

Procurement of personal protective equipment in national health insurance patient services during the Covid-19 pandemic at Bahteramas Regional public service agency hospital Southeast Sulawesi Province, Indonesia

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Abstract

Currently, the incidence of morbidity and mortality due to the Covid-19 disease outbreak in Indonesia is still quite high, with the intensity of transmission being very fast in the community. The occurrence of contact between patients and health workers becomes very vulnerable to the emergence of illness and death in health workers. The importance of the use and availability of personal protective equipment (PPE) in hospitals needs to be continuously pursued. The purpose of the study was to determine the supply of personal protective equipment for the service of national health insurance patients during the Covid-19 pandemic at the Bahteramas Regional Public Service Agency (RPSA) Hospital, Southeast Sulawesi Province. This type of qualitative research with a case study approach. The study was conducted at the Bahteramas RPSA Hospital, Southeast Sulawesi Province, Kendari City, with the reason that this hospital is a referral center for Covid-19 patient services. The informants in the study consisted of 3 regular informants and 6 key informants. Data was collected using observation, document review and in-depth interviews. Data analysis is done by matrix Content Analysis. The results of the study show that the procurement of PPE for Hospitals is carried out through E-catalogs and direct procurement. The vacancy of PPE is caused by internal factors where the hospital procurement party minimizes stock procurement as needed with evaluations carried out every month. Evaluation is carried out to determine the availability of sufficient stock until the deadline for the next PPE purchase, but if the stock is insufficient then the purchase of PPE can be made before the stock period is empty. The external factor causing the stock vacancy is caused by the delay in the distribution of PPE. Conclusion: Procurement of supplies for PPE needs for RPSA Hospitals, apart from making their own procurement from the hospital, also borrows and requests assistance from related agencies. The availability of hospital PPE is influenced by internal factors and external factors. Suggestion; The Hospital Logistics Section should always monitor the procurement of PPE to ensure the availability of PPE is still met as needed.

Keywords: Procurement; Personal Protective Equipment; Covid-19; National Health Insurance

1. Introduction

Entering the covid-19 pandemic in Indonesia in 2020, to increase awareness and handling of the covid-19 disease, the Ministry of Health of the Republic of Indonesia through the Decree of the Minister of Health Number HK.01.07/Menkes/104/2020 on February 4, 2020 has determined Covid-19 as a disease. can cause epidemics and how to overcome them. In dealing with the Covid-19 outbreak, the use of PPE for health workers is urgently needed in every hospital, especially hospitals that have been appointed as Covid-19 referral hospitals. So that the use of PPE for officers becomes a means of protection from the dangers of exposure or cross-infection between patients and health workers in health services.

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The medical sector is showing remarkable agility to meet the ever-increasing demand for medical devices, Personal Protective Equipment, and medicines [1]. Due to the global shortage of PPE caused by the increasing number of covid-19 patients in recent months, many hospitals are having difficulty providing adequate PPE for doctors treating these patients [2]. This covid-19-related shortage has also affected the healthcare market for medical devices and Personal Protective Equipment, which includes protective eyewear and visors, mouth-nose protective equipment, as well as protective clothing and gloves, prompting countries to make regulations in this regard [3].

Inventory management has many objectives, namely to anticipate the risk of delays in the arrival of goods, to anticipate orders for materials that are not in accordance with what the company needs so that they must be returned, to anticipate if the required materials are not available on the market, as a step to ensure the smooth production process, to utilize the machine optimally, and to optimally meet market needs [4]. In the service of Covid-19 patients, health workers in charge of handling patients are required to use PPE to prevent transmission of the corona virus. In order to be able to carry out the service process and handling patients, sufficient PPE stock is needed for health workers on duty.

As a provider of health services, the hospital operates 24 hours a day. Hospitals make a separation between patient services, namely patient care services that require emergency, non-emergency and hospitalized treatment [5]. To support health services during the Covid-19 pandemic so that they can run properly and still pay attention to the safety of health workers on duty in hospitals, it is very important to procure PPE. In the service of Covid-19 patients, health workers in charge of handling patients are required to use PPE to prevent transmission of the Corona Virus. In order to be able to carry out the service process and handling patients, sufficient PPE stock is needed for the Health Workers on duty.

Procurement is the activity of implementing the selection of procurement providers carried out by the procurement committee to meet user needs [6]. Procurement is an activity to meet drug needs in accordance with operational needs that have been determined in the planning process. Pharmaceutical logistics procurement has three important requirements that must be met, including: (1) according to plan, (2) according to ability, (3) system or procurement method according to provisions [7].

