

Implementation of Prevention Program for Hepatitis B Transmission from Mother to Child in Surabaya City's Public Health Center" to The Indonesian Journal of Public Health

Tanggal 23 Januari 2021 author submit naskah:

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Date: Sab, 23 Jan 2021 14.05
Subject: [ijph] Submission Acknowledgement
To: Ms. Manika Putri Kunigara <manika.putri.kunigara-2017@fk.unair.ac.id>

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Prof. Kuntoro
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Mohon maaf dan Terimakasih

Salam

Letter of Acceptance (LoA)

To:

Author: **Manika Putri Kunigara¹, Bagus Setyo boedi², Sulistiawati³**

¹ Medicine Program, Faculty of Medicine, Airlangga University

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Dear Author's

I have pleasure to inform you that your following Original Article has been accepted for publication in The Indonesian Journal of Public Health :

IMPLEMENTATION OF PREVENTION PROGRAM FOR HEPATITIS B TRANSMISSION FROM MOTHER TO CHILD IN SURABAYA CITY'S PUBLIC HEALTH CENTER

It will be published in Volume 16 Issue 3, December 2021. It is further mentioned for your information that our journal is a double blind peer reviewed. It is covered by index Sinta and many other index

Surabaya, 20 April 2021

With regards,

Your sincerely

Editor in Chief



Prof. Kuntoro, dr., M.PH., DR.PH

LETTER OF STATEMENT

Sehubungan dengan adanya upaya peningkatan kualitas isi dan tampilan pada The Indonesian Journal of Public Health, maka terdapat perubahan jumlah artikel pada setiap terbitan. Edisi tahun 2020 yang semula berisi 12 artikel tiap terbitan menjadi 15 artikel per terbitan di tahun 2021. Hal inilah yang menyebabkan adanya penataan ulang artikel-artikel yang dimuat pada edisi tahun 2021-2022 ini, diantaranya :

Judul Artikel	Nama Author	Rencana terbit	Realisasi terbit
Implementation Of Prevention Program For Hepatitis B Transmission From Mother To Child In Surabaya City's Public Health Center	Manika Putri Kunigara, Bagus Setyoboedi, Sulistiwati	Volume 16 Nomor 3, Desember 2021	Volume 17 Nomor 1, April 2022

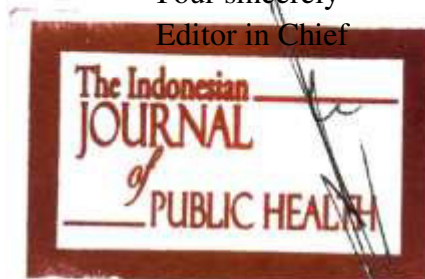
Demikian informasi ini. Semoga menjadi periksa adanya.

Surabaya, 6 November 2021

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Editor in Chief



Prof. Kuntoro, dr., M.PH., DR.PH

IMPLEMENTATION OF PREVENTION PROGRAM FOR HEPATITIS B TRANSMISSION FROM MOTHER TO CHILD IN SURABAYA CITY'S PUBLIC HEALTH CENTER

by Manika Putri Kunigara

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IMPLEMENTATION OF PREVENTION PROGRAM FOR HEPATITIS B TRANSMISSION FROM MOTHER TO CHILD IN SURABAYA CITY'S PUBLIC HEALTH CENTER

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ABSTRACT

95% of Hepatitis B transmission is vertical and will become chronic, which can result in re-infection and/or suffering from cirrhosis and hepatocellular carcinoma. As a state effort to prevent this vertical transmission, the Indonesian Ministry of Health issued Minister of Health Regulation (Permenkes) No. 52 of 2017. For this reason, the purpose of this study is to analyze the implementation of the prevention program for Hepatitis B transmission from mother to child at the Public Health Center (PHC) A and B, Surabaya in 2019. This research is an exploratory descriptive study with a qualitative approach through in-depth interviews and document review. The results of this study found that health promotion activities were not specified in the education material at PHC A, in surveillance, there were gaps in recording at PHC A and incomplete form filling at both PHCs, early detection activities had reached the target coverage but pre-and post-counseling activities were not optimal, case management activities are still below the target coverage and infant monitoring is weak. In conclusion, the implementation of the prevention program for Hepatitis B transmission from mother to child is still not optimal, especially in health promotion at PHC A, surveillance and case handling at both PHC.

