

Analysis of the Surveillance of Risk Factors of Non-Communicable Diseases in the Department of Health Sleman Regency

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ABSTRACT

Non-Communicable Disease (NCD) is one of the biggest causes of death in the world. Riskesdas data in 2013 and 2018, shows the prevalence of NCD in Sleman Regency is increasing rapidly. One of the NCD control is through a surveillance system. Data and information sourced from a good surveillance system will be able to reduce morbidity and mortality. This study aims to analyze the surveillance of NCD risk factors at the Department of Health Sleman Regency. This type of research is qualitative with a case study design. The key informants in this study amounted to 20 people. Data were collected by in-depth interviews, document reviews, and observation. Data analysis used is data collection, data reduction, data presentation, and drawing conclusions. The result of the research is that NCD risk factor surveillance has been implemented according to the guidelines, but its achievement has not been maximized. The biggest obstacle in implementing NCD surveillance is the ability and skill of cadres in reporting NCD surveillance, data that do not all show NCD risk factors, not optimal facilities and infrastructure that support NCD surveillance, and lack of support from private health facilities (networks) that support NCD surveillance. Incomplete data and data delays affect the quality of NCD surveillance. The conclusion of this study is that the implementation of NCD surveillance has not been maximized due to the lack of human resources and infrastructure and the need for support from various parties for better surveillance system data quality.

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INTRODUCTION

One of the causes of death in the world is the high prevalence of non-communicable diseases (NCD). In developing countries, mortality due to non-communicable reached 82%. Cancer, cardiovascular, chronic respiratory diseases and diabetes is a types of NCD main causes of death[1]. NCD is often not detected because often there are no complaints and symptoms, and usually at an advanced stage cannot be cured even lead to disability or death. In poor countries and growing, the rate of death caused by NCD increased rapidly, causing the load socio-economic severe in society [2].

Trigger the occurrence of NCD is influenced by various factors, including genetic factors, lifestyle, and physiological. Smoking, alcohol consumption, lack of physical activity, consumption of unhealthy foods is a risk factor that triggers the occurrence of NCD. Lifestyle changes that lead to physiological disorders such as high blood pressure, blood sugar, and blood fat will trigger the onset of NCD [3].

The proportion of deaths due to NCD in Indonesia has increased. Mortality due to non-communicable based on Riskesdas 2013 amounted to 59.5% and Riskesdas 2018 by 69,91%, thus there is an increase of 10,41% [4].

Hypertension and Diabetes Mellitus is the leading cause of death NCD due to entry point disease NCD other. The prevalence of NCD in

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the Sleman Regency has increased rapidly. Data profile of health 2020 shows the prevalence of primary hypertension as much as 138,702 cases increased from the previous year (2019), namely 82.592 the case so there is an increase to 40.4%. The prevalence of Diabetes Mellitus as much as 59.378 cases increased from the previous year (2019) as much as 36.864 cases thus there is an increase in 37,9% [5].

High problem NCD, require efforts to control adequate and comprehensive through promotion, early detection, treatment, and rehabilitation. The provision of data and information that is accurate and precise is systematically and continuously required in the system surveillance NCD in prevention and control. A system of surveillance that will better support the prevention and control in terms of planning, controlling, monitoring, and evaluation of the program. Surveillance of risk factors that have a simple attribute, acceptability, has high sensitivity as well as have data that is representative [3]. Surveillance should combine a series of actions that provide information distribution, and the tendency of the disease [6].

Based on the results of the evaluation in the Department of Health Sleman Regency, system surveillance NCD is not optimal such data collection is not yet implemented on time, there is duplication of data as well as constraints of the form offline charging data so that it affects the quality of the data that ultimately have the constraints in the making of the program of control of NCD. The purpose of this study is to analyze the system of surveillance of risk factors of NCD in The Sleman Regency from the side of the input, process and output that is produced.

METHOD

This research is qualitative research with a case study design that aims to describe the activities of the information system risk factors for non-communicable diseases in Sleman Regency. Data were collected by in-depth interviews, document review, and observation. Key informants in this study consisted of the Head Section of the Prevention and Control of non-Communicable Diseases, Head of the health center, and the Programmer of the Non-Communicable Disease. Triangulation of data was done with the interview with the Head of

the Field of the Prevention and Control of disease as well as Cadres Posbindu NCD.

The variables in this study consist of input, process, and output. The Input is a health resource that includes the data source, workforce, infrastructure, and funding. The process is the effort and the work done in the implementation which includes data collection, data analysis, data interpretation, and dissemination of information. The Output is the results obtained from the implementation of the process as well as the feedback received.

Data analysis of this research using content analysis, which begins at the time of data collection, data reduction, data presentation, and conclusion. Ethical Clearance this research, No. 144/KEPK/STIKES-WHY/VII/2021.

