9 | 1 | 9.1 | 11 | 100 |
| Less | 7 | 100 | 0 | 0 | 7 | 100 |
| Enough | 2 | 66.7 | 1 | 33.3 | 3 | 100 |
| Work motivation | | | | | | |
| Low | 10 | 83.3 | 2 | 16.7 | 12 | 100 |
| Moderate | 7 | 100 | 0 | 0 | 7 | 100 |
| High | 2 | 100 | 0 | 0 | 2 | 100 |
| Workload | | | | | | |
| High | 12 | 92.3 | 1 | 7.7 | 13 | 100 |
| Medium | 4 | 80 | 1 | 20 | 5 | 100 |
| Low | 3 | 100 | 0 | 0 | 3 | 100 |

Upgrading the skills in the case finding of paediatric pneumonia is assumed to improve the *Puskesmas* performance. The majority of officers on all of the existing teams in the *Puskesmas* revealed that there are only limited upgrading skills related to paediatric pneumonia case finding that are available. Supposedly if an officer has attended the training, then the officer is more skilled at executing their tasks in relation to case finding. The intensity of the upgrading of the skills given to officers is still low. Almost all of the team members at each *Puskesmas* in Sumenep have not participated in training related to the activities associated with paediatric pneumonia case finding. This situation may prevent the *Puskesmas* from achieving the established performance targets.

In addition to the knowledge and skills of the team of *Puskesmas* in performing their duties, team performance can also be influenced by the motivation of the officers to find new cases of paediatric pneumonia. Most of the teams (12 teams) have low motivation to do with finding new cases of paediatric pneumonia. More than half of the *Puskesmas* are not performing well due to the low motivation of the team members in making new case discoveries.

This study also analysed how the workloads of the team members was related to carrying out the task of finding cases of paediatric pneumonia. The limited number of health personnel in Sumenep has caused many health workers to have multiple tasks

associated with their other jobs in the *Puskesmas*. Team members not only do their job of finding the cases of pneumonia, but also keep doing their other duties in *Puskesmas*. The low motivation of the health officers makes sense according to this high workload. They could be thinking that by identifying new cases, it will multiply their workload.

The results showed that the workload owned by the team tends to be high (13 *Puskesmas*). The majority of the team members (85.7%) have duplicate tasks within the organisation. This can disrupt the officers' concentration on the new case finding. The health workers (76.2%) stated that the additional tasks prevented them from finding new cases of paediatric pneumonia. Unclear task distribution is also a problem for 61.9% of *Puskesmas*. This is also exacerbated by the large number of *Puskemas* whose team members have tasks to do that do not fit their role.

3.2 The main problem

The result of multiple linear regression between knowledge, upgrading skills, motivation and the workload of *Puskesmas* with the performance of pediatric pneumonia case finding in Sumenep showed that only knowledge significantly influences the data ($p = 0,029$; $\beta = 0,148$). The better the health officers' knowledge is, the more it will improve the officers' performance on paediatric pneumonia case finding. Upgrading skills, motivation and workload does not significantly influence the performance.

Table 2: Multiple linier regression result

| | p | β |
|------------------|-------|---------|
| Knowledge | 0,029 | 0,148 |
| Skills upgrading | 0,569 | 0,071 |
| Motivation | 0,393 | 0,890 |
| Workload | 0,880 | 0,041 |

Teams in *Puskesmas* consist of various health workers with different professional backgrounds. Sun et al. (2017) explained that a team with diverse members will trigger different skills and knowledge needed for optimal individual and team learning. It will improve the innovations at both individual and team levels. Therefore *Puskesmas* should have a better chance to perform innovative case finding. Our results show that while both knowledge and the opportunity for upgrading skill are poor in Sumenep, it creates no leverage to enhance team diversity to generate more innovative performance.

This study show that knowledge is the entry point of upgrading skills to influence the *Puskesmas* performance. Due to the poor knowledge of the

health workers, even intensive upgrading skill cannot improve performance. It means that the health workers should be provided good knowledge first, thus influencing their performance. Health workers could feel that the limited opportunities for them to participate in upgrading their skills will worsen their motivation to do case finding actively. Careful consideration should be given to risk reduction strategies, enhanced vaccination coverage, improved management of hypoxaemia and antibiotic stewardship (Nguyen et al. 2017).

The low motivation of health workers in performing case finding does not significantly affect the *Puskesmas* performance. Working in difficult mountainous and rural environments with limited resources coupled with little opportunity to practice in order to maintain and develop professional competencies with poor supervision will demotivate health workers when it comes to doing and showing their best performance (Thi Hoai Thu et al., 2015). This has happened in Sumenep. The various geographical features of Sumenep hinders the health workers when it comes to case finding. Limited resources related to performing case finding worsen the situation as well. The possibility of why motivation not significantly influenced by performance is due to the fact that health workers could be already adapting to the bad work environment.

On the other hand, Jaskiewicz & Tulenko (2012) revealed that the productivity of health workers is determined by where they work. The work environment should be managed well to enable the health workers to perform their tasks. Their study also explained that a manageable workload, clear organised tasks, reasonable geographic distance to cover, supplies and equipment, supportive supervisor, and community acceptance can allow them to function better, leading to better performance. Workload in this study also does not significantly influence the case finding performance.

In the other hand, government collaboration with the community agencies should be evaluated. Ortiz (2011) mentioned that rates of well-child services and preventive care improve with collaborative efforts among government and community agencies and physician offices. These findings imply that intervention should include how to manage this collaboration effectively.

4 CONCLUSION

The performance of the *Puskesmas* when it comes to finding new cases of paediatric pneumonia in Sumenep is influenced by the knowledge of its

health care workers. Poor knowledge of health workers in Sumenep worsen by the limited upgrading skills that is available. Health workers, through the limited opportunity for experiencing training to upgrade their skills, seems to experience an erosion of their professional competencies and development. It is also coupled with the difficult geography of their respective coverage area.

