

Performance Analysis of Covid-19 Epidemiology Surveillance at the Class 1 Port Health Office Batam in the Batam Center International Ferry Port Work Area

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Abstract: COVID-19 is infectious by a coronavirus. It causes that are unknown before the outbreak in Wuhan, China. COVID-19 is now a pandemic occurring in many countries around the world. The study aimed to analyze the performance of COVID-19 Epidemiological Surveillance in Class I Port Health Office Batam, Batam Center International Ferry Port Work Area. The study used a qualitative descriptive approach using triangulation methods (observation, interviews, and documentation). The results found that several indicators were still lacking, such as lack of manpower and facilities. Surveillance officers who were still not good enough, in terms of numbers, resulting in 1 staff having to take holidays on weekdays. Meanwhile, in terms of facilities, some facilities were damaged, namely thermal scanners, for process and output activities that were following the specified indicators. This study concludes that the epidemiological surveillance activities in Port Health Office I Batam, Batam Center International Ferry Port Work Area in-process and output have been going well and are by the input, even though there is a shortage of input. It is recommended that the class I Port Health Office Batam add more personnel, especially quarantine officers, and organize and replace damaged thermal scanners so that surveillance activities, especially on input, are better.

Keywords: Performance, COVID-19 Epidemiological Surveillance, Port Health Office.

1. INTRODUCTION

Covid-19 is a contagious disease caused by a newly discovered type of coronavirus. The new virus and the diseases that their causes were not known before the outbreak in Wuhan, China, in December 2019. COVID-19 is now a pandemic occurring in many countries around the world [1].

The COVID-19 outbreak has been declared a Public Health Emergencies of International Concern (PHEIC) by WHO on January 30, 2020. This statement is the sixth declaration made by WHO since the 2009 flu pandemic. PHEIC is an extraordinary event that can pose a health threat to other countries and may require international coordination in the response. PHEIC is

a part of the International Health Regulation. Based on Permenkes RI. 356/2008 concerning the Organization and Work Procedure of the Port Health Office (PHO), the PHO has the task of preventing the entry and exit of diseases, potential disease outbreaks, epidemiological surveillance, quarantine, environmental health impact control, health services, OMKABA supervision and protection against new diseases and re-emerging diseases, bioterrorism, biological, chemical and radiation protection in the work area of airports, seaports, and across state land borders [2].

Research on the Covid-19 surveillance system has never been carried out. Research on epidemiology about Covid-19 is urgently needed because based on information from epidemiological research/investigations, a rapid risk assessment is carried out including hazard, exposure/vulnerability analysis, and the capacity to carry out risk characteristics based on likelihood and impact. It is hoped that the results of this risk assessment can be used to determine recommendations for handling 2019-nCoV cases. This risk assessment is carried out periodically by the progress of the disease. A complete explanation of the rapid risk assessment can refer to the WHO Rapid Risk Assessment of Acute Public Health guidelines [3].

This port was built by the Batam Authority Development Agency and its management is entrusted to a private party, namely PT. A synergy of Tharada Batam, the Perimeter of the Port is 12 HA. This port specifically serves passenger ferries that come and depart from/to foreign countries, namely Singapore and Malaysia. The arrival and departure of passenger ships at the 14 ports are quite high, reaching 40 trips/day with a fairly high number of passengers, especially at weekends.

2. METHODS

This study used a qualitative research method with a descriptive approach to understanding the phenomena experienced by the research subjects as a whole and utilizing descriptions in the form of words and language. The research design used a qualitative descriptive approach using triangulation methods (observation, interviews, and documentation). The research subject was the implementer of the COVID-19 epidemiological surveillance activity in the Class 1 PHO Batam, Batam Center International Ferry Port Work Area. There were 6 informants in this study, consisting of (a) one doctor as the Regional Coordinator, (b) one sanitarian, (c) one functional nurse, (d) one nurse (THL), (e) one SATGAS, (f) one volunteer.