Keywords: Implementation, Prevention, Transmission of Hepatitis B

ABSTRAK

Sebesar 95% penularan penyakit hepatitis B yaitu secara vertikal dan akan menjadi kronis yang mengakibatkan bisa menularkan kembali dan atau menderita sirosis dan hepatoseluler karsinoma. Sebagai upaya negara dalam mencegah penularan vertikal ini, Kementerian Kesehatan Indonesia mengeluarkan Permenkes No. 52 Tahun 2017. Untuk itu, tujuan penelitian ini untuk menganalisis implementasi program pencegahan penularan hepatitis B dari Ibu ke Anak di Pusat Kesehatan Masyarakat (Puskesmas) A dan B Kota Surabaya tahun 2019. Penelitian ini merupakan studi deskriptif eksploratif dengan pendekatan kualitatif melalui wawancara mendalam dan telaah dokumentasi. Hasil penelitian ini didapatkan kegiatan promosi kesehatan terdapat ketidakspesifikan materi penyuluhan di Puskesmas A, pada surveilans terdapat kesenjangan pencatatan di Puskesmas A dan ketidaklengkapan pengisian form di kedua puskesmas, pada kegiatan deteksi dini sudah mencapai target cakupan namun kegiatan konseling pre dan pasca deteksi dini belum optimal, kegiatan penanganan kasus masih dibawah target cakupan serta lemahnya monitoring bayi. Kesimpulannya, implementasi program pencegahan penularan hepatitis B dari ibu ke anak masih belum optimal terutama dalam promosi kesehatan di Puskesmas A, surveilans serta penanganan kasus di kedua puskesmas.

Kata kunci: Implementasi, Pencegahan, Penularan Hepatitis B

INTRODUCTION

Hepatitis B is a liver infection that has the potential to cause death. The disease is caused by the Hepatitis B virus, which is transmitted vertically (perinatal) and horizontally (WHO, 2020). According to Infodatin in 2018, the majority of Hepatitis B transmission is vertical, which is 95%. Death in several Asian and African

countries caused by hepatocellular carcinoma and cirrhosis is 50% of chronic Hepatitis B sufferers who are transmitted from mother to child so that, if this is not controlled, it will result in continuous Hepatitis B transmission from generation to generation (Stanaway et al., 2016). However, this vertical transmission can be prevented by early detection in pregnant women and giving vaccines to babies born

from mothers infected with Hepatitis B (Schillie et al., 2018).

Efforts to prevent vertical Hepatitis B transmission need to be done because the number of women infected with Hepatitis B continues to increase. In the City of Surabaya in 2015 there were no women infected with Hepatitis B, but 201 cases in 2016, and up to 920 cases in 2017. An increase in the number of cases of women infected with Hepatitis B also occurred in PHC A in 2017 by 42 times compared to the year previously, this increase was the highest when compared to other PHC in the city of Surabaya. The increase in cases also occurred in PHC B, from 19 cases of Hepatitis B infection in women in 2016 to 38 cases in 2017. The number of cases of Hepatitis B infection in women in PHC B was the highest in 2016 and the second highest in 2017 in the Surabaya (Surabaya City Health Office, 2017).

To prevent transmission of Hepatitis B from mother to child, the state is responsible for ensuring the survival of the child by making efforts to break the chain of transmission of Hepatitis B from mother to child. The Indonesian Ministry of Health issued the Minister of Health Regulation/Permenkes No. 52 of 2017 which consists of four activities, namely health promotion, surveillance, early detection, and case management so that from this policy it is hoped that by 2030 it can achieve the SDG's 3 target, namely the elimination of Hepatitis B. In 2018 - 2019 the Hepatitis B vertical transmission elimination program is at the open-access stage namely, its implementation is carried out at the first level health facility, one of which is the PHC (Ministry of Health of the RI, 2017).

Based on Central Bureau of Statistics for the City of Surabaya in 2020 PHC A and B are different sub-districts but the location between the two PHC is not too far away, which is about 2 km away and the characteristics of both PHCs are also almost the same, including dense urban areas with the population density of the two PHC areas

in 2019 more than 20,000 population/km² and the number of emigrants and immigrants in each region is also high, namely from more than 1,000 residents. The majority of the population in the two PHC are also similar, namely Javanese and Madurese. In this study, the selection of PHC A as the PHC studied was based on the number of Hepatitis B cases in women who experienced the highest increase in the city of Surabaya in 2017, while the selection of PHC B as the PHC studied was based on the number of cases of Hepatitis B in women who persisted high in 2016 and 2017.

To achieve the elimination of Hepatitis B transmission from mother to child, the implementation of a prevention program for Hepatitis B transmission from mother to child at first-level health facilities is very important so that the government's target to eliminate mother-to-child Hepatitis B transmission can be achieved. Therefore, this study aims to analyze the implementation of the prevention program of mother-to-child Hepatitis B transmission in PHC A and B Surabaya City in 2019.