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Factors Affecting Medical Doctors in Charge (MDiC) Obedience in Filling Medical Resumes Based on the Table of Eleven (Study in Private Hospital “X”)

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Keywords: Claim, Medical doctor in charge (MDiC), Medical record, Obedience, Table of eleven.

Abstract: Medical resume are a required file in a Social Health Insurance Agency’s (BPJS) claim document. Incomplete claim documents detain the claim proposal between the hospital and the BPJS. Medical Doctor in Charge (MDiC) was the person in charge of filling in the medical resume. The purpose of this research study was to analyse the obedience of MDiC in filling in the medical resume based on the table of eleven. The method in this research was descriptive quantitative and observational. This research was accomplished by questionnaires, observations, and checklists. The result of this research illustrate that the majority of MDiC (57.10%) was classified as obedient in filling of medical resume. Dimension of knowledge of rules, cost or benefit, degree of acceptance, respect of authority, risk of detection, selectivity, risk of sanction, and severity of sanction have positive value to doctors obedience in filling medical resume. Risk of being reported and risk of being inspection have a negative value to doctors’ obedience in filling medical resume. Social control was not related to doctor’s obedience in filling medical resume.

1 INTRODUCTION

The Government of Indonesia is establishing a program called National Health Insurance (NHI) in order to achieve health coverage for all citizens. The NHI program started operations on January 2014. The implementer of the NHI program is the Social Health Insurance Agency’s (BPJS Kesehatan) established by the government. In the era of JKN known health referral system. Referral system starts from health service at Fasilitas Kesehatan Tingkat Pertama (FKTP) to Fasilitas Kesehatan Tingkat Lanjutan (FKTL).

Payment system in NHI is capitation and fee for service payment based on Indonesian-Case Based Group (INA-CBG) tariff. Payment is made by making a claim from the health facility to BPJS Kesehatan. Claims consist of several documents, one of them is a medical resume

Medical resumes are one of the files contained in a medical record document. A medical resume is a treatment summary file that is given to the patient from the start of hospitalisation up until discharge from the hospital. Currently in the era of National Health Insurance (NHI), medical resumes are one of the most important documents. The medical resume is one of the files in the claim document, because the resume contains a diagnosis which will be coded

into the software in the form of ICD-9 and ICD-10. Incomplete claims documents cannot be submitted to Social Health Insurance Agency’s (BPJS). Postponed claim’s processes will affect the hospital’s cashflow. The Medical Doctor in Charge (MDiC) is the person in charge of filling in the medical resume. The preliminary study indicates that 117 (86.67%) incomplete claim documents have been because there is no medical resume in Hospital “x”. The purpose of this research is analyse the obedience of MDiCs in filling in the medical resume based on the table of eleven.

2 METHOD

Sampling method in this research used total sampling. The primary data was obtained from questionnaires to 35 doctors. Secondary data were obtained from observation and a checklist of 266 medical resume documents. The independent variables in this study include the perception of the knowledge of rules, cost or benefit, degree of acceptance, respect of authority, social control, risk of reported, risk of inspection, risk of detection, selectivity, risk of sanction, and severity of sanction. The independent variable in this research was MDiC

obedience in filling in the medical resume. Data analysis technique used is cross tabulation. Cross tabulation can show the relationship between variables

3 RESULT

The MDIC’s obedience in relation to the medical resume was rated based on timeliness and the completeness of the medical resume. The results based on the research obtained are as follows.

Table 1: MDIC obedience levels in filling medical resumes in private hospital “x”

| Level of obedience in filling medical resumes | Amount (n) | Percentages (%) |
|---|------------|-----------------|
| Obey | 20 | 57,10 |
| Not obey | 15 | 42,90 |
| Total | 35 | 100,00 |

Based on Table 1, the majority of MDICs (57.10%) obey when it comes to filling in the medical resume. The table of eleven has 11 dimensions that can affect a person’s obedience to adhere to a rule. The results of the research present the relationship between the 11 dimensions of the table of eleven with MDIC obedience in filling in the medical resumes at private hospital "x".

Table 2: Relationship table of eleven with MDIC obedience in filling in the medical resume

| Dimension table of eleven | Result | Explanation |
|---------------------------|---|--------------------|
| Knowledge of rules | A better the perception of the knowledge of the rules, the better the obedience of MDIC in the filling in of the medical resume vice versa. | Positively related |
| Cost or benefit | The better the perception of cost and benefit, the better the obedience of MDIC in filling in the medical resume. | Positively related |
| Degree of acceptance | The better the degree of acceptance perception, the better the MDIC obedience in filling out the medical resume. | Positively related |
| Respect of authority | The better the perception in respect | Positively related |

| | | |
|--------------------------|---|--------------------|
| | of authority tends to lead to better obedience of MDIC in relation to the medical resume. | |
| Social control | Good or bad perceptions of social control tend not to affect the obedience of the MDIC in filling in the medical resume. | Not related |
| Risk of being reported | MDIC’s with a good risk of being reported tend to be less obedient in filling out the medical resume. | Negatively related |
| Risk of being inspection | MDIC with a good inspection perception tend to be less obedient in filling out the medical resume. | Negatively related |
| Risk of being detection | The better the perception risk of being detected tends to lead to better obedience of the MDIC in filling in the medical resume. | Positively related |
| Selectivity | The better perception of selectivity tends to lead to better obedience of the MDIC in filling in the medical resume. | Positively related |
| Risk of sanction | The better perception of the risk of sanction tends to lead to better obedience of the MDIC in filling in the medical resume. | Positively related |
| Severity of sanction | The better the perception of the severity of sanctions tend to lead to better obedience of the MDIC in filling in the medical resume. | Positively related |

Table 2 is the result of data analysis technique used cross tabulation, so there is no p-test value in this research. Based on Table 2, it was identified that the dimensions of knowledge of the rules, cost or benefit, degree of acceptance, respect of authority, risk of detection, selectivity, risk of sanction, and the severity of the sanction has a positive relationship to the obedience of the doctor in filling in the medical resume. The dimensions of risk of being reported and the risk of being inspection has a negative result towards the obedience of the doctor in filling in the

medical resume. The dimensions of social control were not related to the doctor's obedience in filling in the medical resume.