RESULTS AND DISCUSSION

An Overview Of The General Characteristics Of The Research Informants

This study consists of 14 informants main and 6 informants triangulation. The main informants are composed of 14.2% of the educated S2, 50% S1 educated, and 35,7% educated D3. Informant triangulation has the level of education of S2 of 16.67%, 16.67% of educated S1, 16.67% of educated D3, and 50% had high school Degree. Key informants have varied work. Some of the work 5-10 years as much as 35.57%, the work of 11-15 years as much as 35.57%, the working lifetime > 15 years as much as 28,57%. Of all respondents either the main informants and triangulation gender women as much as 80% and men as much as 20%.

Component Input Surveillance System NCD

Hypertension and Diabetes Mellitus is the entry point of the disease so other surveillance NCD focused on both of these diseases. Surveillance NCD and the factor of risk is one of the strategies of prevention and disease control done right and integrated by the government, private, and community [6]. Surveillance activities of NCD in Sleman Regency are divided into two, namely surveillance inside the building and outside the building. Surveillance in the building is done

when the community has access to primary health care called the program "Panduan PTM". While surveillance outside of the building is done by empowering the role of the community called "Posbindu PTM".

Panduan PTM is the prevention and control of conducted by the health center staff in the service of early detection, monitoring, and management of NCD. This concept is integrated with the activities of Posbindu PTM in the community, the services of hypertension and diabetes as well as special services NCD in Puskesmas Kabupaten Sleman.

Posbindu PTM is one form of community-based health efforts (UKBM) in an effort to control NCD risk factors under the guidance of the puskesmas in the work area. The role of cadres of posbindu PTM is very large to the effort of recording and reporting in the framework of the surveillance of NCD.

The implementation of surveillance NCD in Sleman Regency has been referring to Permenkes No. 45 of 2014 which states that parties shall conduct health surveillance in accordance with its authority, including the surveillance of risk factors NCD [6]. The components of the data collected in the surveillance system include social data, interview data, measurement data, data counseling, and referral. Interview and measurement data can be obtained through the interviews of risk factors NCD, blood pressure checks, weight, height, BMI, fat analyzer body as well as the proportion of risk factors NCD. Research conducted by Rahmayani and Hargono (2017) mentions that the quality of surveillance data can be judged from the completeness and accuracy of the data recorded in the system of epidemiological surveillance.

The Data in the surveillance of NCD-based Posbindu is derived from the results of the interview and the measurement of the participants Posbindu through a register book NCD, then the officer enters the data from the register book in the google form that are been prepared from the Department of Health Sleman Regency. In this case, not all the filling into the google form because of the constraints of some cadres have less understanding good in IT. Other studies mention that the surveillance of dengue fever in Puskesmas Pudukpayung fill out a report online and

findings from the community and the school can report via SMS [7]. Research surveillance system in Sleman Regency 2017, mention that 76,47% case detection NCD done by cadres with the supervision of the doctor due to the limitations of the most [8].

In carrying out Posbindu PTM cadre personnel in the conduct of activities Posbindu PTM, recording and reporting has been done cadre training, whether conducted by the health center or the Department of Health Sleman. Programmer NCD at the health center in the recording and reporting has been provided by the Department of Health in Sleman Regency and the Ministry of Health. Constraints in the surveillance NCD is not all cadres to get training, so the cadres not to be not skilled in the recording and reporting. Most epidemiology at the Public Health Center and the Department of Health Sleman regency in the conduct of surveillance activities NCD has not been sufficient in number and usually has a double task with the other programs. This is in line with the research system EWARS Kabupaten Salatiga explain copies of the work and there is no training to be the constraints of the implementation of the program EWARS in the City of Salatiga [9]. Research conducted in Wonosobo related surveillance system NCD mention that the lack of understanding regarding the regulation and the poor who follow the training will affect the implementation of surveillance NCD [10].

Facilities and infrastructure for recording and reporting require a computer and internet access are offered in puskesmas Sleman Regency, software applications information systems management NCD, the internet network as well as ease of a cadre of using the smartphone with the application google form related to the recording and reporting of Posbindu PTM. Surveillance NCD-based posbindu has the structure of simple and operational ease in its implementation. Facilities and good infrastructure transport related to the stability of the web of surveillance can refer to the ability of the system of epidemiological surveillance for collecting, processing, and analysis of data correctly without failure [3]. Data processing developed a web-based connection required adequate so as to provide ease of operation [11].

The financing of the NCD risk factor surveillance system is not allocated specifically but becomes one with the budget for the Disease Control & Environmental Health Division of the Sleman Health Office. As for the procurement of risk factor measurement tools given to each posbindu in the Sleman Health Service, sourced from the funds of the regional budget (APBD) and the state BUDGET (ABPN). In addition, the health center (Puskesmas) can utilize the financing sources with the potential to support and facilitate the implementation of posbindu through the utilization of Health Operational Aid (BOK). Research in Puskesmas Pudukpayung explain the surveillance of dengue sourced from BOK Puskesmas, but its availability is still very low so that hinder the implementation of such activities [7].

