BEST PRACTICES TO DECREASE ACUTE RESPIRATORY INFECTIONS IN UNDER FIVE YEARS CHILDREN IN SURABAYA: AN ENVIRONMENTAL HEALTH PERSPECTIVES

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Abstract: Acute respiratory infections (ARIs) are the leading cause of morbidity and mortality from infectious disease worldwide, particularly affecting the youngest and oldest people in low and middle-income nations (WHO, 2014). There were some areas in East Java with ARIs among under five years children is high enough, one of Surabaya with 4,306 cases (Surabaya Health District, 2015). The aim of this research was to describe best practices to decrease acute respiratory infections in under five years children in the primary health care. This research was an observational study with cross sectional design. Research sample was 5 primary health care with highest cases from 2014 to 2015. Data collection were carried out with questionnaire, observation form and analyzed using descriptive method. The result showed that all primary health care have guidance for infection prevention and control measures but not well implemented. There were 3 primary health care have support unit and staff to solve the infection diseases named sanitation clinic unit that responsible for identify diseases, communicate with community, observation housing sanitation, give recomendation to the community, and also do the surveillance for environment based diseases. These guidelines and sanitation clinic unit will contribute to improving health care practices in Indonesia.

Keywords: acute respiratory syndrome, sanitation clinic, environmental health

Introduction

Many factors affect the health (both of the individual and public health), there are environmental, behavioral, health care, and heredity. Optimum Status of health can be achieved when these four factors together have been in optimum conditions (Hendrik L. Blum in Notoatmojo, 2007).

Poor sanitation can cause an environment-based disease, such as: Upper Respiratory Tract Infection (URI), Acute Respiratory Infections (ARIs), diarrhea, malaria, dengue haemorragic fever, tuberculosis, worm infestation and scabies (Achmadi, 2011). Acute respiratory infections (ARIs) are the leading cause of morbidity and mortality from infectious disease worldwide, particularly affecting the youngest and oldest people in low and middle-income nations (WHO, 2014).

Indonesia have higher cases of environment-based disease in some areas, one of area is East Java. The highest environment-based disease among under five years children is ARIs, one of Surabaya with 4,306 cases in 2014 (Surabaya Health District, 2015).

The cases of environment-based disease can't solve only using curative and rehabilitative approach, the result will not be significant. The eradication should also has promotive and preventive approach, which is through life style and habit changing (Ministry of Health, 2003).

Concerning the Implementation of Environmental Health Services in District Health Center (DHC), on Article 2 which reads "Each DHC are obliged to implement Environmental Health Services, which is part of the comprehensive health care provided to patients". According to the regulation, so every DHC to carry out the public health service to the community in the district (Ministry of Health, 2015).

The aim of this research was to describe best practices to decrease acute respiratory infections in under five years children in the primary health care.

Methods

This was an observational study with cross sectional design. Research sample was 5 primary health care with inclusion criteria, such as: highest ARIs cases from 2014 to 2015, have sanitation clinic unit (SCU).

Data collection techniques used are three techniques:

1. Interview to the Head of Primary Health Care, Head of Disease Control and Environmental Health Development Unit, Sanitarian that held responsibility in Community Sanitation.
2. . Observation by performing the direct observation of procedure and implementation of medical services and clinic sanitation.
3. Documentation by collecting the documentation related to the implementation and activities carried out by Sanitarian

The questionnaire was filled by one sanitarian of each primary health care service, as an informants. Primary data including the survey of sanitarian, facility, trans-program and trans-sector activity, and evaluation of sanitation clinic was collected within the questionnaire by sanitation of each primary health care service. Secondary data including number of environment-based disease, client number, and house-visiting activities of sanitation clinic was collected within the available data in each primary health care service.

Data collection were carried out with questionnaire and observation form and analyzed using descriptive method. The ethical approval was obtained from health research ethics committee Faculty of Public Health Airlangga University.

Result and Discussion

Surabaya District have 62 Primary Health Care (PHC), all PHC have guidance for infection prevention and control measures but not well implemented. Less than 10 PHC have support unit to solve the infection diseases named sanitation clinic unit (SCU). But only 3 PHC have SCU complete with staff (called sanitarian), facilities and have been running well. All sanitarians are well-educated, within the degree of Environmental Health Diploma and Bachelor of Public Health. This unit responsible to identify infection diseases, communicate with community, observation housing sanitation, give recomendation to the community, and also do the surveillance for environment based diseases.

Primary health care service pays attention not only in curative and rehabilitative approach, but also in promotive and preventive. Primary health care service has a program dealing environment problem and environment-based disease, which is called sanitation clinic (Ministry of Health, 2003). Sanitation clinic unit have several program such as:

1. Integrated Efforts of Environmental Health

Integrated efforts of environmental health made by Sanitarian in order to improve public health. This effort is done through explanation, consultation and technical assistance of: a) improvement of environmental

sanitation; b) improvement of housing sanitation; and c) improvement of family's behavior become healthy and clean.

2. Disease Eradication

Eradication of the disease is one of the two main strategies in the implementation of the sanitation clinic program (SCP), in addition to the integrated efforts of environmental health, to be able to address the public health problems. This is as stated in white book of Clinic Sanitation (2011) in Santoso (2016) which reads "Clinic sanitation is a tools for the community to address public health problems through integrated efforts of environmental health and disease control with explanation, consultation and technical assistance from the attendant of DHCs".

In this research, there are three activities in disease control: a) Improvement of clean and healthy behavior (example: avoid source of exposure); b) control of infectious diseases history each patients; and c) improvement of disease eradication activities. All of the efforts at the three activities are conducted by explanation, consultation, dan technical assistance.