4 DISCUSSIONS

Obedience is obeying when it comes to performing a particular behavior that is suggested or as a response given outside of the subject (Green and Kreuter, 2005). Obedience is influenced by several factors: predisposing factors, enabling factors, and reinforcing factors. Predisposing factors are factors that become the basis or motivation of a given behavior. Possible factors are factors that enable or facilitate a particular behaviour. The reinforcing factor is the factor that encourages and reinforces the occurrence of a behaviour or action.

A medical resume is a treatment summary file that has been given to the patient since the start of hospitalisation up until discharge from the hospital. According to the Minister of Health No. 269 2008 on medical records, medical resumes include patient identification, admission diagnosis, patient care indications, summary of physical and auxiliary examinations, final diagnosis, treatment, follow-up, the doctor's name and signature. Based on the results of the research, it is noted that the majority of MDiCs (57.10%) are classified as obedient in relation to filling in medical resumes in private hospital "x". Based on the results of this study, it can be observed that the timeliness and completeness of medical resume filling in is quite good.

The table of eleven is a model developed by the Dutch Ministry of Justice in 1994. The table of eleven is based on the science of behaviour and consists of 11 dimensions that determine a person's level of obedience with rules or laws (Dutch Ministry of Justice, 2004).

Knowledge of the rules is the familiarity and clarity of the regulations or legislation among the target setting. A lack of knowledge about a rule may encourage disobedience (Elffers, et al, 2003). The knowledge of rule perceptions tends to have a positive effect on the doctors' obedience in filling out medical resumes in "x" hospitals.

Cost or benefits are an advantage or disadvantage that exists or not in relation to a person's obedience or non-obedience with the rules. Cost or benefit can be expressed in time, money, and effort. The perception of cost or benefit tends to have a positive effect on the doctors' obedience in filling in medical resumes in hospital "x". This can be interpreted that the majority of doctors feel the benefits gained

greater than the cost incurred when filling medical resume. This is appropriate compared with Widayanti's research (2017) which explained the relationship between the perception of cost and benefit with the obedience of doctors in filling in referral letters (Widayanti, 2017).

A person can obey a rule if the rule is considered reasonable to be accepted⁴. Perceptions of the degree of acceptance tend to positively influence the obedience of doctors in filling in medical resume in hospital "x". This is appropriate compared with Widayanti's research (2017) which explains the relationship between the perception of cost and benefit with the obedience of doctors in filling in referral letters (Widayanti, 2017). Obedience may occur due to pressure from a group and personal acceptance (Smith and Mackie, 2000).

Respect of authority is a condition in which the target group can respect an authority. People comply with a rule because it has respect for the authority (Milgram, 1974). The results showed that the perception of respect of authority tended to positively influence the doctor's obedience in filling in the medical resume at hospital "x". This may mean that the majority of MDiCs have a high degree of respect for hospital directors and professional medical ethics.

Social control is the target group's perception of positive or negative punishment against obedience or disobedience received from the surrounding environment. Social control is a measure of whether the environment will support or criticise non-obedience. The results show that good or bad social perception tended not to influence the obedience of MDiC in filling out the medical resumes in "x" hospital. Research by Widayanti (2017) stated that the lower the social control received, the lower the obedience of the doctors for filling in the referral letter.

The risk of being reported is the target group's perception of a violation that can be detected by others and then reported to the authority holder. The dimension of risk of being reported is a punishment received from social control. The results showed that MDiC with a good risk of being reported perception tended to be less obedient in filling out the medical resumes. This is because obedience does not only arise from external factors, but also from internal factors derived from the person.

Risk of being inspection is the target group's perception of an inspection being conducted by an authorised division. Inadequate inspections in high-risk areas are less effective inspections (Parker, et al, 1990). The results showed that MDiC with a good

risk of being inspected perception tended to be less obedient in filling out the medical resumes. This can happen if the inspection is not tight enough and rarely, so some people feel not at risk to be inspected.

Risk of detection is the target group's perception of violations being detected during inspection. Violations should be detectable by various forms of inspection, depending on the type of violation committed and the depth of the examination. The results showed that the dimension of risk of detection tended to positively affect the obedience of doctors in filling in the medical resume in hospital "x". This means that the majority of the MDiC feels a high risk of finding non-obedience in the filling of medical resumes.

Selectivity is an increased risk of inspection and detection of violations caused by the selection of interests, persons, actions, or areas to be examined. The results showed that there is a positive relationship between selectivity perception and physician obedience. This can be interpreted that the better the perception of selectivity owned by the doctor, then the obedience in the filling in of the medical resume also tends to be better.

Risk of sanction is the target group's perception of the risk of getting punished if the inspection find a violation or non-obedience with a rule. The results showed a positive relationship between the perceptions of risk of sanction that doctors have on obedience in relation to filling in the medical resume in hospital "x". This is in accordance with the research by Regaletha (2009) which explained that there was a relationship between the punishment system with the obedience of doctors in prescribing outpatient recipes based on the formulary in RSUD Prof. Dr. W. Z. Johannes Kupang (Regaletha, 2009).

Severity of sanction is the severity associated with the form of violation and punishment. The severity of punishment concerns the duration of detention, the number of penalties, or attempts made to correct the ongoing damage (Solicitors Regulation Authority, 2011). The results showed a positive relationship between the perceptions of risk of punishment that doctors have on their obedience in filling in the medical resumes in hospital "x"

5 CONCLUSIONS

The majority of MDiCs (57,10%) are classified as being obedient in filling in medical resumes in private hospital "x". The dimension of knowledges of rules, cost or benefit, degree of acceptance,

respect of authority, risk of detection, selectivity, risk of sanction, and severity of sanction has a positive value towards doctor obedience in filling in medical resumes. The dimension of the risk of being reported and risk of being inspection has a negative value towards doctor obedience in filling in medical resumes. The dimension of social control was not related to the doctor's obedience in filling in the medical resumes.