METHODS

This research is a study with a qualitative approach and descriptive explorative research methods with triangulation validity testing sources (in-depth interviews, document review, and pregnant women). The sampling technique in this study was purposive sampling with the number of subjects in this study were one informant from PHC B, namely Hepatitis B cadres and 4 informants for each PHC, consisting of Communicable Disease Eradication (P2M) coordinator, Maternal and Child Health (MCH) coordinator, a midwife in charge of Hepatitis B, and pregnant women. Primary data were obtained from deep interviews and secondary data in this study were obtained from the document review. This study was conducted from January until June 2020 at PHC A and B, Surabaya. The data analysis stage used Colaizi's steps, namely

transcription, determining keywords, grouping respondent answers into various categories, and integrating the overall results of the influencing factors into a descriptive narrative form. This research was conducted after obtaining a recommendation from the ethical review team of the Faculty of Medicine Airlangga University and it was declared feasible based on the certificate Number 197/EC/KEPK/FKUA/2020.

RESULT

Implementation of a prevention program for Hepatitis B transmission from mother to child based on Permenkes No. 52 of 2017, there are four activities, namely health promotion, health surveillance, early detection, and case management.

Health Promotion

Socialization regarding the prevention program for Hepatitis B transmission from mother to child at PHC A and B is carried out to all employees through monthly meetings and to independent practicing midwives (BPM) in the PHC working area through facilitative meetings to provide counseling to pregnant women patients to carry out antenatal activities at PHC. Apart from socialization, training on this program has also been obtained by the two PHCs. The special health promotion strategy carried out by PHC A includes the use of Integrated Service Posts (*Posyandu*) and Mobile PHC (*Pusling*), while PHC B includes *Posyandu* and Hepatitis B cadres. Apart from providing counseling, Hepatitis B cadres also assist pregnant women with Hepatitis B and mothers with Hepatitis B who have babies less than 1-year-old.

"I got a certificate as a cadre on September 26, 2019, there are a total of 10 cadres. Previously, the activity started with the name I-HBV (*Inhibit Hepatitis B Virus Infection*) under the auspices of a doctor from Airlangga University (UNAIR). There were closing and opening, at closing, there

was a quiz. This is because to tackle the high number of hepatitis B cases in PHC B. The form of the I-HBV activity is training and it goes directly to the field. During the training, we are given input so as not to be nervous while providing counseling and given books about hepatitis B." (Cadre of Hepatitis B in PHC B)

"Hepatitis B is jaundice, the signs are yellow eyes and nails and swollen feet. Pregnant women with hepatitis B have a lot of risks, can transmit, but can be prevented by immunization." (Cadre of Hepatitis B in PHC B)

"Every month we hold meetings with Family Welfare Development (PKK) women conduct counseling. Patients from PHC are reviewed and monitored, and if asked will also take the patient to the PHC for lab check. So far we have 4 people, 2 of them are women who are also hepatitis B patients. Coordination with the PHC is in the form of contacting patients when asked by the PHC, especially for patients who are disobedient not according to immunization, etc. There is also a WhatsApp group for coordination. Every month there is training in PHC from doctors administering I-HBV, We've had meetings several times. If only for the cadres meeting themselves, we only got together once for sharing." (Cadre of Hepatitis B in PHC B)

The obstacle for the cadres, namely limited knowledge of hepatitis B cadres when there are difficult questions when conducting counseling.

"Every time there is a question that cannot be answered during counseling, you have to look at the book first or ask the doctor by online, there are participants in the extension who do not pay attention so it would be better if it is the door to door because it is not ignored". (Cadre of Hepatitis B in PHC B)

Health promotion was carried out by the two PHCs directly, but also, at PHC B provided leaflets as a medium for health education. The information conveyed during counseling at PHC A did not specifically discuss Hepatitis B, namely

matters related to pregnant women and how to register and the intended poly when they were at PHC, while PHC B provided information primarily on early detection of Hepatitis B, besides explaining the definition of Hepatitis B, its causes, symptoms, prevention, and treatment.

To make services easier, the PHC has also installed service channels that will provide convenience and certainty of service to the community. The flow of MCH services at PHC A is that after entering the MCH poly, patients can go to the general poly nutrition poly, dental poly, and laboratory. After getting the results of the examination, the patient can be referred to the hospital, or directly to the pharmacy and go home, or reproductive health counseling. Meanwhile, the service flow at PHC B, after entering the MCH poly, patients who need a laboratory examination will go to the laboratory and return to the KIA poly again, if they do not need a lab examination, the patient will immediately take the drug at the pharmacy and then go home, the patient from the KIA clinic also needs a nutritional consultation and sanitation will conduct a nutrition or sanitation consultation and return to the KIA poly again afterwards.

