

Preparedness of the Bhakti Wira Tantama Army Hospital Semarang in Facing The Covid-19 Outbreak

Rianti Merviane Erungan*, Wahyu Sulistyadi

*Hospital Administration Studies, Faculty of Public Health University of Indonesia,
Depok, West Java, Indonesia*

**Corresponding author. Email: riantimaria@yahoo.com*

ABSTRACT

Coronavirus is one of the large family of viruses. On March 11, 2020, WHO established COVID-19 as a pandemic. This research aim was to analyze, to assess the level of Preparedness of the Bhakti Wira Tantama Army Hospital in facing the Covid-19 outbreak. This type of researched is descriptive with study case method, with quantitative and qualitative approached. The process of organizing data in this study had begun with the literature study of health regulatory and laws in Indonesia. The instrument of this researched based on the Hospital Readiness from World Health Organization guidelines, the second was in-depth interviews. The results of this study showed Bhakti Wira Tantama is sufficient for a maximum capacity of 32 patients. The management was succeeded to overcome this pandemic. In details, it showed that Communication (50,54%), Continuity of Essential Health Services Patient Care (100%), Surge Capacity (57,02%), Human Resources (56,40%), Logistic, Management of Supplies Including Pharmaceuticals (51,51)%, Surveillance Early Warning and Monitoring (69,07%), Essential Support Services (95,23%), Case Management (59,88%), Infection Prevention and Control (58,96%), Laboratory Services (53,85%). It concluded that Bhakti Wira Tantama Hospital recently had a sufficient level of preparedness in facing the Covid-19 pandemic.

Keywords: *Coronavirus Disease, Hospital Readiness, Pandemic*

1. INTRODUCTION

According to the World Health Organization (WHO) in the Ministry of Health (2020), Coronavirus is a large family of viruses that cause illness ranging from mild to severe symptoms. WHO officially designated COVID-19 as a global pandemic. Lack of Hospital Readiness and Preparedness in Indonesia, included the availability of resources, facilities, infrastructure and different knowledge of health workers on the COVID-19 protocol can pose high risks and problems to the safety of patients, medical personnel, non-medical personnel and all of the Indonesian people in facing this outbreak (Indonesian Ministry of Health, 2020). Regarding of this issue the researchers are trying to analysis how is the minimum preparedness that must be provided by the Bhakti Wira Tantama Army Hospital Semarang as one of the Covid 19 referral hospitals in Indonesia. The results of this study showed Bhakti Wira Tantama Hospital is sufficient for a maximum capacity of 32 Covid 19 patients. In details, it showed that Communication (50,54%), Continuity of Essential Health Services and Patient Care (100%), Surge Capacity (57,02%), Human Resources (56,40%), Logistic and Management of Supplies Including Pharmaceuticals (51,51)%, Surveillance Early Warning and

Monitoring (69,07%), Essential Support Services (95,23)%, Case Management (59,88%), Infection Prevention and Control (58,96%), Laboratory Services (53,85%). As a suggestion Bhakti Wira Tantama Army Hospital needs to plan for the additional negative pressure isolation rooms to anticipate the overflow beds in case of a spike in hospitalizations caused by the Covid-19 and then do prepare for HR plans and recruit health personnel or volunteers from the community in case there is a transmission of C-19 between health personnel inside the hospital. In addition, the Indonesian government should be focus to slowdown the community transmission then strictly do implementation on C-19 protocol or regulation such as lock down some area of Indonesia, especially the high-risk (red zone) of C-19 area, so it will do not spread easily to the community.