Doctors' obedience in filling medical resumes can be improved by

1. Socialisation of doctors about regulations or the SOP of medical resume filling in private hospital "x".
2. Socialisation to doctors about the importance of medical resumes in the era of National Health Insurance (NHI) that can affect the claims process and hospital cashflow.
3. Completeness and timeliness in medical resume filling can be used as an indicator of Medical Doctor in Charge (MDiC) performance assessment.

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Compliance Determinants of Mothers in Full Child Immunisation in Bangkalan District

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Keywords: Compliance, Immunisation, Mother’s Characteristic, Health Service.

Abstract: Child immunisation is one of the cost-effective interventions in response to health problems and it provides protection against a variety of health problems for children. Universal Child Immunisation (UCI)’s achievement is a projection of the coverage of complete child immunisation. Child immunisation coverage in Bangkalan in 2011 had a gap compared to the target. The study aims to analyse the factors that influence mothers’ compliance with child immunisation based on maternal characteristics, community support, and health workers in Bangkalan district. This research used a cross-sectional design and the populations were all mothers of children aged 12-24 months. The analysis was then continued using Path Analysis. The data was collected using a multi-stage sampling method. The samples included 360 respondents selected by the snowball technique. The results reveal that 37.3% of infants had been fully immunised on schedule and this indicates the mothers’ compliance with child immunisation. The Path Analysis Model is able to predict immunisation compliance. The predictive factors are Community Support, Mother’s Characteristics, Health worker, Service, and the Mother’s Factors. Result showed that mother’s characteristics and the health service directly affected the mother’s compliance of child immunisation. Community support, health manpower and the mother’s factors only have indirect effects.

1 INTRODUCTION

Child immunisation is one of the most effective health interventions in terms of cost. Budiman (2011) in Kompasiana (2012) said that in 1974, since the launch of the Expanded Program on Immunization (EPI) that included immunisation against seven diseases, immunisation has saved more than 20 million in two decades. UNICEF in the Report Card on Immunisation (2005) stated that vaccines have saved millions of children in the last three decades. Immunisation has becomes one of the programs for decreasing the child death rate in MDGs and programs of health development in Indonesia.

What Universal Child Immunisation (UCI) has achieved is a projection of the coverage of complete immunisation towards a group of infants. If UCI’s coverage is put into a certain area, we can see the level of people or infants’ immunity (herd immunity) against disease contagions that can be anticipated by immunisation (PD3I).

In the past few years, some mothers refused to bring their children to health care services for immunization even though it’s free and provided by the government. The low mother’s compliance to giving their children immunization caused by several factors such as mother’s characteristics (age, education, income, attitude, etc), family support, poverty, lack of information about immunization, and other socio-economic factors (Ramayani, 2007; Falagas, 2008; Goofman & Frerichs, 2000; Octaviani, 2015).

The UCI of Ministry of Health’s target was 80% in 2008, and the UCI of East Java’s target pursuant to the Minimum Standard of Service (SPM) up until 2015 was $\geq 95\%$, and the UCI of Bangkalan District’s target amounted to 90% in 2011.

Table 1: Coverage of Immunisation in Bangkalan District for the January - December 2011 period.

| Immunization | Target | Coverage | Coverage Gap |
|--------------|--------|----------|--------------|
| HB0 | 90% | 69.5% | 20.5% |

| Immunization | Target | Coverage | Coverage Gap |
|--------------|--------|----------|--------------|
| BCG | 95% | 76.2% | 18.8% |
| POLIO 1 | 95% | 77.3% | 17.7% |
| POLIO 2 | 90% | 76.0% | 14.0% |
| POLIO 3 | 90% | 74.3% | 15.7% |
| POLIO 4 | 90% | 72.9% | 17.1% |
| DPT-HB1 | 95% | 76.1% | 18.9% |
| DPT-HB 2 | 90% | 73.8% | 16.2% |
| DPT-HB 3 | 90% | 73.2% | 16.8% |
| MEASLES | 90% | 73.2% | 16.8% |

Source : Report of PSE Division of Bangkalan District Health Office 2011 (2012)

According to Table 1, there is a gap between immunisation coverage in Bangkalan District and the target. Therefore, there is a need to do a study that analyses the mothers' compliance determinants in giving children immunisation based on the mother's characteristics, community support, and the role of health workers in Bangkalan District.

2 LITERATURE REVIEW

2.1 Immunisation

In accordance with the Verdict of the Minister of Health of the Republic of Indonesia No. 1059/MENKES/SK/IX/2004 on Guidelines of Immunisation Implementation, immunisation is one of the preventive actions against diseases through the administration of immunity to the body. Administering immunity should be done regularly, completely, and in compliance with the set standards to provide health protection and to stop disease contagions.

As one of the government's policies, immunisation is the most effective measure to prevent infectious diseases. It is considered as an investment since in the long run, immunisation is able to decrease morbidity and the child death rate in several countries. For the children, immunisation aims to provide immunity for infants and toddlers against diseases and against the deaths caused by the infection of such illnesses.

Immunisation through certain vaccine provisions will also protect children from particular diseases. Despite the available facilities in the society, not all infants have complete immunisation. The paper size must be set to A4 (210x297 mm). The document margins must be the following:

2.2 Compliance

Kyngas, et al. (2000) believed that the low level of compliance will contribute to the decrease of effectiveness and medication benefits as well as the increase of treatment cost as a result of off-standard implementation. Lack of compliance also influences the health of the surrounding society; for example, TBC patients who do not obey the treatment conditions will contaminate others.

Kyngas (1999) found that motivation, health services, normal feelings and adequate energy as well as the willingness to reach the goals in the context of the health services are the factors that increase compliance. Motivation could be improved by support and affirmation from parents, and it also influences the individual energy and willingness to reach the goal of the health services.