Health Surveillance

The recording of Hepatitis B cases in PHC A is carried out in two fields, namely recording the Hepatitis B early detection registration form (RR DDHB) and the immunization monitoring form by MCH poly and filling out the information system and digestive tract infection disease (SIHEPI) form by online by P2M. Recording in the SIHEPI format includes the date of early detection, patient identity, pregnancy status, HBsAg examination results, treatment and referral status, delivery, and monitoring of infant hepatitis (0-12 months). Recording in the RR DDHB format for pregnant women includes the date of registration, the identity of the pregnant woman, pregnancy status, history

of hepatitis symptoms, history of hepatitis detection and examination results, history of blood transfusions, history of hemodialysis, history of having other sex partners, history of using drugs and syringes, history of hepatitis B immunization status, history of one domicile with hepatitis B sufferers, history of HIV and CD4 examination and results, history of taking ARVs, history of suffering from symptoms of sexually transmitted diseases in the last 1 month, history and examination results after early detection (HBsAg, Anti Titer HBs, SGPT, Anti HBe, HBeAg, HBV DNA), recommendations given if HBsAg is reactive (check anti-HBS, monitors, and therapy), place and time of delivery, monitoring of infants (date of immunization HB0, HBIG, DPT/HB1 (given in the form of pentavalent immunization), DPT/HB2 (given in the form of pentavalent immunization), DPT/HB3 (given in the form of pentavalent immunization), and HBsAg examination results and anti-HBS titer), and maternal immunization and maternal counseling. Last, monitoring forms for pregnant women with hepatitis B and infant immunization include the date of registration of the identity of the pregnant woman, pregnancy status, estimated delivery, date and place of delivery, weight and length of the baby, method of delivery, the identity of the baby, date of HBIG immunization, HB < 7 days, BCG, P1, Penta 1, P2, Penta 2, P3, Penta 3, P4, MR, and additional immunizations.

Based on Table 1, the results of the documentation review showed that the difference in performance achievement of early detection of Hepatitis B in the recording carried out by PHC A was 39.9%, this condition was due to the difficulty in retrieving separate data between each field which also held many programs in PHC. Meanwhile, recording at PHC B from filling in the RR DDHB form for pregnant women to the SIHEPI form was only done by midwives from the MCH poly.

Table 1. Hepatitis B Early Detection Coverage in Pregnant Women at PHC A in 2019

Type Form	Number of Targets	Number of early detection		Performance Achievements (%)	
	2019 year	RR DDHB Form	SIHEPI Form	RR DDHB Form	SIHEPI Form
Total	1,593	1,585	949	99.5	59.6

Also, filling in the forms at both PHCs was incomplete, with several columns for inspection and monitoring that were not filled in namely 17 out of 33 (51.5%) and 13 out of 33 (39.4%) columns that were not filled in the RR DDHB form for pregnant women at PHC A and B, respectively (Table 2).

Meanwhile, the recording is also carried out in the Maternal and Child Health book.

"The result of test lab are recorded in the MCH Handbook" (IP1)

"The results are recorded in the MCH book because when I wanted to give birth, the doctor at the hospital knew that I was Hepatitis B positive from that book" (IP2)

All recorded data will be exported online to the Surabaya City Health Office and will be validated once every 3 months.

The data obtained by PHC A will be analyzed so that it will get an overview of the coverage of early detection, the management outcomes of referring to pregnant women. Besides that, data on pregnant women in both PHCs will be grouped based on delivery time to recap the number of HBIG vaccines that need to be prepared.

Barriers to conducting this surveillance.

"Yes, there are separate data on different computers and it makes it difficult to retrieve" (PP1)

"One officer holds many programs." (PP2)

"Yes officers are lazy to input data hehehe, and now the entry in the application also takes time and SIHEPI still has to update, so sometimes, there is double data." (BP2)

Table 2. Completeness of Filling in the RR DDHB Form Column in PHC A and B

Completeness of Filling in the RR DDHB Form Column	PHC A (%)	PHC B (%)
Completely filled	6.1	6.1
Partially Filled	42.4	54.5
Not Filled	51.5	39.4

Early detection

Pregnant women who visit PHC are required to carry out Hepatitis B surface Antigen (HBsAg) tests. In 2019, 99.5% of pregnant women who visited PHC A had early detection and 1.7% of them were reactive HBsAg. Meanwhile, 97.9% of pregnant women performed early detection of Hepatitis B and 3% of them were reactive