Data collection was carried out through observation, interview, and documentation so that it could dig up information to explain the performance of Covid-19 epidemiological surveillance in Class 1 PHO Batam, Batam Center International Ferry Port Work Area. The research site is at the Class 1 Batam Port Health Office in the Batam Center International Ferry Port Work Area, the research time is from 12 August 2020 to 19 August 2020. Primary data was obtained by observation, document review, in-depth interviews with research informants including information about the input, process, and output components related to the performance of Covid-19 epidemiological surveillance in Class 1 Batam PHO, Batam International Ferry Port working area. Secondary data was basic data from the Class II Padang Port Health Office in the form of recording and reporting activities in the Class 1 PHO Batam in the working area of Batam Center International Ferry Port. The research

variables were input (HR, SOP, Facilities and Infrastructure), process (Implementation, Cross-sectoral Cooperation and work units. Compliance officers), and the output of the implementation of Covid-19 epidemiological surveillance according to the SOP.

3. RESULTS

Covid-19 epidemiological surveillance in Class 1 PHOBatam, Batam Center International Ferry Port working area was carried out through input, process, and output stages. The descriptions of these stages are as follows:

Input

Power

The surveillance personnel in Class 1 Batam PHO, Batam Center International Ferry Port work area, there were 4 PHO employees, 4 SATGAS staff and 6 volunteers. 4 PHO employees, namely 1 doctor as the Regional Coordinator, 1 environmental health person as a Sanitarian, 2 nurses as a Functional Nurse. The results of the interviews show that quarantine officers form a TGC team at the Batam International Ferry Center which consisted of SATGAS, Volunteers, and related sectors such as harbormaster, immigration, police, and port managers to increase networks and efforts to prepare for the early detection of Covid-19 at the entrance to the country. The performance of quarantine officers, SATGAS, and volunteers in preparedness and early detection activities for Covid-19 in the Class 1 PHO Batam, the Batam Center International Ferry Port work area has been very good in carrying out their responsibilities, and communication between officers was also well established. However, based on the results of interviews, the existing quarantine officers were inadequate in carrying out Covid-19 epidemic surveillance activities. If based on the standards in KMK no. 1116 of 2003 concerning the implementation of a health epidemiological surveillance system, the existing human resources are still insufficient and not by the human resources in KMK no. 1116 of 2003. The availability of human resources in Class 1 PHO Batam working area of Batam Center International Ferry Port is still less than the specified indicator standard, as can be seen in the table below.

Table 1: Human resources

No.	Kind of power	Quantity available	Adequacy	
			Yes	No
1	Epidemiologist	0	-	√
2	Physician	1	√	-
3	Sanitarian	1	√	-
4	Nurse	2	√	-

Data

The type of data in conducting Covid-19 epidemiological surveillance carried out by officers is data from filling in the HAC (health alert card) and health documents in the form of passenger Swab/PCR examinations related to the symptoms of the Covid-19 case. Sources of data for Covid-19 epidemiological surveillance activities come from filling in passenger HAC, health documents in the form of passenger Swab/PCR examinations, and Swab/PCR sampling carried out by medical officers from volunteers. The frequency of data collection on

Covid-19 epidemiological surveillance activities in the Class 1 Batam PHO, the Batam Center International Ferry Port work area cannot be predicted because it follows the number of passengers entering Indonesian territory so that the data collection frequency cannot be estimated.

Method

In epidemiological surveillance activities, the established method is very important in determining the output of the surveillance activity. The method used by PHO Class 1 Batam in the Batam Center International Ferry Port working area is by interviewing passengers at the arrival gate using PE and HAC forms, checking health documents in the form of Swab/PCR examinations. The method is by the standard operating procedures set by the Ministry of Health of the Republic of Indonesia. When compared with the infrastructure indicators in the Covid-19 prevention guidelines, there are still several supporting facilities that are lacking, one of which is a means of measuring body temperature, namely the Thermal scanner at the departure gate which is currently in a damaged state and replaced with a manual body temperature measurement using a thermal gun. The thermal gun is quite effective in checking the body temperature of passengers, but it is not by the early detection infrastructure indicators in the Covid-19 prevention guidelines set by the Indonesian Ministry of Health. From the results of the interview, the hospital that became the referral if passengers were found with positive and positive conditions was also very adequate, namely the Galang Hospital, then transportation means such as an ambulance belonging to the Batam Class 1 PHO were not available at the port because the port manager already had an ambulance, and logistics support services health needs such as HAC, PPE, and medical devices are also adequate. The availability of facilities for Covid-19 surveillance activities can also be seen in table 2.