According to Haynes (1979) in Evangelista (1999), compliance in the health sector is the increase of someone's behaviour (taking medicine, going on a diet, or changing their lifestyle) in implementing the health workers' advice. The definition was also stated by Fletcher (1989) in Evangelista (1999) that compliance is how patients do what the health professionals want them to do.

2.2.1 Compliance with Immunization

Ramayani, et al. (2007) conducted a study on several factors related to the lateness of giving immunisation in Health Centres in urban and suburban area. The results show that late immunisation is related to social-economic factors including poverty, vaccination cost, and late first immunisation. A lack of information about immunisation for parents and health workers and also health practices in private institutions where the schedule of the practice and immunisation do not often meet which also contributes to the lateness. Other factors include the lack of reminder system for immunisation times and difficulties in implementation in accordance with standards.

Another study conducted by Falagas (2008) stated the factors that influence incomplete immunisation such as under-age mothers (under 20 years old) which most commonly leads to a lack of knowledge. Goodman & Frerichs (2000) who did a research study on compliance with immunisation in Kern Country, California, found that the main factors of immunisation disobedience are ill condition, postponement, and a lack of access to information and services. Several other factors related to lack of compliance are demographic

characteristics such as the mother's age, race, income, education, and also the father's education level. Information on the purpose of immunisation for parents from health workers is also considered to be significant in increasing compliance with immunisation.

An analysis study by Waluyanti (2009) in Depok City that aimed to learn the causes and analysis factors influencing the low coverage rate of complete immunisation for infants that led to vulnerability from PD3I diseases found that health insurance and the response towards immunisation has a meaningful relationship with compliance with immunisation.

2.3 The Interaction Model of Client Health Behaviour/IMCHB

The theories used to understand, predict, and improve the level of compliance are among other's theory of Health belief model, the theory of Planned Behaviour, and the Transtheoretical Model. Pender (2004) stated that there is a model theory, namely The Interaction Model of Client Health Behaviour/IMCHB proposed by Cox (1984).

Health behaviour can be predicted more easily by understanding the client's social-economic status, the influence of social or community values on the patient's health, as well as finance and health accessibility. The background variables are considered relatively static ones both in terms of influence and influencing dynamic variables. Dynamic variables tend to be more active than the background variables that include intrinsic motivation, cognitive assessment, and affectionate response. The interaction between the client and health workers involves four factors, namely information, affectionate support, control of decision, and skill.

3 METHOD

This is a cross-sectional design research. The population were all mothers with children in the susceptible age range of 12-24 months in Bangkalan District, while the research subject were mothers registered in UCI and non-UCI Health Centres.

The sampling technique used was Multi-stage Sampling where Stage 1: Selecting Health Centres (8 UCI Health Centres and 4 non-UCI Health Centres); Stage 2: Categorising Health Centres into 3 village groups with 3 categories of UCI coverage namely A (Good, 80-100%), B (Fair, 70-79.9%),

and C (Poor, <69.9%); and Stage 3: Selecting villages through Stage 2 that resulted to 36 villages from 12 Health Centres with 10 respondents each Centre, which made it 360 respondents in total. The respondents were determined by using the Snowball technique and the data analysis used univariate, bivariate, and multivariate analyses.

The influence of the various variables on the mother's compliance with complete child immunisation was identified through Path Analysis, which was executed after each variable was analysed by using a computerised program.

4 RESULT AND DISCUSSION

The data results of all 360 respondents show that 351 of them (97.5%) take their child for immunisation and 9 of them (2.5%) do not take their child for immunisation. The coverage of Child Immunisation based on the type of vaccine implemented on schedule is: BCG at 53%, Hepatitis B0 at 49.6%, Hepatitis B1 at 63.0%, Hepatitis B2 at 47.6%, and Hepatitis B3 amounts to 54.1%. Meanwhile, coverage of DPT1 is at 49.3%, DPT2 at 58.1%, DPT3 at 47.0% and Measles amounts to 51.3%. Polio1's coverage amounts to 66.4%, Polio2 at 47.3%, Polio3 at 63.0% and Polio4 is at 56.4%.

Approximately 37.3% of infants have been given complete immunisation per vaccine type (antigen) on schedule (compliant). The coverage of complete immunisation given to infants off schedule or incomplete immunisation amounts to 62.7%. The result of immunisation completeness in accordance with the schedule is basic for the mother's compliance level in taking their child for immunisation.

4.1 Mother's Characteristics

The mother's individual aspects being studied in this paper include motivation, knowledge on immunisation, and response towards the immunisation knowledge. The result shows that the mother's motivation to take their child for immunisation is derived from the self-factor (intrinsic) at 52% and non-self-factor (extrinsic) at 48%. Extrinsic factors included as the source of the mother's motivation are family, neighbour, health worker, and health cadre. The mother's self-motivation becomes the determinant factor for them to take their child for immunisation.

The result of the mother's characteristics is based on aspects of knowledge and responses as shown in Table 2.

Table 2: Distribution of the Mother's Characteristics Based on Knowledge and Response Category

| Mother's Characteristics | Category | | | | Total |
|--------------------------|----------|------------|------|------|-------|
| | Poor | Inadequate | Fair | Good | |
| | (%) | (%) | (%) | (%) | (%) |
| Mother's Knowledge | 7.9 | 65.2 | 21.0 | 5.9 | 100 |
| Mother's Response | 23.2 | 33.3 | 25.0 | 18.5 | 100 |

The mother's knowledge on immunisation and its schedule, as the result shows, shows that 65% of mothers are in the inadequate category. The mother's insight on immunisation is needed to develop their willingness to take their child for immunisation on time. Inadequate knowledge on the importance of on time immunisation will have an impact on the mother's obedience in relation to taking their child for full immunisation. Octaviani (2015) and Falagas (2008) stated that mother's knowledge have significant influence on mother's compliance to take their children for immunization.