2. RESEARCH METHOD

This type of research is a descriptive with study case method, with quantitative and qualitative approach. The process of organizing data in this study begins with the literature study of health regulatory and laws in Indonesia. The instrument of this research is based

on the Hospital Readiness checklist from World Health Organization guidelines, the second is in-depth interviews. The respondents of this researched is 23 people. The technique for the measurement of the quantitative result by percentage formula, as a table below:

$$\frac{\text{RESULT SCORE}}{\text{MAXIMUM SCORE}} \times 100\%$$

or $P = F/N \times 100\%$

Keterangan :

P = percentage value

N = respondents

F = frequency of answered

Category Level of The Result		
NO.	Interval	Category
1	81 – 100 %	Very good
2	61 – 80 %	Good
3	41 – 60 %	Sufficient/Fair
4	21 – 40 %	Deficient/Poor
5	0 – 20 %	Very Poor

Source: Arikunto, (2010)

3. RESULT AND DISCUSSION

The Hospitals need a good preparation in dealing with the Covid 19 outbreak, wishes starting from improving the management system and existing resources such as human resources, logistics, finance, facilities and infrastructure at the hospital also to implement in the healthcare system. The hospital's duties itself as a place to provide individual health services to the community, starting from treatment, medical health care, rehabilitation, isolation and other health services.

The following is a picture of the Key Components Hospital Readiness Guidelines from the World Health Organization (WHO) to assess the preparedness of the Bakti Wira Tantama Army Hospital Semarang in handling the Covid 19 outbreak.

Key Component of the Hospital Readiness



Source: (WHO, 2020)

The Respondents of the Research

The respondents in this research is 23 people from Bhakti Wira Tamtama Army Hospital.

Samples of the Research

The researcher used Purposive Sampling technic to collect the respondents.

The Research Instrument

The instrument in this qualitative research is in depth interview guided by the Questionnaire / Checklist s from the WHO (World Health Organization) Hospital Readiness. The tools that researchers use in the interview process are laptop, documentation, zoom meetings, writing tools, whatsapp and mobile phones. The instrument for the quantitative approach is questionnaire sheet which containing questions where the respondent can provide the answers by giving a checklist (V). The value of each component is calculated by using the formula to obtain a percentage value.

$$\frac{\text{RESULT SCORE}}{\text{MAXIMUM SCORE}} \times 100\%$$

After that the percentage value from the results or calculation is described qualitatively. In order to get the results as a qualitative analysis, the results of the percentage are put into five categories.

Arikunto (2010), explains that data analysis using qualitative techniques with percentages, is just the first step in the entire analysis process. Percentages in the form of numbers, counts or numbers are clearly quantitative and not qualitative measures. So the percentage statement is not a qualitative analysis. Qualitative analysis must be expressed in terms of a predicate or measure that is quality. In order to obtain the results in the form of the qualitative analysis, the results of the the percentage are entered into five categories, namely as in the table below

Category Level Of The Result		
NO.	Interval	Category
1	81 – 100 %	Very good
2	61 – 80 %	Good
3	41 – 60 %	Sufficient/Fair
4	21 – 40 %	Deficient/Poor
5	0 – 20 %	Very Poor

Source: (Arikunto, 2010)

The results of the five categories will be used for interpretation the preparedness of the Bhakti Wira Tantama Army Hospital Semarang in facing Covid 19 outbreak.

Data Analysis

The data analysis was conducted qualitatively with descriptive by using various methods. Data collection was carried out by in-depth interviews, documentation through videos, photos, pictures, document review, and through a questionnaire based on Hospital Readiness guidelines from WHO. Then the researchers checked the data obtained through several sources. After data collection is carried out, the researcher continued to process and analyze the data then interpretation the overall results of the data in narrative form. The results of the study will be compared with the Hospital Readiness standards from WHO and the regulations in Indonesia.

The data collected were both quantitative and qualitative from primary and secondary data sources, are the researcher material for analysis, classified, compiled, and tabulated the data based on Hospital Readiness from WHO (World Health Organization). Then from the data collected, the researchers will not put it all in the report, especially the data in the form of videos, images, text and language which are so

complicated and large that they need to be disaggregated. Qualitative research data analysis focuses on some of the useful data and ignores other parts.

BWT Hospital Preparedness Based on Key Components of the Hospital Readiness checklist for Covid-19:

Communication

Based on the research regarding communication, BWT Hospital already has a sufficient / good enough communication preparedness in dealing with the C-19 pandemic with the result (50.54%).