Table 2: Availability of facilities

No.	Kind of facilities	Number	Standard	Adequacy	
				Yes	No
Tools					
1.	Computer	3	1	√	-
2.	Form HAC and PE				
3.	Printer	2	1	√	-
4.	WIFI	1	1	√	-
5.	Personal protective equipment			√	-
6.	Educational information communication media	2		√	-
7.	Referral hospital	1		√	-
Transportation					
1.	Ambulance	1	1	√	-

Source: Batam Class 1 PHO working area, August 2020.

Process

Data collection

Data collection carried out by Covid-19 epidemiological surveillance officers to passengers was carried out by interviewing passengers and checking health documents at the arrival gate of the Batam international center ferry port.

Data collection is carried out by officers using the HAC form which is filled in by the passenger according to the passport and ID card. Then, data collection also uses the PE form which is filled in by officers based on interviews with passengers and observation of health documents in the form of Swab / PCR examinations. From the results of the interview, it can be seen that the accuracy and completeness of the collection of Covid-19 surveillance officers at the Class 1 Batam PHO, the Batam Center International Ferry Port work area has met the standards and indicators of surveillance implementation, namely 85%. Meanwhile, the accuracy in collecting identity data and passenger health documents were collected in less than 24 hours, so that the accuracy of the data showed 85% results. The data from the results of the supervision are submitted to officers at the Class 1 PHO main office in Batam.

Data Analysis and Interpretation

The data available is only in the form of data that is presented in tabular form. The analysis carried out is in the form of a simple analysis by comparing it with existing indicators. Passenger identity data and health documents that have been presented in tabular form are used to ensure that passengers arriving are in good health and serve as the basis for determining the location when a case is found.

Output

Epidemiological Information

The information generated includes HAC data according to the complete identity of the passenger which is a daily report to the Batam Class 1 PHO main office and is by the number of reports that should have been made by the Class 1 PHO Batam, the Batam Center International Ferry Port working area includes identity data and health documents. passenger.

Information Dissemination

The results of the interviews indicated that the dissemination of epidemiological information on Covid-19 resulted from the surveillance system [4]. Information dissemination is carried out by the main office to cross-sectoral and related agencies such as the Provincial SATGAS, the Health Office, the BTKL-PP, and the Provincial Government. The report will be sent to the main office in tabular form.

Problems found

In the implementation of Covid-19 epidemiological surveillance activities in Class 1 Batam PHO, the Batam Center International Ferry Port working area in August 2020, several weaknesses were found, namely, the lack of availability of trained surveillance activity implementers or an epidemiologist.

4. DISCUSSION

Input

Power

Human resources in an institution need to be managed properly to achieve organizational goals [5]. Covid-19 epidemiological surveillance officers in Class 1 PHO Batam, Batam Center International Ferry Port work area are available, consisting of 4 quarantine officers, 4 SATGAS officers, and 6 volunteer officers. All officers have received special training related to Covid-19 epidemiological surveillance. However, the number of quarantine officers is inadequate and insufficient. Due to the number of quarantine officers only 4 people, and must enter for 6 working days. Both quarantine officers and SATGAS and volunteers have received direction from the Class 1 PHO Batam in terms of early detection of Covid-19, procedures at the door of arrival and departure. Training is an important component of surveillance management activities because it supports the implementation of surveillance [6]. Training is also to improve the quality and competence of human resources by SOP Kepmenkes No. 1314 of 2010.

Data

By the SOP in the Covid-19 Prevention and Control Guidelines revised-4 set by the Indonesian Ministry of Health, namely the source of Covid-19 epidemiological surveillance data through passenger interviews using PE forms and filling in HAC then checking health documents by quarantine officers related to the results of the Swab / PCR.