HBsAg. The empty reagent preparations became one of the obstacles in early detection activities, this was due to the presence of PHC B employees who had not had time to report the vacant reagents to the city pharmacy building (GFK) or the reagent stock at GFK was empty. Pregnant women who have a pregnancy visit near the time of delivery are also one of the reasons

pregnant women do not get the HBIG vaccine. Information is conveyed to pregnant women during pregnancy visits to carry out early detection, however, some pregnant women say that what they do is laboratory tests without knowing what benefits they get. Post-early detection counseling is delivered to all pregnant women with reactive HBsAg, but pregnant women with non-reactive HBsAg has not been carried out according to guidelines.

The obstacles of implementation of early detection activities in both PHC are indiscipline of pregnant women patients to control and lack of reagents.

"Discipline of the patient for routine control." (PP1)

"The stock of reagents is sometimes empty and not all pregnant women contact the health center, some of them go to BPM to tell when they are born at the hospital and suddenly ask for vaccines to the public health center (PHC) even though they need a vaccine request and have been planned for patients A, B, C., Well or maybe a hospital patient rarely checks blood in PHC, because of the cesarean, they finally check the blood. The result was positive. So, I don't understand what the lab is like, the mechanism should immediately re-stock, don't wait until the reagent stock runs out. I think that the stock at GFK is always available." (BP2)

Case Management

Management of cases in pregnant women with reactive HBsAg, namely being referred to the hospital and being asked for their availability to sign a vaccine application for their baby. Meanwhile, the treatment for infants of mothers with reactive HBsAg is administration of Hepatitis B Immunoglobulin (HBIG) vaccine <24 hours, immunization for HB0 <24 hours, HB1 (given in the form of pentavalent immunization), HB2 (given in the form of pentavalent immunization), and HB3 (given in the form of pentavalent immunization), and checking for HBsAg at the age of 9-12 months.

The number of pregnant women with reactive HBsAg at PHC A with an estimated date of birth in 2019 is 25 people, as many as 16 out of 25 or 64% of these pregnant women were recorded as having delivered at the hospital and 9 out of 25 or 36% of pregnant women had no data regarding where the delivery was carried out while the number of pregnant women with reactive HBsAg at PHC B with an estimated date of birth in 2019 was 23 people, as many as 20 out of 23 or 87% of these pregnant women were recorded as having delivered in the hospital, 1 in 23 or 4.3% were recorded to have delivered in independent midwives, and 2 out of 23 or 8.7% of pregnant women had no data regarding their place of delivery.

The coverage of case management in infants of mothers with reactive HBsAg can be seen in Table 3. The coverage of case handling is not optimal due to pregnant women who are late in carrying out early detection of Hepatitis B so that they do not get the HBIG vaccine, also the lack of monitoring of mothers with reactive HBsAg by PHC employees and the high number of population mobility in the working areas of PHC A and B so that some pregnant women and their babies cannot be monitored.

The obstacles of implementation of case management for hepatitis B transmission from mother to child are inactive of monitoring patient and their infants, Hepatitis B patients who did not report to the health center when they moved to a hospital thus complicating the monitoring process.

"Monitoring is not active, There must be patients who are missing too, many patients who have received vaccines with no news or notification of moving to the village, patients sometimes give fake addresses or addresses that are outside the work area of the puskesmas so that usually we only ask for monitoring and evaluation from their area so as not to interfere own territory." (BP2)

Table 3. Coverage of Case Management in Infants of Mothers with HBsAg Reactive in 2019

Intervention	PHC A			PHC B		
	Number of targets	Number of case management	Coverage (%)	Number of targets	Number of case management	Coverage (%)
HBIG	25	13	52	22	20	90.9
HB0	25	12	48	22	20	90.9
HB1	23	10	43.5	20	15	75
HB2	22	11	50	20	15	75
HB3	24	12	50	19	12	63.2
HBsAg Test	27	2	7.4	24	14	58.3

