

Original Research Article

Overview of Prevention of Coronavirus Disease 2019 for Health Workers at the Naibonat Health Center in 2021

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Received: 28.08.2022

Accepted: 02.10.2022

Published: 25.11.2022

Journal homepage:<https://www.easpublisher.com>**Quick Response Code**

Abstract: The Covid-19 pandemic has had an impact on various fields of life, especially in the health sector. Health workers are at the forefront of dealing directly with patients so that they are most affected by the transmission of Covid-19, the transmission of Covid-19 to health workers has become an issue in the era of the Covid-19 pandemic. In 2021-2022 at the Naibonat Health Center, 28 health workers were confirmed positive for Covid-19. The increase in these cases of course raises problems, especially the procurement of Personal Protective Equipment (PPE) for health workers which is very minimal. This study aims to describe the prevention of Covid-19 in health workers at the Naibonat Public Health Center in 2021, the type of descriptive research with purposive sampling technique. This study involved 6 health workers. Data collection techniques used by interviews, documentation, and distribution of questionnaires. Data analysis used qualitatively. The results showed that the availability of PPE at the Naibonat Health Center at the beginning of the Covid-19 pandemic in 2019 was still very minimal in terms of quantity (amount) and also Puskesmas access to PPE, but after 2020-2022 the availability was sufficient because there was a lot of assistance from various institutions. Standard Operating Procedures (SOPs) in preventing the transmission of Covid-19 at the Naibonat Health Center use the SOPs regulated by the Ministry of Health in 2020. Advice for health centers, although currently there are no difficulties in procuring PPE, it still requires careful planning in the procurement process in the future. This is because there is no certainty when the Covid-19 pandemic will end.

Keywords: Self-protection Devices (APD), Standard of Operating procedure (SOP), Knowledge.

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INTRODUCTION

According to the World Health Organization (WHO), viral diseases continue to emerge and become a serious public health problem. Coronavirus Disease 2019 (Covid-19) is a new type of disease that attacks the respiratory tract and has become a world health problem since the beginning of 2020 (WHO, 2019). On February 12, 2020, WHO officially designated this novel coronavirus disease in humans as Coronavirus Disease (Covid-19). There are at least two types of coronavirus that are known to cause diseases that can cause severe symptoms such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS).

Health workers are at the forefront of direct contact with patients, so there is a high risk of being

exposed and infected (WHO), 2020. According to the International Council of Nurses (ICN), as of May 5, 2020, more than 90,000 health workers have been infected with COVID-19 in the world with deaths reached 989 people. The prevalence of Covid-19 in Indonesia is quite high. The first confirmed case in Indonesia was on March 2, 2020 where there were only two sufferers. However, until 2021 the number will increase and put Indonesia in the first rank of the country affected by Covid-19 in the Southeast Asia region. According to data on cases of patients suffering from corona virus infection as of April 18, 2020 in Indonesia, there were 5,923,000 people with a death rate of 520 people.

Based on data from the Naibonat Health Center, Health Workers who were confirmed to have Covid 19 on January 18, 2021, included 15 health

workers. On April 29, 2022, those who were confirmed to be COVID-19 included 13 health workers. This brings the total number of health workers at the Naibonat Health Center who have been confirmed to be Covid-19 is 28 people.

The use of Personal Protective Equipment (PPE) is very important to protect the mucosa-mouth, nose and eyes from contaminated droplets and fluids. As the pandemic accelerates, and the availability of personal protective equipment (PPE) for health workers continues to increase, it is becoming increasingly difficult. The availability of personal protective equipment for health workers is still lacking, so many health workers have been exposed to the virus and some have even died. During a pandemic, knowledge is needed to overcome or prevent the spread of the Covid-19 virus, especially to health care providers and patients. So that the knowledge of health workers about Covid-19 is also very important because Covid-19 cases are still new cases. Good knowledge about the virus and transmission is important as an effort to prevent the transmission of Covid-19.

The high number of cases infected with COVID-19 in health workers is influenced by one of the limitations of personal protective equipment (PPE) in health facilities so from interviews it was found that during the 2019 pandemic PPE was minimal because there was no preparation for the Covid-19 budget. The limitation of PPE in terms of quantity (amount), in addition to the difficulty of puskesmas getting access to PPE, has become a factor that affects the transmission of Covid-19 to health workers. The high level of interaction between health workers and patients with Covid-19 cases, with the experience and knowledge of health workers who are still minimal in preventing the transmission of Covid-19, also affects the infection of health workers. The Covid-19 pandemic also demands changes to the Standard Operational Procedure (SOP) which must adapt to the virulence that has just been encountered, so that health workers are also required to be able to adapt quickly. In practice, there are still many officers who do not wear PPE in accordance with the recommended safety level. This is probably due to the lack of awareness of the officers and the availability of adequate PPE. Things that have a considerable influence on the use of PPE include knowledge. This study aims to determine the description of Covid-19 prevention in health workers at the Naibonat Health Center, Kupang Regency.