The number of passengers collected for Covid-19 epidemiological surveillance activities cannot be ascertained. Due to the uncertainty of the number of passengers, the frequency of data collection cannot be determined. From the results of interviews with surveillance officers, namely SATGAS, it was found that a maximum of 24 hours after the surveillance activity was completed.

Method

The methods used in carrying out Covid-19 surveillance activities are by standard operating procedures determined by the Indonesian Ministry of Health, starting from officers who use standard PPE when carrying out early detection of passengers at the entrance of the country, checking health documents in the form of swab/PCR results, interviews using HAC and PE forms, to officers using complete PPE when taking swab samples for passengers who do not have swab/PCR results. After that, the passengers will carry out a centralized quarantine at RSKI Galang using transportation provided by the relevant cross-sector.

Facilities

The existing facilities in the Covid-19 surveillance activities are very adequate for the implementation of Covid-19 surveillance activities in the Class 1 PHO Batam, the Batam Center International Ferry Port working area. However, there is a facility that is damaged, namely the thermal scanner at the arrival gate, but this does not interfere with the early detection process for passengers at the arrival gate.

Process

Data collection

Collecting data or reporting from Covid-19 surveillance officers, namely by filling in HAC by passengers, then PE interviews, and checking health documents in the form of

Swab/PCR examinations. The collection of passenger data by surveillance officers has so far not experienced any problems, because the data required is only the identity of the passenger, as for the variables that need to be completed, namely: Name, Gender, Age, date of birth, Nationality, Mobile Number, address according to ID, previous country address, ID, status, and health status. The knowledge of quarantine officers, SATGAS, and volunteers regarding data collection is very good. Not only that, but each officer has also carried out their duties with full responsibility and the communication that has been built is also very good.

Data Analysis and Interpretation

The data in the Class 1 PHO Batam in the Batam Center International Ferry Port work area is analyzed simply in the form of a simple summary and table. Officers conduct analysis every day to be sent directly to the main office of Class 1 PHO Batam. Data entry was carried out by surveillance officers namely SATGAS and volunteers directed by the Coordinator of the Class 1 PHO Batam area, the Batam Center International Ferry Port working area. Considering the importance of analysis in the surveillance system, an analysis must be carried out and training of the officers conducting the analysis must be carried out so that the information generated by the surveillance system is accurate and of high quality.

Output

The epidemiological information generated by the Covid-19 surveillance system is in the form of reports on the results of interviews and document examinations in the Class 1 PHO Batam, the Batam Center International Ferry Port working area which will be reported to superiors at Class 1 PHO Batam main office. Reports in table form are sent via email and there will be corrections if there are deficiencies or problems in sending the report. Besides, this report will be disseminated to relevant agencies and across sectors through the Batam Class 1 PHO main office so that the information is useful by other sector programs or agencies. The dissemination process can be carried out by utilizing easily accessible information technology facilities.

Alternative problem solving

Alternative solutions to the problems found are (1) Increasing the number of personnel, especially quarantine officers based on epidemiologist education, (2) Proposing to provide a thermal scanner at the arrival and departure gates through the main office to be submitted to the Indonesian Ministry of Health.

5. CONCLUSIONS

There are several weaknesses and obstacles in the Covid-19 epidemiological surveillance activities. Barriers and weaknesses in Covid-19 surveillance are the power variable. The available manpower is still lacking, especially for quarantine personnel. Facilities are a very important support to get maximum results in surveillance activities. Like a thermal scanner that is damaged, but does not interfere with the process of checking body temperature at the departure gate because body temperature checks can be done with a thermal gun, which is checking body temperature manually. The process of surveillance activities in the Class 1 PHO Batam, Batam Center International Ferry Port work area has met the indicators set by the Indonesian Ministry of Health, data collection activities ranging from completeness and

accuracy of data has exceeded 80%. The output or output from the results of surveillance carried out by officers in Class 1 PHO Batam in the working area of Batam Center International Ferry Port has been very good. Reporting is done regularly and there is never any delay to the main office at PHO Class 1 Batam.

6. SUGGESTIONS

It is recommended that the Class 1 Batam Port Health Office add quarantine officers in the work area of Batam Center International Ferry Port, and procure thermal scanners at the departure and arrival gates.

7. REFERENCES

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