DISCUSSION

Health promotion is an activity carried out with a strategy of advocacy, community empowerment, and partnerships aimed at increasing public knowledge about the benefits of early detection of hepatitis B transmission, increasing knowledge and responsibility of pregnant women to breastfeeding, sexual partners, families, and the community for the health of their babies, including behavior. live clean and healthy and offer food to babies, and increase the role of the community to participate in maintaining a healthy family since pregnancy (Ministry of Health of the RI, 2017). Based on the results obtained, The two PHCs had conducted socialization on the prevention program of mother-to-child transmission of hepatitis B to officers and BPM socialization is an important stage in the implementation of a policy aimed at the public, including health policies, so that without good and comprehensive socialization, it is likely to cause problems in implementing the policy (Ainy, 2012). However, the implementation of health promotion in activities to prevent Hepatitis B transmission in PHC A has been running but has not been fully optimized so that an understanding of the material presented to pregnant women and mothers with Hepatitis B is required at the time of conducting

counseling because of the mother's good knowledge about Hepatitis B has a significant effect on the mother's behavior in immunizing her baby for Hepatitis B (Helmi, 2008; Pontolawokang, Korah and Dompas, 2016). In a study in northern Vietnam, the existence of educational exposure about Hepatitis B during pregnancy was the only factor that influenced pregnant women's knowledge about Hepatitis B (Hang Pham et al., 2019). Education for pregnant women about Hepatitis B during the first trimester also has a big influence on the actions of pregnant women to carry out HBsAg examinations (Putri, Hanum and Simanjuntak, 2019; Effendy and Yustiari, 2019). In PHC Sei Jang, Tanjung Pinang (Rahmadona, Lestanti and Respatiningrum, 2018) found that educational exposure can use individual counseling methods and leaflet media. The use of flipchart media also provides a significant difference in knowledge between before and after exposure to education about Hepatitis B (Dewi, 2019). Also, (Ningsih and Rahmawati, 2017; Mukhoirotin and Ismawanto, 2015; Rachman, Handayani and Ridwan, 2015) s say that there is a significant relationship between maternal knowledge about Hepatitis B immunization and the mother's decision to join the immunization program. For that, efforts are

needed to increase maternal knowledge about Hepatitis B and immunization. This can be done by providing education about the definition, causes, route of transmission, symptoms, prevention of transmission, and treatment of Hepatitis B, as well as information about Hepatitis B immunization, through the delivery of immunization schedules, service places, and reactions that generally occur after immunization. The role of Hepatitis B cadres in PHC B can be an innovation in providing counseling and assistance to pregnant women with Hepatitis B or to babies of mothers with Hepatitis B who do not immunize properly. In other studies, there was a significant relationship between the role of health workers and the provision of Hepatitis B immunization (Helmi, 2008; Rachman, Handayani and Ridwan, 2015; Harahap, 2016). The presence of Hepatitis B cadres as community leaders also has a significant role in giving Hepatitis B immunization (Helmi, 2008; Harahap, 2016). The presence of cadres can be a consideration for other health centers with a high number of pregnant women with Hepatitis B as well as to empower the community.

According to Ministry of Health of the RI in 2017, health surveillance in the elimination program for hepatitis B transmission from mother-to-child is carried out by recording, reporting, and analyzing data on pregnant women and children whose hepatitis B is used as the basis for implementation. The implementation of health surveillance in both PHCs has been running but has not been optimal. In a study on Prevention Mother to Child Transmission (PMTCT) HIV services in the city of Depok by (Puspitasari and Junadi, 2018), it was also found that there was a gap in recording the coverage of HIV early detection from the family health (Kesga) and HIV and Aids Information System (SIHA) forms of 7.2% because using forms according to their respective programs due to limited personnel, time, and lack of understanding

of implementing officers in taking notes. According to (Suharni and Hersumpana, 2015), recording and reporting that is integrated with a general information system will increase the effectiveness and efficiency of recording and reporting. It takes a sense of responsibility and a good understanding between implementing activities at PHC A in recording the results of screening and monitoring in a form that has been integrated with SIHEPI from the Ministry of Health of the Republic of Indonesia so that the data obtained can be documented properly. In a study regarding the description of recording and reporting of maternal health at MCH Local Area Monitoring (PWS) in the city of Jember, the recording could not be done optimally on all forms because data was obtained regarding the types of forms that had to be filled in too much, while the workload of services was high so it was needed computerized data collection (Rani and Hargono, 2012). In addition to computerized data collection, there are many programs in health centers, some of which have information systems such as the Integrated Tuberculosis Information System (SITT), the HIV AIDS Information System (SIHA), or even the PHC information system itself, and other information systems that all perform input data in each information system and move independently. For this reason, an integrated system that contains a lot of data is needed by only doing input once which will minimize repetitive data entry and establish cross-program coordination in efforts to deal with health problems.