METHOD

The type of research used is descriptive research method, a qualitative approach to describe the description of the prevention of Coronavirus Disease 2019 in health workers at the Naibonat Health Center in 2021. This research was carried out at the Naibonat Health Center, East Kupang District, Kupang Regency took place from April-March 2022. Sampling using

purposive sampling technique. The number of informants is six people who work at the Naibonat Health Center. The informants consisted of the head of the Covid-19 team in 2021 and the covid-19 team in 2022, 1 member of the Covid-19 team, 2 logistics and 1 nurse. The type of data used to collect is primary and secondary data. Primary data was obtained through in-depth interviews with Covid-19 team informants, logistics and nurses regarding the availability of PPE, Standard Operating Procedures (SOP) and the distribution of questionnaires regarding Covid-19 symptoms, Covid-19 prevention, PPE and SOPs. Processing data by means of: thick description, which is collecting the results of interviews, notes, photos and documents, making transcripts, namely making a summary in written form of all the data we collect, giving codes or displaying data, namely cutting out parts of interviews or recordings or photos to in each variable, the questionnaire is to make a table and calculate so as to get an overview of knowledge. Data analysis was carried out by drawing conclusions and verification by comparing findings and theories and findings from other literacy. This research has received ethical approval from the Health Research Ethics Commission, Faculty of Public Health, Nusa Cendana University with ethical approval number: 2022031-KEPK 2022.

RESULTS

1. Description of Informants

There were six informants in this study consisting of 2 people from the Covid-19 team leader in 2021 & 2022, 1 member of the Covid-19 team, 2 logistics and 1 nurse. The age of the informants varies from 26-48 years. The educational background of the informants varies from the level of Diploma three (D3), Bachelor strata 1 (S1) and Bachelor strata 2 (S2).

2. Availability of Personal Protective Equipment

The results of interviews with two informants said that during the 2019 pandemic PPE was minimal because there was no budget preparation for Covid-19. The limitation of PPE in terms of quantity (amount), besides that the Puskesmas also has difficulty getting access to PPE. Here are the answers from the informants:

"During the pandemic yesterday from 2019 it was still hot at first, it was still a bit minimal because we haven't prepared for the budget yet, but from 2020 to 2021, he has complete preparations, assistance from the service and we ourselves from the puskesmas continue a lot of help from outside parties across sectors, such as many councils, who provide assistance for adequate PPE. If since 2021 it has been running smoothly but only at the beginning, when it comes to PPE that is still minimal, we use it as is, so we use a face shield, which is what it is called, after that we use it again, actually, we can't have to use it once and throw it away. it was burned but because of the limitations

of PPE, we had to reuse it but for 2020 and above, we already know what kind of SOP is available, it's worth it." (HS)

Two informants in this study stated that the PPE used while serving patients were PPE levels 1,2, and 3. Level 1 when the service was finished, namely using N95 masks or medical masks, coconut covers, level 2 for the laboratory section, namely gloves, beskap (cover suit), masks, face shields, level 3 for the Covid-19 team using full hasmat clothes. The following is the informant's statement:

"The PPE used is level 1 2 3 PPE, so level 1 PPE when we have finished our service, we will tidy up level 1, yes, enough masks, we still wear headgears with masks during the pandemic, but after walking around if when we served, the poly friends were level 2, they had gloves, beskap (coat cover), and masks, face shields too, but for me in the laboratory because I was in direct contact with the suspect sample, I ended up wearing full level 3 PPE hasma clothes." (GG)

"If the PPE is serving, we use level 2 PPE." (FAL)

The results of interviews with informants stated that the PPE used when dealing with patients depends on the comfort of health workers. The following is a statement from the informant:

"And most of the sondes here want to wear hasmat clothes, because the sonde is airtight, so what can the sonde do, he's just tired of dealing with patients because there's no air coming in, so my friends prefer to use ordinary hasmat to handle the patient." patients go back and forth, sonde bapanas is more effective in serving patients. The point is not that it is effective in dealing with covid, but it means that katong has more comfort, they use it compared to the level 3 that the covid team uses." (VFAT)

3. Standard Operating Procedure

Three informants in this study said that the SOP used by the Naibonat Health Center came from the Ministry of Health. Here are the answers from the informants:

"Yes, of course, for Covid, the SOP is from the ministry directly, so there is a standard that must be traced, how long does it take, how many must be traced, right from this positive, there is 1 positive case that must be traced, how many then the time interval from positive to tracer how long. Then after the tracer, what is the name that you want to check, how much is it, the standard SOP, we use it, yes, the SOP is from the Ministry of Health." (YBB)

"The SOP used comes from the Ministry of Health." (HS)

"We from the ministry directly gave it to the revised 5 KMK what year, I forgot, but it's based on government regulations, so it's from the agency that directs it." (GG)

Six informants in this study stated that for this Covid-19 disease there was cross-sectoral collaboration with P2P, health promotions, MCH, nutrition, treatment and health.

The results of research on informants found that there were obstacles in cross-program collaboration during the pandemic, namely health workers being late to screen patients who visited the puskesmas, as well as a lack of communication between health workers. Here are the answers from the informants:

"The obstacle may be that communication is sometimes late, the delivery is late, so because of what the name of the person has come, they have already entered but have not been screened whether he is Covid or not."

Meanwhile, one informant stated that there were no obstacles in cross-program collaboration during this pandemic. The following is the statement from the informant:

"If the problem with the beta sense is that the sonde is there because our program was already running before there was a pandemic." (GG)

The results of interviews with two informants revealed that in handling COVID-19 there is no target to be achieved because this Covid-19 is a pandemic, so if there is a positive then health workers must handle it thoroughly.

According to informant 6, they did not know the target related to close contact with Covid-19 patients, so they continued to promote health to the community and establish communication with cross-sectoral groups about Covid-19 in every village. Following are the answers from informant 6:

"If the target is we don't know how many people, what's important is that we do health promotions, there are still many who are afraid to get checked because they think that if we check for coughs, it means that the health facilities have already sentenced that he is Covid but we must continue to promote Health to the community through our social media, the Naibonat Health Center has a Facebook platform, then IG. After that, we communicate through cross-sectoral groups about Covid. It's already in every village. Every day, we continue to update the latest news about Covid, about finding new cases as a result of our activities. updates." (Informant 6. FAL)

The results of the study, according to RDAT, show that to minimize COVID-19, health facilities must increase the number of PPE. Following are the answers from RDAT informants:

"If it is certain that all puskesmas have the same target, they must minimize it"

covid 19, he's multiplying, he has PPE, but in reality, the PPE is minimal and he has problems with the bag

being exposed to lack of protection for himself." (RDAT)

4. Knowledge of Health Workers

Table 1: Distribution of the percentage of correct answers to the knowledge of health workers about Covid-19 symptoms, Covid-19 prevention, Personal Protection Equipment (PPE) and Standard Operating Procedures

No	Question	Right	Wrong
Questions about COVID-19 Symptoms: 5 questions			
1.	Early signs and symptoms of Covid-19 are acute respiratory disorders such as fever, cough and shortness of breath.	6 100%	0 0%
2.	The average incubation period is 5-6 days with an extended incubation period of 14 days.	6 100%	0 0%
3.	People with COVID-19 cannot infect other people with the virus when they don't have a fever	6 100%	0 0%
4.	A person can be infected without any symptoms and still be able to spread the virus to others	6 100%	0 0%
5.	Severe cases of Covid-19 can lead to pneumonia, acute respiratory syndrome, kidney failure and even death.	6 100%	0 0%
Questions about COVID-19 Prevention: 4 questions			
6.	use personal protective equipment in the form of a mask that does not cover the nose but only covers the mouth when leaving the house or interacting with other people.	6 100%	0 0%
7.	You don't need to wash your hands with soap or hand sanitizer, just water is enough because the corona virus can die.	6 100%	0 0%
8.	When people cough or sneeze, they emit droplets from their nose or mouth and those droplets cannot carry the virus.	6 100%	0 0%
Self Protection Tool 8 questions			
9	The use of Personal Protective Equipment requires several elements that must be adhered to: Determine indications for the use of PPE, How to "wear" properly, How to "take off" properly and How to collect (disposal) the right one after use.	6 100%	0 0%
10.	Eye Protection (Goggles), its purpose is to protect users or health workers by filtering or retaining liquids, blood, aerosols (solid particles in the air), bacteria or viruses.	4 66,6%	2 33,3%
11.	Removing all accessories on the hands such as rings, bracelets and watches and using an N95 mask are activities that must be carried out when using PPE.	6 100%	0 0%
12.	Touching the eyes, nose and mouth when using PPE, touching the front of the mask and draping the mask around the neck are things that should not be done in the use of PPE.	6 100%	0 0%
13.	Disposable gowns have a function to protect users or health workers from the spread of infection or disease as a whole where the whole body including the head, back, and lower legs is covered.	5 83,3%	1 16,6%
14.	Medical Coveralls (special clothing) are used to protect users or health workers from spreading infection or disease, only protecting the front, arms and half of the legs.	4 66,6%	2 33,3%
15.	Apron (apron) has a function to protect users or health workers against the spread of infection or disease.	6 100%	0 0%
16	Medical gloves are sterile Wrist design does not have to close tightly without wrinkles. Gloves may roll or contract during glove use.	6 100%	0 0%
Standard Operating Procedure 3 questions			
17.	The mode of transmission (Method of Transmission) of Covid-19 is a method of transporting microorganisms from a container/reservoir to a susceptible host.	6 100%	0 0%
18.	Standard operating procedures for puskesmas are aimed at breaking the cycle of transmission of infectious diseases through standard precautions and transmission-based precautions.	6 100%	0 0%
19.	The standard operating procedure must be owned by the puskesmas, this is to regulate and control matters relating to health services in hospitals or other health services, one of which is the use of PPE.	6 100%	0 0%