Through the Decree of the Minister of Health of the Republic of Indonesia Number HK.01.07/Menkes/169/2020 concerning the Designation of Referral Hospitals for the Management of Covid-19 Certain Emerging Infectious Diseases, establishing 132 hospitals in 34 provinces throughout Indonesia to become Referral Hospitals for Corona cases. Of the 132 existing referral hospitals, one of them is in Southeast Sulawesi Province, namely the Bahteramas RPSA Hospital, Southeast Sulawesi Province. In an effort to handle covid-19 at the Bahteramas Regional General Hospital, it is very necessary to have PPE for health workers for protection from potential work accidents and to minimize cross-infection between patients and officers. Complete PPE will also be needed by officers to handle COVID-19 patients, given that the Bahteramas Hospital is a Referral Hospital for Covid-19 cases.

It was noted that the Bahteramas RPSA Hospital had 3 positive patients with Covid-19 on March 20, 2020. The results of the initial survey of researchers found that the shortage of PPE occurred in March where the initial discovery of Covid-19 cases, the Covid-19 pandemic presented a shortage problem in the health care system: the unavoidable constraint of limited resources when demand soars. Until now, PPE is considered the most visible control measure to prevent the transmission of Covid-19. The average need for PPE each month is; 1) Protection Gown/Hazmat level 3 as much as 2,000 pcs/month, 2) Google Glass as much as 80 pcs/month, 3) Nurse Cup as much as 8,000 pcs/month, 4) Gloves 20,000 pcs/month, 5) Long Gloves/ Obstetrics 1,000 pcs/month, 6) N95 masks 6,400 pcs/month, 7) Surgical masks 24,000 pcs/month.

Until now, January 2021, the shortage of PPE still occurs at the Bahteramas RPSA Hospital and there are several types of PPE that are difficult to obtain. To meet the high need for PPE, Bahteramas RPSA Hospital is able to control the supply of PPE needed so that there is no shortage or excess stock. As a Referral Hospital for Covid-19 Handling in an effort to handle covid-19 at the Bahteramas RPSA Hospital, Southeast Sulawesi province, it is very necessary to have PPE for health workers who are directly involved in handling patients for protection from potential work accidents and to minimize cross-infection between patients and staff. Research objective: to determine the supply of personal protective equipment in the service of national health insurance patients during the Covid-19 pandemic at the Bahteramas RPSA Hospital, Southeast Sulawesi Province.

2. Material and methods

The type of research used is qualitative with a case study approach. The research was conducted at the Bahteramas RPSA Hospital, Southeast Sulawesi Province. The research informants consisted of 3 regular informants and 6 key

informants. The criteria for selecting informants are those who know the incident, have rational arguments, feel the impact of the incident, are directly involved with the incident, have sufficient time, and are able to convey information well. The selection of informants can be based on the depth of understanding or experience of the informants. Collecting data using observation, and in-depth interviews. Data analysis was carried out by means of matrix content analysis derived from data collected from the data collection process, namely recording & note taking, literature review, interviews, and participation [8].

3. Results

Procurement is the realization of a previously planned program as a function of planning, determining the need and budgeting for PPE in hospitals. The procurement function is one of the functions of the inventory of goods according to the needs and plans that have been previously determined. Procurement does not have to be done by purchasing, but with other alternatives that are more effective and efficient, such as rental, exchange, manufacture and repair [9].

Based on the results of in-depth interviews, it was found that the procurement of PPE for the Bahteramas RPSA Hospital was carried out by purchasing. During the current Covid-19 pandemic, the procurement of PPE other than the hospital, although it requires a long waiting time, but to overcome this problem, the hospital has received PPE allocation assistance from the regional Covid task force and the regional health office, as statements of the following informants;

- „ Last year, it was really an emergency because the item would only come in 6 months but it was still covered up. We can still borrow purchases that arrive late or we can ask the covid task force,, (Key Informant, NEH) "
- „ PPE that came in from the health office in early January and February was there. There we ask for help from the health office or task force,, (Ordinary Informant, SLH)

The results of in-depth interviews showed that the PPE procurement process was carried out by Activity Technical Implementing Officer (TIO) and Medical Service Procurement Officers. In the process of procuring PPE for hospitals, it is carried out based on the use of the previous year where the time of ordering is done every 3 months, by adding a buffer of 1 month. Procurement of PPE for hospitals is carried out through e-catalogs and direct procurement. An inspection of the supply of PPE needs is carried out by the logistics department, where the stock of PPE needs that are lacking and used in services will be submitted to the medical service procurement official as a procurement proposal, as stated by the following informants;