The activity of early detection of hepatitis B in pregnant women to identify as soon as possible the symptoms, signs, or characteristics of risk, threat, or dangerous condition. According to (Ministry of Health of the RI, 2017), this early detection activity is carried out through blood tests at least 1 (once) during pregnancy. Both PHCs have exceeded the target coverage for early detection of Hepatitis B in pregnant women in 2019, which is 70% in Permenkes No.52 of 2017. The achievement of Hepatitis B

early detection coverage in pregnant women shows the quality of MCH services and contribution to the detection of Hepatitis B cases (Ministry of Health of the RI, 2017). As an effort to increase Hepatitis B screening for all pregnant women, a better health service strategy is needed to improve the control and prevention of Hepatitis B, especially in terms of stocking reagents or laboratory medical devices that are still available (Wuan and Molina, 2018). Thus, the exchange of data regarding reagent stock, both at PHC B and GFK can be a strategy so that the implementation of early detection activities can run optimally. In research on the design to fulfill the internal demand process and distribution of pharmaceutical preparations (drugs and medical supplies) in health services in the city of Surabaya, a relationship is needed that supports the exchange of data and information between the PHC and the Health Pharmacy Warehouse (GFK) which can minimize the phenomenon of formulary drug shortages national (FORNAS) at the PHC. There are several problems in the supply chain process for health services in the city of Surabaya, the first is the availability of pharmaceutical preparations at GFK. Based on the condition of the availability of stock of pharmaceutical preparations (drugs and medical supplies) at the Health Pharmacy Warehouse (GFK) in a period of 3 years, it was found that the average stock availability of pharmaceutical preparations (drugs and medical supplies) in the Health Pharmacy Warehouse (GFK) was less than 50% good for drug pharmaceutical preparations that are classified as FORNAS units, non-FORNAS units, and non-drugs units. The second issue is the ability to supply pharmaceutical preparations (drugs and medical supplies) which can result in PHC pharmaceutical preparations running out before the next period of demand for pharmaceutical preparations. The third issue, the accuracy of planning pharmaceutical preparations is very low because the use of planning models for the use of pharmaceutical

preparations is not effective and efficient. The fourth issue is a deficit of pharmaceutical preparations at PHC which may require PHC to make sudden requests to GFK in the hope that pharmaceutical preparations can be fulfilled immediately so that this problem requires intervention from health service providers and drug providers by providing information on drug availability at GFK (Dzulquarnain, Usman and Lestari, 2016). To avoid the same thing in the future, PHC B and GFK should improve the data exchange relationship between reagent availability at PHC and GFK because the availability of resources (reagent) is very important to implement this prevention program. Also, pregnant women as triangulation informants in this study did not know that early detection was carried out, but what they did know was blood tests. In another study at the PHC Sei Jang, Kepulauan Riau, pregnant women have already done blood tests at the PHC but some pregnant women do not know about this examination, one of which is for early detection of Hepatitis B. However, after intervention in the form of health education, the result was an increase in the average score of pregnant women knowledge about Hepatitis B compared to before being given health education (Rahmadona, Lestanti and Respatiningrum, 2018). Providing information on early detection to pregnant women who visit PHC is very important, this aims to make pregnant women understand more about the reasons for early detection activities and to avoid transmission of disease from mother to child. Counseling activities after early detection of Hepatitis B were also carried out by both PHCs but were more aimed at pregnant women with reactive HBsAg. Based on Permenkes No. 52 of 2017, pregnant women who receive counseling after conducting early detection are also aimed at pregnant women who are not infected with Hepatitis B, containing messages to keep the results negative, suggesting that they enter the class of pregnant women, asking their partners to

also be tested for Hepatitis B, and avoiding risky behavior (Ministry of Health of the RI, 2017).

Case management is a way of handling or resolving cases that are unexpected or risky so that they turn out to be harmless or harmless. Case management activities are divided into two, namely management of pregnant women infected with hepatitis B and handling of babies of these mothers. Management of cases for pregnant women infected with hepatitis B is referred to the hospital, while the treatment for infants of mothers infected with hepatitis B includes giving HBIG vaccine <24 hours, HB0 immunization <24 hours, HB1, HB2, HB3, and HBsAg examination at age 9-12 months (Ministry of Health of the RI, 2017). The coverage of giving HBIG, HB0, HB1, HB2, HB3, and checking for HBsAg at the age of 9-12 months is still below the coverage targeted according to Permenkes No.52 of 2017, which is 100%. Giving HB0 followed by the completeness of giving HB1, 2, and 3 can help in preventing the vertical transmission of Hepatitis B but it is even better if combined with HBIG vaccine <12 hours (Buckley and Strom, 2016). This study also supported by a systematic review of 30 years of experience from (Van Den Ende et al., 2017) which shows that the efficacy of giving 3 doses of hepatitis B vaccine and giving HBIG to infants of mothers with reactive HBsAg is 96% when examined at 5 years of age. In the study in Magelang, the coverage of HB0 to infants of pregnant women with reactive HBsAg in 2014-2016 was 100% and the vertical hepatitis B transmission rate in the study was 0% (Ahmad and Kusnanto, 2017). Another study by (Purwono et al., 2016), the low birth dose coverage in Indonesia might contribute to the endemicity of HBV infection among children in Indonesia, although a universal Hepatitis B vaccination program for the infant was adopted in 1997. Therefore, the coverage of HBIG and HB0 vaccines <24 hours after delivery plays a major role in terminating the vertical