Details of knowledge are described in Table 1. Knowledge that respondents still do not understand, especially about personal protective equipment.

Based on Table 1 there are 2 (33.3%) respondents who do not know the use of eye protection

(goggles). There are 1 (16.6%) respondents who do not understand the use of disposable gowns. There are 2 (33.3%) respondents who do not understand the use of medical coveralls (special clothing).

DISCUSSION

1. Availability of Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE) is equipment that must be used when working according to work hazards and risks to maintain the safety of the workers themselves and those around them. PPE is used to protect staff or patients from exposure to blood, body fluids secretions and excretions consisting of gloves, surgical masks or N95 masks, gowns, aprons, eye protection (goggles), face shields (face shields), medical gowns, medical gloves, protective headgear and foot protection. For health workers, the use of personal protective equipment is needed to protect themselves so that health workers do not contract the disease. The reality on the ground, there are still many health workers who do not optimally use PPE even though the benefits are known and even when it is provided.

The results showed that the availability of PPE at the Naibonat Health Center at the beginning of the 2019 Covid-19 pandemic was still very minimal in terms of quantity (amount) and also puskesmas access to PPE. This resulted in officers reusing clothes that had been used in previous services.

The results of the study are in line with research conducted by (Sari ZA, Syafrawati, and Fizikriy 2021) that there are some PPE that are only used for certain activities such as fieldwork. This is due to the limited availability of the PPE. The results of this study are also not in line with the Coronavirus Disease (Covid-19) Prevention and Control Guidelines, which say that it is not permissible to hang PPE in the room and then reuse it.

The results showed that the PPE used during service was for officers who had direct contact with patients, namely that the PPE used while serving patients were PPE levels 1,2, and 3. Level 1 when finished service was using N95 masks or medical masks, coconut covers, level 2 is for the laboratory section, namely gloves, beskap (cover suit), masks, face shields, level 3 for the Covid-19 team using full hasmat clothes.

The results of this study are in accordance with the Guidelines for Prevention and Control of Coronavirus Disease (Covid-19), that PPE is used to protect staff or patients from exposure to blood, body fluids, secretions and excretions consisting of gloves, surgical masks or N95 masks, gowns, apron, protective clothing, eye (goggles), face shield (face shield), protective / headgear and foot protection.

Based on the results of research on the PPE used, it was found that most health workers were not comfortable using PPE such as hazmat clothes when working because they got tired quickly when handling patients and felt hot. This is in accordance with research

conducted by (Rifqi Fadilla Neraz 2021), that PPE has an influence on the comfortable feeling of respondents / health workers. This is due to the emergence of several considerations that are often a concern in this issue, ease of movement, flexibility when providing care to patients. Some volunteers expressed discomfort because they felt uncomfortable, hot and also difficult to breathe when treating patients. The results of this study are also in line with (Rori, Bongakaraeng, and Pandean 2018), that respondents' non-compliance in using PPE is due to discomfort when using PPE and feeling safe even though they do not use PPE, respondents argue that PPE is used only when taking actions or examining patients who are considered risk of transmitting certain diseases.

2. Standard Operating Procedures (SOPs)

The Standard Operating Procedure (SOP) aims to provide the correct steps to reduce the occurrence of errors and services below the mutually agreed standard to carry out various activities of the service function. SOPs must be owned by the puskesmas, this is to regulate and control matters relating to health services in hospitals or other health services, one of which is the use of PPE.