Implementation of the three activities can be stated if not run properly in accordance with the purpose of the sanitation clinic. It happens because some of the obstacles are faced, both from officials as well as from the patients or clients. Since the SCP conducted to the community, it should be able to reduce the number of patients who indicated disease based on the environment (Santoso, 2016).

According to the observation data showed that from 5 PHC as a sample, only 3 PHC have make good collaboration between Disease Control, Environmental Health Development Unit, and other related unit which needed. The data from medical report has been connected to the SCU and other related unit, so Sanitarian can follow up patient status and give some suggestion to the patient. After patient come to the PHC and diagnosed one of environment based diseases, patient must come to the SCU and discuss with Sanitarian.

The environment based disease cases that record in sanitation clinic can be different in each primary health care service in Surabaya. The highest cases were URI, ARIs, diarrhea, and DBD. The diseases probably caused by the main environment problems in Surabaya: poor ambient air quality, minimum house ventilation, house density, and poor sanitation behavior.

Trans-program activity has been done in all primary health care services. The activity generally associated with several programs: health promotion, nutrition, surveillance, epidemiology, and transmitted-disease eradication. Compared to the research in Dumai that all the 9 primary health care services have done trans-program activity (Suriani, 2009).

The result of the observation data about the sanitation clinic activity showed that the activity has been implemented according to procedure and manual book. Sanitation clinic also provide some flowchart about their program, leaflet about environment based diseases, and documentation of patient's history who ever come to SCU and kind of the treatment.

Patients who diagnosed URI and ARIs should come to SCU, fill some questionnaire related to sanitation as a database and will discuss with Sanitarian. Patients can share about their house and environment condition, personal hygiene behavior, and all potential hazard around their house that probably as a source of pollution. Sanitarian will explain about several causes of the disease from environmental perspective and source of the pollution that can be as a trigger for the disease. Patients who come to the Primary Health Care not only get some medicine but also get some recommendation to make their environment become healthy and clean.

Sanitarian will record all patient data and arrange the date for house-visiting activity. All house of patients will be abserv by Sanitarian to crosscheck with the data, conducted air quality measurement, identify all potential hazard, and explain the risk of patients house condition. The number of house-visiting activity is still under the

expectation. According to all sanitarians, the probable causes are lack of employee and the over burdens for this program.

After house-visitting activity finished, Sanitarian will give some of recommendation for each patients. Recommendation not only related to the patients house and environment but also if patients need advance consultation with another unit in Primary Health Care, such as nutrition unit. Recommendation should be record and share to related unit which needed. From this integrated effort can decrease the number of URI and ARIs diseases in Surabaya.

The accumulation of clients come to sanitation clinic from 2010 to 2012 in all primary health care services in Bukittinggi is still below the expectation. This might because of lack of employee, lack of socialization and promotion of the program itself. Thus, existence of this program to people around hasn't met the expectation yet (Jamarin, 2014).

Every program should follow an integrated direction in some manual books. There are 4 manual books produced by ministry of health for the sake of sanitation clinic: implementation manual book, technical direction, standard operational procedure, and counseling manual book (Iskandar, 2004).

Conclusion and Suggestion

The conclusion of this study is the implementation of clinical Sanitation Clinic Program (SCP) in Surabaya District through integrated efforts of environmental health and efforts to eradicate the disease with explanation, consultation and technical assistance still has not done well. There are still many constraints encountered in SCP implementation. Some of the constraints include number of sanitarian for sanitation clinic program that is still limited.

Sanitation clinic implementation must be observed including ten aspects: sanitarian, facility, budget, manual book, environment-based disease data, client number, house-visiting activities, trans-program and trans-sector activity, and evaluation. By observing sanitation clinic implementation, sanitation clinic could evaluate and be better in reducing environment-based diseases. Primary health care that have successfully impelmented SCP can teach to another Primary health care in Indonesia.

References

Achmadi, U.F., 2011, Environment-Based Diseases, First Edition, Jakarta: Raja Grafindo Persada

Iskandar, D., 2004, Sanitation Clinik Evaluation in Primary Health Care in Pandeglang District, Thesis, Jakarta: Indonesia

Jamarin, V., Rasyid, R., and Rusjdi, S.R., 2016, Description of Sanitation Clinic Implementation in Primary Health Care Services in Bukittinggi, Jurnal Kesehatan Andalas, 5(1), 154-157.

Ministry of Health, 2003, Health regulation number 1202/MENKES/SK/VIII/2003 about Clinic Sanitation Guidance for Primary Health Center, Jakarta: Ministry of health of Indonesia

Ministry of Health, 2015, Health regulation number 13/MENKES/2015 about Implementation of Environmental Health Services at the Distric Healt Center (DHC), Jakarta: Ministry of health of Indonesia

Notoatmojo, S., 2007, The Public Health Sciences and Arts, Jakarta: PT. Rineka Reserved

Santoso, E. B., Rosita, B. M., 2016, Implementation of Sanitation Clinic Program in East Lombok Regency, Province of West Nusa Tenggara, Indonesia, Conference: International Conference on Public Organization (ICONPO), At Bangkok City, Thailand, Volume: VI

Surabaya Health District, 2015, Surabaya Health Profile in 2014, Surabaya

Suriani, 2009, Clinic Sanitation Program Analysis in All Primary Health Care in Dumai, Skripsi, Medan: Universitas Sumatera Utara

WHO, 2014, World Health Statistics, Geneva: WHO Pres

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