transmission of hepatitis B and the coverage of implementation must be increased. Implementation interventions to increase HB0 coverage include promoting community awareness of the need for HB0 vaccine, building capacity and knowledge of health workers for HB0 administration, and promoting delivery in health personnel because supporting pregnant women to deliver in health facilities can reduce neonatal mortality and morbidity by ensuring the mother and baby are examined by a health professional within 24 hours of delivery to increase HB0 coverage (Allison et al., 2017). Meanwhile, the coverage of HBsAg examination in infants aged 9-12 months from mothers with reactive HBsAg in 2018 and 2019 at PHC A and B, respectively, was 7.4% and 58.3%. The coverage of the HBsAg examination is still below the target coverage based on Permenkes No. 52 of 2017, namely 100%. The examination for infants of HBsAg reactive mother are not only HBsAg but also anti-HBS in a package called post-vaccination serological test (PVST), but this is still not optimal because one of the tests is only HBsAg so that the recommendation is that the laboratory can carry out both HBsAg and anti-HBS to assess infant immunization from mothers infected with hepatitis B and the status of the immune response to the administration of a vaccine series by minimizing the use of blood (Mast et al., 2005). In a study conducted by (Yang et al., 2020) regarding the prevention program of mother-to-child hepatitis B transmission in the Republic of Korea, the low PVST rate is also a matter of concern, even though several efforts have been made since 2015, namely, health center officers are encouraged to use post or cell phones to remind mothers about the baby for examination, besides that it also adds a verification step at the visit of children aged 9-12 months to identify babies who missed vaccinations. Several things that become obstacles in fulfilling the coverage target are low infant monitoring and the lack of participation and public awareness in

vaccination, this can be seen from the presence of pregnant women who move houses after receiving the HBIG vaccine without notifying PHC or cadres. An integrated information system between health facilities can be a solution for patients who are migrants and those who have moved so that they can continue the process of treating their illness wherever the patient is in Indonesia. Also, the role of health workers and maternal knowledge has a significant relationship with Hepatitis B immunization (Helmi, 2008; Rachman, Handayani and Ridwan, 2015). For this reason, training and supervision of health workers are needed to raise awareness about the importance of Hepatitis B immunization and infant outreach by monitoring cohorts to increase the coverage of vaccines and complete immunizations.

Research Limitation

However, apart from the contribution of this study in enriching the literature, this study also has limitations, namely that the researcher does not discuss the punctuality of reporting the amount of data carried out by the health center to the Surabaya city health office.

CONCLUSIONS

³⁴ This study aims to determine how the implementation of a prevention program for Hepatitis B transmission from mother to child. Based on the description above, it can be concluded that the implementation of health promotion activities has been running but has not been optimal in its implementation, especially in PHC A because the material presented has not specifically led to early detection and prevention of infection with Hepatitis B immunization. Health surveillance activities have been running but not yet optimal in both PHCs, there was a gap in recording the coverage of early detection of Hepatitis B in PHC A and incomplete form filling in both PHCs. Early detection activities have been running and achieved

the target coverage, but the pre-and post-early detection counseling activities are still not optimal in both PHCs. Case handling activities have also been running but are still not optimal because the coverage of HBIG, HB0, HB1, 2, 3, and HBsAg examinations is still far below the target set based on Permenkes No. 52 of 2017.

There are several recommendations that researchers can provide. They are implementing health promotion activities can make more efforts to convey messages of early detection and immunization activities to the community in their working area so that in the future not only coverage of early detection activities but also understanding of pregnant women has to do with the benefits of early detection and Hepatitis B immunization, it requires commitment and a good understanding between activity implementer in recording early detection results that have been integrated with SIHEPI, therefore, it is better if the executors of these activities gather to equalize perceptions and make good commitments in recording, and MCH poly midwives should improve the infant monitoring system from mothers infected with Hepatitis B as an effort to increase the coverage of complete immunization and increase the coverage of HBsAg examination in infants.

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Prof. Kuntoro <kuntoro2@yahoo.com>
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