- „ who carry out this activity for the procurement process, for example, here, for example, the budget has been prepared, for the procurement process there are TIO and procurement officials. So the executioners to procure PPE are TIO and procurement officials, the term is,, (Key Informant, SHT)
- „ The procurement process is here for routine covid because the term doesn't have a description, we don't have an idea here how many APD how many masks because we only shop for the initial stock, we'll see how much progress it has,",, the routine shopping process was at the beginning of the year we already have a plan, for example this mask, for example, maybe the procurement is based on last year's use,,,,, for example the mask is 10,000 needs per year, so I divide it into 3 so every quarter I spend it, ordered every 3 months plus 1 month for buffers,, (Key Informant, RCS)
- „ The procurement process is E-catalog and direct procurement,, (Key Informant, J)

Based on the interview results, it was found that when there was a shortage of PPE stock in the hospital, the fulfillment of PPE needs was carried out by borrowing it from another hospital or getting assistance from the Covid-19 Task Force. The vacancy of PPE is caused by internal factors where the hospital procurement party minimizes stock procurement as needed with evaluations carried out every month. Evaluation is carried out to determine the availability of sufficient stock until the deadline for the next PPE purchase, but if the stock is insufficient then the purchase of PPE can be made before the stock period is empty. The external factor causing the stock vacancy was caused by the delay in the distribution of PPE, as stated by the following informants;

- „ the mass is empty and the distributor hasn't sent it yet, we borrow it from another hospital or ask for help from the task force,, „ At the beginning of the year there were many empty hand sanitizers or masks at the beginning of the pandemic were empty, so we sort out not all rooms are given surgical masks so tricked with cloth masks,, (Key Informant, NEH)
- ... Well, if there is a vacancy problem, maybe there are many factors that make it empty, not only internal factors but also external factors, I think internal factors have minimized the possibility because there is an evaluation every month. So it's a limit, before we run out we ordered. so there are more obstacles from outside, for

example, empty stock and delays in distribution, like yesterday, during Eid, we ordered the lockdown before Eid, there were about 2 weeks 3 weeks, the goods just arrived after Eid, the new lockdown was opened, then the goods can leave like that ,, (Key Informants, RCS)

- ,, there is an evaluation so even though it's not enough 2 months if it's the limit we ask again like that. But in general, we spent 3 months on all the items plus a 1 month buffer ,, (Key Informant, SHT)

Based on the results of in-depth interviews, it was found that when the demand stock for the service unit was empty, the hospital logistics team would coordinate with the service unit or deliver goods on demand. In another reality, the availability of PPE needs is always met even though in some situations there has been a shortage of PPE in hospitals, as stated by the following informants;

- ,, for example, masks that are used for breathing, the items are empty so I will say later if for example the items are ready here we will contact you. But when they empty the goods later, in the next two days, we will contact them and come to request ,, (Ordinary Informant, SLH)
- ... At the beginning of Covid, last year the price of masks had increased so that the procurement was also a bit, so starting there it was limited, but if there was a shortage, there was no shortage. Because if we are in the ICU, we don't have PPE, we can't work. Available, Still fulfilled, only limited ,, (Ordinary Informant, S)
- ... At first, when we had a pandemic, in March and April, right, because at that time, the supply of tools was indeed limited. We did provide only how many units. But when it jumps, it's okay. The service was delayed, but after entering the 5th month, it is no longer available, until now, it is no longer available ,, (Ordinary Informant, M)

4. Discussion

Procurement is the activity of implementing the selection of procurement providers carried out by the procurement committee to meet user needs [6]. Procurement is an activity to meet drug needs in accordance with operational needs that have been determined in the planning process [7]. The procurement of pharmaceutical logistics has three important requirements that must be met, including: (1) according to the plan, (2) according to ability, (3) the system or method of procurement according to the provisions [10]

Procurement of PPE supplies involves several parties including; (1) Technical Implementation Officer, (2) Medical Service Procurement Officer, (3) Pharmacy Logistics. To ensure that pharmaceutical preparations, medical devices, and medical consumables are in accordance with the required quality and specifications, if the procurement process is carried out by other departments outside the pharmaceutical installation, it must involve pharmaceutical personnel [11]. The procurement of PPE is carried out based on the Standard Operational Procedure (SOP) for Planning for the Procurement of Pharmaceutical Supplies Number SOP/A03/25/RSUD/IX/2019.