The results showed that in handling the Covid-19 case, the Naibonat Health Center used the SOP set by the Ministry of Health in 2020.

The results of this study also show that there is cross-program collaboration in handling Covid-19 cases, patients who come to visit will be screened to find out whether the patient is positive or negative. If negative, the patient will be treated according to need. The results of this study are in accordance with the Guidelines for the Prevention and Control of Coronavirus Disease (Covid-19), that the screening is carried out in all health facilities such as hospitals, health centers, clinics, and individual practices, and can also go through the emergency service call center 119 to get initial status. The patient's presence or absence of symptoms of COVID-19. The results of this study are in line with research (Aryani and Abidin 2021), which says that screening is an early action that can be taken by both health workers and independently on patients or the community. Screening consists of several questions that question health conditions by displaying some of the main symptoms of the Covid-19 disease. This action will determine whether the patient or the community must be immediately referred to a hospital or Covid-19 service center to undergo further tests.

3. Overview of knowledge about the symptoms of covid-19, prevention of covid-19, the use of PPE and SOPs for health workers

The better a person's knowledge, the better the level of awareness and discipline of a person in terms of receiving or applying a message or information conveyed. Health workers are the ones who must update their knowledge about Covid-19 because of the

rapid development of science. Good knowledge about viruses and transmission is important as an effort to prevent the transmission of Covid-19.

Based on the results of the study, it was found that of the 6 health workers at the Naibonat Health Center related to the description of the knowledge of the health workers, the respondents had quite good knowledge, especially about personal protective equipment and had good knowledge about the symptoms of covid-19, prevention of Covid-19 and SOPs.

Based on Table 1 there are 2 (33.3%) respondents who do not know the use of eye protection (goggles). Goggles are water and scratch resistant. Goggle frames are flexible to fit the contours of the face without excessive pressure. Goggles are not allowed to be reused if any part is damaged. Uses: Protects the eyes and the area around the eyes of users or medical personnel from splashes of liquid or blood or droplets.

There are 1 (16.6%) respondents who do not understand the use of disposable gowns. Half-calf length dress to cover the top of the boots. There is an elastic cuff at the wrist. Uses: Protects the user or healthcare worker from spreading infection or disease, protects only the front, arms and half of the legs.

There are 2 (33.3%) respondents who do not understand the use of medical coveralls (special clothing). Medical coveralls (special clothing) are resistant to penetration of fluids, blood, viruses. Resistant to aerosols, airborne, solid particles. Uses: Protects the user or health care worker from spreading infection or disease throughout the entire body including the head, back, and lower limbs.

The results of this study are in line with research conducted by who showed that most puskesmas officers had fairly good knowledge about the use of personal protective equipment in the covid-19 era (75%). The results of this study are also not in line with the results of research conducted by the knowledge of puskesmas officers is still low 60%, it is known that 52.9% of officers answered incorrectly the question of the minimum use of PPE used to treat patients at the puskesmas level, 43.5% of officers answered incorrectly to the question of the stages after removing the headgear and 23.5% of respondents answered incorrectly on the question of understanding the dress.

CONCLUSION

The availability of Personal Protective Equipment (PPE) at the Naibonat Health Center at the beginning of the 2019 Covid-19 pandemic was still very minimal in terms of quantity (amount) and also puskesmas access to PPE but after 2020-2022 the availability was sufficient because there was a lot of help from various institutions. The Standard Operating

Procedure (SOP) in preventing the transmission of Covid-19 at the Naibonat Health Center uses the SOP set by the Ministry of Health in 2020. So that the SOP for the service of Covid-19 cases runs in accordance with the 05th revision of the Covid-19 prevention and control guidelines. The description of the knowledge of health workers at the Naibonat Health Center has good knowledge about the symptoms of covid-19, prevention of covid-19, SOPs and knowledge about the use of personal protective equipment is still lacking. It is hoped that the Puskesmas, although currently no longer experiencing difficulties in procuring PPE, will still require careful planning in the procurement process in the future. This is because there is no certainty when the COVID-19 pandemic will end. Since the Covid-19 pandemic occurred, puskesmas have made preparations to serve patients who need treatment. One of the main equipment that needs to be prepared is PPE.

Thank-you note

The authors would like to thank the Head of the Naibonat Health Center who has allowed researchers to conduct research in their working area and all informants who have participated in this research.

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Cite This Article: Yudika Margaretha Ndaumanu, Muntasir, Tadues A. L. Regaletha (2022). Overview of Prevention of Coronavirus Disease 2019 for Health Workers at the Naibonat Health Center in 2021. *EAS J Parasitol Infect Dis*, 4(5), 33-39.