The mother's responses towards their insights determine how much they comply with the obligation to give full immunisation to their child. Good response is when mothers take their child for immunisation in accordance with the schedule. The study result shows that among the mothers taking their child for immunisation, 33% of them shows

negative response. These negative responses cause the off-schedule implementation of immunisation.

4.2 Community Support

The role of the community in successfully implementing immunisation is in their support of mothers taking their children for immunisation on time. Elements of community that supports the mother's compliance includes public figure, neighbours, health cadre, as well as local religious figures as the connector or due to the affirmation of information on the importance of immunisation.

Community support based on the mother's compliance result shows that most mothers (49%) do not have sufficient community support. Approximately 4.3% of mothers receive good community support, 41% of them gain fair support, and the other 5.75% have poor support. Inadequate support from the community will encourage the mother's to not taking their child for full and on schedule immunisation. Research showed that support especially from family affected in mother's compliance to take their children for immunization (Octaviani, 2015).

4.3 Health Workers Support

The health worker factor in this study includes affectionate support of health workers, information on health, control of decision, and the health worker's skill. The distribution of the health worker's support based on the category of support is shown in Table 3.

Table 3: Distribution of Health Workers Support Based on Category of Support

| Health Workers Support | Category of Support | | | | Total |
|---------------------------------------|---------------------|------------|------|------|-------|
| | Poor | Inadequate | Fair | Good | |
| | (%) | (%) | (%) | (%) | (%) |
| Affectionate Support of Health Worker | 5.8 | 22.2 | 16.8 | 55.2 | 100 |
| Information on Health | 25.2 | 34.7 | 24.5 | 15.6 | 100 |
| Control of Decision | 38.0 | 33.9 | 7.9 | 20.2 | 100 |
| Health Workers' Skill | 5.6 | 15.9 | 36.7 | 41.8 | 100 |

The result shows that 55.2% of health workers have been given affectionate support for mothers to take their child for immunisation properly. Support from health workers is able to give comfort to mothers in taking their child for immunisation. The support could be in a form of care and suggestions that boosts the mother's trust in the health workers.

Effective support can also convince mothers that immunisation for their child is important.

Inadequate information about health becomes the most determining factor (34.7%) of the mother's compliance with child immunisation. This result consistent with research by Goodman & Frerichs (2000) which stated that lack of access to

information affected the mother’s compliance of immunization. The availability of health information is significant in giving more insights and reinforcing the mother’s adherence to full child immunisation. Health workers who actively share information to mothers could be working as a reminder for mothers on the importance of on time and full immunisation.

Poor control of decision from the health workers (at 38%) indicates that the lack of health worker’s role in persuading mothers to take proper action and reducing their anxiety about child immunisation. Health workers could have control over the mothers’ decision to have child immunisation. The mother’s decision in taking immunisation for their child determines their adherence to full and on time immunisation.

The standard of competence for health workers is closely related to their skill in their service and practices. Health workers with good skill can give mothers a secure feeling and trust in taking their child for immunisation, particularly related to after-immunisation effects. The study result shows that the health workers’ skill is categorised as good at approximately 41.8%.

4.4 Health Services

The health service facility has a significant role in child immunisation implementation. Various kinds of health service available in the residential area are options for having immunisation arranged. The choice of immunisation venue is also related to stronger community support. Table 4 shows the choices of health service venue available based on community support.

Table 4: Distribution of Health Service Venue

| Venue of Health Service | Total | |
|---|-------|------|
| | n | % |
| Regional Hospital | 16 | 4.5 |
| Health Center | 88 | 25.0 |
| Village Health Clinic/Branch Health Center (<i>Polindes/ Pustu</i>) | 25 | 7.1 |
| Integrated Health Service (<i>Posyandu</i>) | 17 | 4.8 |
| Private Hospital | 26 | 7.4 |
| Health Clinic | 23 | 6.5 |
| Private Doctor Practice | 20 | 5.6 |
| Private Midwife Practice | 136 | 38.7 |
| Total | 351 | 100 |

The most utilised health service facility is the private midwife practice at approximately 38.7%. The choice of venue for immunisation arrangements was most likely related to the location of childbirth. The more flexible open hours of the midwife practice might probably be the reason of mothers’ choice for immunisation venue.

4.5 Analysis

The various factors of the mother’s compliance with full and on time child immunisation has been further analysed to learn the influence of each factor. The analysis was conducted by using Path Analysis to learn the cause-effect relationship or the direct/indirect effects of the factors. Factors of the mother’s characteristics, community support, and health workers are analysed with the mother’s compliance, mother’s factors or the health service factor. The analysis result of each factor is shown in Figure 1.

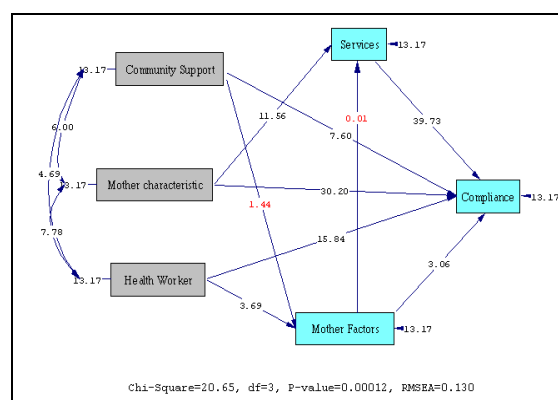


Figure 1: Result of Path Analysis

Community support, the mother’s characteristics, and health workers are independent variables while services, compliance, and mother factor are the dependent variables. The calculation of the relationship between the factors uses computerised calculations. The red numbers show that the variables do not have a correlation or relationship.

On the analysis of community support on compliance and the mother factor, the assessment result shows that the aforementioned does not influence the mother factor (motivation, knowledge, and response) as it is shown by the low number (1.44) while community support does influence the compliance variable (7.60). The mother factor shows a low score (0.01) in the services factor, thus the mother factor does not correlate with services.