Continuity of Essential Health Services and Patient Care

Based on the research regarding Continuity of Essential Health Services and Patient Care, BWT Hospital already has a very good result of the Continuity of Essential Health Services and Patient Care preparedness in dealing with the C-19 pandemic with the result (100%), However, another obstacle faced by BWT Hospital is that non-covid patients is decrease due to the social restriction regulation from the Indonesian government or PSBB.

Surge Capacity

Based on the research regarding Surge Capacity, BWT Hospital already has a sufficient / good enough Surge Capacity preparedness in dealing with the C-19 pandemic with the result (57,02%). Healthcare services for Covid-19 patients at BWT hospital were developed with ICU facilities in isolation rooms, additional VIP isolation rooms, addition of 16 beds in June 2020 become 32 Bed, construction of garden with safety fences, internet facilities and jogging track.

Human Resources

Based on the research regarding Human Resources, BWT Hospital already has a sufficient / good enough Human Resources preparedness in dealing with the C-19 pandemic with the result (56,40%). On June 2020 the capacity was increased to 32 Bed for C-19 patients. The human resources have been trained based on the guidelines and instructions from WHO and the health ministry of Indonesia.

Logistic and Management of Supplies Including Pharmaceuticals

Based on the research regarding Logistic and Management of Supplies Including Pharmaceuticals, BWT Hospital already has a sufficient / good enough Logistic and Management of Supplies Including Pharmaceuticals preparedness in dealing with the C-19 pandemic with the result (51,51%), Even though in the early days of the pandemic, namely March to

April 2020, it was difficult to get PPE, however in May to June 2020 it was able to accommodate 32 C-19 patients and their logistics and pharmaceutical needs had begun to be fulfilled based on the C-19 standard protocol.

Surveillance Early Warning and Monitoring

Based on the research regarding Surveillance Early Warning and Monitoring, BWT Hospital already has a sufficient / good enough Surveillance Early Warning and Monitoring preparedness in dealing with the C-19 pandemic with the result (69,07%).

Essential Support Services

Based on the research regarding Essential Support Services, BWT Hospital already has a very good Essential Support Services (95,23)%.

Case Management

Based on the research regarding Case Management, BWT Hospital already has a sufficient / good enough Case Management preparedness in dealing with the C-19 pandemic with the result (59,88%).

Infection Prevention and Control (PPI)

Based on the research regarding Infection Prevention and Control, BWT Hospital already has a sufficient / good enough Infection Prevention and Control preparedness in dealing with the C-19 pandemic with the result (58,96%).

Laboratory Services

Based on the research regarding Laboratory Services, BWT Hospital already has a sufficient / good enough Laboratory Services preparedness in dealing with the

C-19 pandemic with the result (53,85%) for the maximum isolation room capacity of 32 C-19 patient.

4. CONCLUSION

From the results of this study, the Readiness and Preparedness of BWT Hospital during the pandemic in March-June 2020 was sufficient for the maximum capacity of the isolation room for Covid-19 patients as many as 32 patients. The result of the Incident Management System is sufficient / good enough. The Communication is sufficient (50.54%), Continuity of Essential Health Services and Patient Care is at a very good result which is (100%), the Surge Capacity is sufficient level (57.02%), The Human Resources sufficient (56.40%), Logistics and Management of Supplies Including Pharmaceuticals is sufficient level (51.51)%, Surveillance Early Warning and Monitoring the result is good (69.07%), Essential Support Services entered at a very good level, namely (95.23)%, although many services had to be adjusted to C-19 procedures and protocols, Case Management entered the level of quite good, (59.88%), although there are still many to improve such as facilities,

infrastructure and resources in the hospital, Infection Prevention and Control is at a sufficient level (58.96%), and Laboratory Services the result is sufficient (53.85%). The BWT Hospital needs to plan for the additional negative pressure isolation rooms to anticipate mass outbreak or overflow beds in case of a spike in hospitalizations caused by the Covid-19. The Hospitals needs to plan and recruit health care workers and volunteers to prepared for the worst mass outbreak C-19 then in case there is a transmission of C-19 between health personnel inside the hospital. In addition, the Indonesian government should be focus to slowdown the community transmission then strictly do implementation on C-19 protocol or regulation such as lock down some area of Indonesia, especially the high-risk (red zone) of C-19 area, so it will do not spread easily to the community.