The components of the Process of Surveillance System NCD

The process of surveillance system NCD is viewed from the aspect of planning, implementation, monitoring, and evaluation of the program. Aspects of the planning are done when coordinating the activities of posbindu PTM in the community which is one of the efforts surveillance NCD. Need coordination with cross-sector in order to meet the target.

The implementation of surveillance NCD in The Sleman Regency is performed actively and passively. Active surveillance was conducted where data collection is carried out directly to the community through the activities of Pandu PTM and Posbindu PTM. Passive surveillance is done when the Department of Health Sleman Regency receives regular reports from the report of each clinic.

Surveillance NCD is not only done by the community and Public Health Centers but also done by the private sector and institutions. Private question is the recording routine by private health facilities and hospitals. While the institution is conducted by the workplace or schools that implement posbindu institutions. Puskesmas coordinate together with the private health facilities in the implementation. However, surveillance NCD with Pandu PTM only limited services at the health center and not all reach out in facilitates private health, only a few with a simple format.

Recording and reporting of surveillance NCD-based posbindu PTM in the community

and the institution are partly cadres perform manual recording the results of his directly submitted to the health center. Although there have been reports online - based web and offline - based desktop-based (Ms. Office), cadres feel more comfortable to manually fill with notepaper. This is because that becomes Kader Posbindu PTM part is not yet proficient computerized technology. This leads to input data relying on the clinic staff and the obstacle is the health center staff have a double task. Reporting to the health department ultimately did not timely due to the hampered reporting from the health center. This is in line with other research that explains the NCD-based Posbindu PTM in Sleman Regency 2017, has the quality of surveillance 82,35% of the data is not complete and the data is not timely [8]. Another problem is when the health center reporting but they are constrained on the server is sometimes down so wait for the server to be back to normal, but there has been a follow up of the Department of Health in Sleman. Another study explains that the web portal of PTM in the city of Surabaya has the server down an obstacle in the recording and reporting [3].

Component Output Surveillance System NCD

The Output of the surveillance activities can be seen from the quality of the surveillance data. Quality Data will facilitate the analysis and interpretation of NCD that provide benefits in the control of NCD in the community. Evaluation of the surveillance activities of NCD in the Kabupaten Sleman is reporting that late and the data sent is partially incomplete, making it difficult for data interpretation. When the component input and process meet the constraints so that the output obtained is not as desired. The limitations of the abilities and skills of the cadres also are one of the obstacles to surveillance NCD-based posbindu. Research surveillance of measles in Bangkalan Regency (2017) mentions that there is a lack of implementation of the surveillance of the components of the input and the process especially at the level of the health center. Some officers have not received training so they are not able to carry out analysis and processing, causing low surveillance attributes

which include quality, sensitivity, and stability [12].

The resulting data also does not meet the representativeness of the target population because of the limited number of participants and the number of posbindu, and the target population cannot be fully accessed in a surveillance system. Epidemiological surveillance systems must be able to represent the accuracy of the occurrence of cases from time to time, the distribution of the population by place and person. [13].

Department of Health in Sleman Regency gives the results of the analysis of the epidemiological surveillance every 3 months by inviting all officers and Paramedics who handle the surveillance is. However, the dissemination of this has not been followed by other parties that are also related to this program, so it is often encountered obstacles in coordination in prevention program NCD in the community. This meeting is expected to be the evaluation of surveillance activities of NCD in the Department of Health in Sleman Regency. The department of Health of the City of Salatiga has yet to make bulletin epidemiology that can be read by health workers to be informed about the development of the disease in the community [9]. Surveillance of Japanese Encephalitis in the District of Bali experiencing problems that are complicated, inflexible, low acceptability, insensitive, predictive value positive is low and the quality of data is low. In the end affect the components of the output that epidemiological information, dissemination of information, and feedback have not been implemented in routine. [14].

CONCLUSIONS

Surveillance of risk factors of NCD has been conducted according to the guidelines, but its accomplishment is not maximized. The biggest obstacle in the implementation of surveillance NCD is the ability and skills of the cadres in the reporting of surveillance NCD, the data are not yet all display the risk factors NCD is not optimal facilities and infrastructures that support surveillance NCD as well as less support private health facilities (networks) which supports surveillance NCD. The incompleteness of the data and the data delay is the lack of the process of surveillance NCD

that affects the quality of data from the surveillance NCD. The suggestion of this research is the need to improve the ability of Human resources, improvement of facilities and infrastructure as well as the coordination, monitoring, and evaluation with the parties who contribute to the implementation of surveillance NCD in Sleman Regency.

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