Factors that have a relationship or that correlate to each other include: community support with service and compliance, health worker with compliance and the mother factor, as well as the services factor with compliance.

In light of the relationship between the independent and dependent variables, further analysis is needed to learn if there is effect and whether it is direct or indirect, which can be seen in Figure 2.

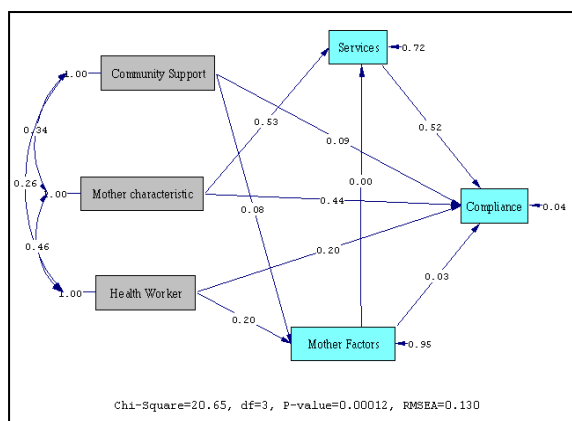


Figure 2: Direct and Indirect Effect

The total of effect influencing the dependent variables is determined by adding up the direct and indirect effect. Direct effect is a variable that directly influences the variable of compliance. Indirect effect is a variable that indirectly influences the compliance variable.

Variable of community support influences variable of compliance with immunisation with a total of 0.09 effect composed only by direct effect. Variable of mother's characteristics has a total of 0.72 effect (0.28 of indirect effect and 0.44 of direct effect).

Variable of health worker has an influence on the variable of compliance in a total of 0.20 (0.006 of indirect effect and 0.2 of indirect effect). The services variable influences compliance at a total of 0.52 entirely from direct effect. The mother factor variable has a total of 0.03 effect on compliance, all coming from direct effect.

In accordance with the scores of the 5 indicators of Good Fit Index (P-value Chi Square, P-value RMSEA, RMSEA, GFI, NFI), 4 out of 5 indicators (except P-Value Chi Square), it shows that the effect assessment result using Path Analysis has met the requirements, thus this model can be used in predicting compliance with immunisation.

5 CONCLUSIONS

Approximately 37.3% of infants have received complete and on schedule immunisation. The mother's compliance with child immunisation is identified through the use of a Path Analysis model from various variables that include community support, the mother's characteristics, health workers, health services, and the mother factor. There is no relationship between the community support variable and mother factor variable as well as between the mother factor variable and health services.

According to the assessment result, it can be concluded that the variables which have greatest influence on compliance with immunisation is the mother's characteristics variable (0.72) and services variable (0.52). The high score of compliance suggests that the variable of the mother's characteristics and health services directly influences the mother's compliance with full child immunisation. Meanwhile, the variables of community support, health workers, and mother factor have an indirect influence on the mother's compliance with full child immunisation.

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Economic Value for Being Working Parents: Family Revenue and Daycare Cost Fulfillment

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Keywords: Young family, Care giver, Children, Economic value, Working parents.

Abstract: Most of young family experiencing about generating child while they are still in the early phase of career. In this early step, family have to fulfil their living cost and additional cost that appear due to their predicate as working parents. We analyse the economic value for being working parents to describe the working parents' preference in the type of child care givers. Voluntary sampling technique was used to determine sample size to be studied. Data collected by online questionnaire or survey which given to 42 employees who affiliated with a biggest university in the eastern Indonesia. They were asked about their total living cost including their cost on child care givers which expensed monthly. Both numbers then proportionate with their revenue which then generated in a linier regression equation. This study revealed that baby sitter is the best valued care givers among other. While young family still do not valued child care givers as the important cost drivers in their expense. Surprisingly, they will consider rising up the children by their own to avoid the extra expense in total living cost.

1 INTRODUCTION

It was noted that working parents especially young families are burdened as the career stepper and also the early parents. This group of employees are reluctant to be late and hastily go home just for the reason of babysitting. The existence of child care givers in this group becomes more important. The parents, especially the mother that working who already has children will have a distraction of concentration on the job because they have to take care th child (Anon., 2015). The existence of daycare becomes one of the support for workers in college (Gault, et al., 2014). Many study about young family mostly discussed about how balance their life and their work, but rarely discussed what this group experiencing according to their preference of child care givers.

The Work-Life Balance study show up many indication of organisation's 'work-life balance' policies assist employees in balancing their work and life responsibilities (Delina & Raya 2013). The result of the study will provide any suggestion about what should be improves in the organisation's policies to balancing the work-life of employee. Rather than to only focus on the organization aspect, we assume that organization should also analyse

how their employee values the care givers of the children. By analysing this, organization will be able to understand why employee retents with reason to take care by their children.

Moreover, the lack of regular use of quality measurement at child care givers and the experiences that children have with their care givers are very important (Emlen et al. 2000). They will affect the development of children while parents work (Bigras et al. 2012). Qualified care givers and how parents should cost for this care will affect its cost-effectiveness. It will describe the value of being working parents.

Urgently overcome this dearth of information, this study try to measure how young family value their children care givers. We also analyse the economic value for being working parents to describe the working parent's preference in the type of child care givers.

2 METHOD

This is an exploratory study that conducted among young family who affiliated in an organization. We choose a biggest university in the eastern Indonesia to be the case study. By using university employee

as sample, we assume that the sample is already having the same value about education for child. This study using cross sectional approach for data collection. Voluntary sampling technique was used to determine sample size to be studied. Data collected by online questionnaire or survey which given to 42 employees who affiliated with a biggest university in the eastern Indonesia. They were asked about their total living cost including their cost on child care givers which expensed monthly. Both numbers then proportionate with their revenue which then generated in a linier regression equation.

We use slope and R² as the main indicator to understand the value of child care givers.