ACKNOWLEDGMENT

Give Thanks to the Lord Almighty God for the blessings God has done to the researcher to be completed this paper. This paper purpose is to be submitted as a requirement for accomplishing the task as a postgraduate student at Faculty of Public Health, University of Indonesia, majoring in Hospital Administration. This Journal would not be done without the mentoring and support from my lecturer advisor, Dr. drg. Wahyu Sulistiadi, MARS.

APPENDIX

Preparedness of the Bhakti Wira Tantama Army Hospital Semarang in facing the Covid-19 outbreak on March till June 2020

Respondents	Incident Management System	Due for review	In progress	Completed
23	Communication			
23	Continuity of Essential Health Services and Patient Care			
23	Surge Capacity			
23	Human Resources			
23	Logistic and Management of Supplies Including Pharmaceuticals			
23	Surveillance			
23	Essential Support Services			
23	Laboratory Services			

Source : (WHO, 2020)

Hospital Readiness Checklist for COVID-19

DESCRIPTION OF HOSPITAL

Evaluation date:	
Name of the hospital:	
City:	Country:
Administrative status: state <input type="checkbox"/> private <input type="checkbox"/> university <input type="checkbox"/> other <input type="checkbox"/>	
Beds:	Annual discharges:
Annual occupied bed days:	
Beds Intensive Care Unit (ICU):	Microbiology laboratory: Yes <input type="checkbox"/> No <input type="checkbox"/>
ICU beds for adults:	Number of isolations/year:
ICU beds for pediatrics:	Number of antibiograms/year:
ICU beds for neonatology	
Name of evaluators:	

I. INCIDENT MANAGEMENT SYSTEM

A well-functioning hospital incident management system is essential for the effective management of emergency operations (Recommended reading 1). Consider taking the following action.

Recommended Action	Due for review	In progress	Completed
Do you have a hospital emergency response plan? If yes, activate it. If not, establish an ad hoc Incident Management System (IMS), i.e., the supervisory body responsible for directing hospital-based emergency response operations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Designate a Hospital Emergency Operation Centre, i.e., a specific location prepared to convene and coordinate hospital-wide emergency response activities and equipped with well-functioning means of communication.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Designate a lead for each key component provided in this document to ensure the appropriate coordination and management of related response activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appoint prospective replacements for directors and focal points to guarantee the continuity of decision-making and resource management in any situation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To ensure effective and efficient hospital management in the face of a COVID-19 outbreak, consult core internal and external documents related to the management of COVID-19 beforehand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

REFERENCES

- [1]. Rumah Sakit Bhakti Wira Tamtama. (2020). Standard Operasional Prosedur Covid 19. Semarang: RS BWT.
- [2]. Rumah Sakit Bhakti Wira Tamtama. (2020). Kesiapsiagaan Rumah Sakit. Semarang: RS BWT.
- [3]. World Health Organization. (2020). Global Surveillance for Human Infection With Novel Coronavirus. [https://www.who.int/publications-detail/global-surveillance-for-human-infection-with-novel-coronavirus-\(2019-ncov\)](https://www.who.int/publications-detail/global-surveillance-for-human-infection-with-novel-coronavirus-(2019-ncov)). (access on April, 25, 2020).
- [4]. World Health Organization. (2020). Hospital Readiness Checklist For COVID-19. http://www.emro.who.int/images/stories/coronavirus/documents/hospital_readiness_checklist_for_covid_19.pdf (access on May, 14, 2020).
- [5]. World Health Organization. (2020). Key Components of the hospital readiness checklist for COVID-19 http://www.euro.who.int/_data/assets/pdf_file/0010/430210/Hospital-Readiness-Checklist.pdf?ua=1 (access on May, 14, 2020).