1. Slope

The slope shows how the value of living cost will affect the value of care givers. The positive slope represents the improvement of cost of the care givers when there is improvement in the total living cost. It means that the value of care givers is still equated with the other living cost. In this situation people tend to change their preferences of care givers only by considering the economic value. Care givers with negative slope tend to be the care givers with the highest value. People do not easily change their preferences even though there is massive changing in their total living cost.

2. R²

R² represents about how strong the total living cost ratio will affect the care givers cost ratio. The higher number of R² show that the changing total living cost ratio will more effect the care givers cost ratio. It will describe how important givers care in the family priority.

3 RESULT AND DISCUSSION

Table 1 describe the characteristic of the sample. It shows that most of respondent are young family who stay together daily. There are 18.6% who live separately with their spouse due to different city of work. Many studies explained about the lack of emotional support to children in this kind of parents. Moreover the staying together parents also have their own problem. The distances of each other office are become major issue for staying together parents. This would bring possibility of high cost in transportation and time consuming in way to reach the children.

Table 1: Parents characteristics

| Variables | n | % |
|--|----|------|
| Age | | |
| <25 years old | 1 | 2.3 |
| 25-30 years old | 23 | 53.5 |
| 31-35 years old | 13 | 30.2 |
| 35-40 years old | 5 | 11.6 |
| Spouse age | | |
| <25 years old | 1 | 2.3 |
| 25-30 years old | 23 | 53.5 |
| 31-35 years old | 13 | 30.2 |
| 35-40 years old | 5 | 11.6 |
| Space between relationship | | |
| Staying together | 34 | 79.1 |
| Long distance | 8 | 18.6 |
| Office distance of staying together spouse | | |
| Near | 2 | 23.3 |
| Far | 32 | 74.4 |

With those specific characteristic, every parents have their own preference in take care of their children daily while work. Most of young family choose to ask the help of their extended family to take of their children. Daycares remains the second common care givers which preferred by the young family. Only limited number of young families hires the specific people to be the baby sitter. Any attendance of other people at home mostly is by servants that also give responsibility to take care the children.

Table 2: Care givers and its cost

| Variables | n | % |
|-----------------------------|-----------------|-------|
| Daily Care Givers | | |
| Parents | 5 | 11.9% |
| Servants | 6 | 14.3% |
| Baby Sitter | 1 | 2.4% |
| Family (grandparents/aunts) | 15 | 35.7% |
| Daycare | 11 | 26.2% |
| Others | 2 | 4.8% |
| No answer | 2 | 4.8% |
| Care Givers Cost | | |
| < Rp 500,000 | 14 | 33.3% |
| Rp 500,001 - Rp 1,000,000 | 18 | 42.9% |
| Rp1,000,001 - Rp 1,500,000 | 6 | 14.3% |
| Rp1,500,001 - Rp 2,000,000 | 1 | 2.4% |
| > Rp 2,000,001 | 3 | 7.1% |
| Min | Rp 0.00 | |
| Max | Rp 6,000,000.00 | |
| Mean | Rp 890,119.05 | |

Table 2 explained that most of young family spent not more than 1 million monthly to fulfil their need in child care givers. This number considered as low when compared to the amount of living cost

ratio which explained in the next Figure 1. Young family who do not expense at all in the child care givers are family who already decided to takes care their children by their self. One of the spouses proposed to be only domestic mother.

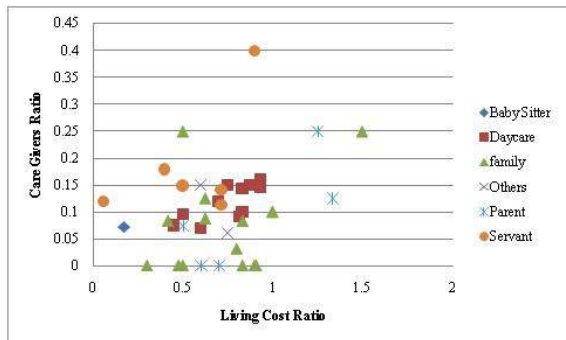


Figure 1: Living cost ratios and care givers cost ratio

Figure 1 depicts the comparison between the living cost ratios to the care givers cost ratio. This distribution imply that family and parents as the care givers have the lowest comparison to the living cost ratio. Parents who choose to use daycares remain have an equal comparison between their living cost and their expense for caring their child (Peterson & Peterson 1986). The highest comparison is the other type of care givers. The other care givers could be refers to full-day school or boarding school. This high comparison could be representing that the cost higher for the other parents in paying their child care givers. Unfortunately, we could not explain more about parents who choose the baby sitter due to limitation number of sample.

Table 3: Linier regression

| Care Givers | Linier Function | R ² |
|-------------|-----------------|----------------|
| Baby sitter | y=-0.045x+0.079 | N/A |
| Daycare | y=0.148x+0.007 | 0.559 |
| Family | y=0.101x-0.001 | 0.132 |
| Parents | y=0.025x-0.090 | 0.583 |
| Servant | y= 0.206x+0.071 | 0.321 |
| Others | y=-0.583x+0.5 | 1 |

Based on its liner function and R², we can analyze some main features:

- Without any further analysis toward other type of child care givers we can understand that the highest value among that type is on the baby sitter. Even there is a changing in the amount of their living cost ratio; parents do not easily change their preference to baby sitter. Even this slope is not the highest, this is the only negative slope generated. In the other hand, extended family as care givers becomes the

least economic value among other. For the young families in the middle economic level, daycares become the best choice (Shpancer 2002).

- According to the R² caring their children daily by their own becomes most priority in family. Parents will be directly chosen their own children if there are big change in their living cost ratio. Job insecurity could be the most predictor explaining this result (Delina & Raya 2013).

4 CONCLUSION

We can conclude that baby sitter is the highest economically valued by young family. The lowest one is existed in the family who choose their extended family as care givers. Based on this result, daycares is more suitable with the middle economic value. Surprisingly, young family in this study will considered to rise up the children by their own to avoid the extra expense in total living cost.

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