The results of the study found that the procurement of PPE needs at the Bahteramas RPSA Hospital was based on a proposal from each hospital service unit for a certain period of time. The availability of PPE for the Bahteramas RPSA Hospital is not only carried out by the hospital itself, but other sources are obtained from the assistance of the Provincial Health Office and the Southeast Sulawesi Province Covid-19 Task Force. The occurrence of the Covid-19 pandemic is difficult to avoid if there is a shortage of PPE stock, which can be anticipated by collaboration with other hospitals in the city of Kendari as well as assistance to the Health Service and the Covid-19 Task Force of Southeast Sulawesi Province. PPE procurement activities at Bahteramas RPSA Hospital are carried out using the direct procurement method via e-catalog. Procurement of supplies for PPE needs at the beginning of the Covid-19 pandemic was carried out directly using hospital funds. However, in the procurement process, there has been a delay in the distribution of PPE, so Bahteramas RPSA Hospital anticipates by lending to related agencies through a coordination system and cross-sectoral cooperation system. The coordination and cooperation system is in line with the Decree of the Minister of Health of the Republic of Indonesia Number HK.01.07/Menkes/413/2020 concerning Guidelines for Prevention and Control to fulfill needs, it is carried out using logistics from other health service units or from provincial and district/city supplies. If it is not sufficient, then it is necessary to consider procuring and/or requesting assistance from a higher institution (provincial/national buffer stock).

This study is in line with research [15] which states that there are two ways to procure drugs, namely through e-catalogs and direct purchases. The process through the e-catalog is an annual routine procurement method, while the direct purchase method is used for emergency medicine procurement. Purchases/orders are made immediately if the medicine is empty at any time. Research [16] says that the request for proposals needs from each unit in the hospital to the pharmacy warehouse. Next, from the warehouse, make a procurement draft for one month by pulling the drug stock

data listed in the Hospital Information System. The warehouse section recapitulates the results of data collection and the proposed drug. If the inventory in the warehouse is not 100% fulfilled, it must be held immediately.

The process of procuring PPE at Bahteramas RPSA Hospital is carried out by direct purchase via e-catalog. This is in line with the mandate of the Government Goods/Services Procurement Policy institution (SPPI) contained in SPPI Regulation Number 13 of 2018 regarding strategic steps that can be taken through the mechanism for the procurement of goods and services, which in this case, if an emergency condition, can be carried out independently. simple and different. Through Presidential Regulation Number 4 of 2015 concerning the Fourth Amendment to Presidential Regulation No. 54 of 2010 concerning the Procurement of Goods/Services, the Government has begun to regulate more deeply about the implementation of e-catalogs in the process of procurement of government goods/services carried out by the Government Goods/Services Procurement Policy Institute. With the enactment of the Presidential Regulation, the process of procurement of government goods/services can be carried out through e-catalog. According to Presidential Regulation No. 4/2015, an electronic catalog (e-catalog) is an electronic information system containing lists, types, technical specifications and prices of certain goods from various Government Goods/Services Providers. The implementation of the procurement of goods/services through e-catalog is getting stronger after the issuance of Presidential Regulation Number 16 of 2018 concerning Government Procurement of Goods/Services. Article 50 paragraph (5), that the implementation of e-purchasing must be carried out for goods/services involving the fulfillment of national and/or strategic needs determined by the minister, head of institution, or head of region. Therefore, for goods/services that are outside the criteria for meeting national and/or strategic needs, the procurement of goods/services is not required to be carried out through the e-purchasing method.

In the PPE procurement activities, an inspection of the supply of PPE needs has been carried out by the logistics officer. The logistics officer will check the stock of PPE, calculate the remaining stock of PPE so that they can find out the amount of PPE that is left and what is needed in service. The results of the calculation of the PPE stock will be submitted to the medical service procurement official as a proposed request and procurement of PPE needed in the future.

Procurement of PPE supplies is carried out based on last year's usage with orders made every 3 months by adding a buffer of 1 month. In principle, all goods/services in the context of handling Covid-19 whose fulfillment/utilization is urgent and must be fulfilled during an emergency. At the beginning of the pandemic, it was unavoidable that there was a shortage of PPE stock, so to meet the needs of PPE, the hospital made a loan to another hospital or asked for help from the Southeast Sulawesi Province Covid-19 Task Force. The alternative when there is a shortage of PPE stock, apart from borrowing and requesting assistance from the Bahteramas RPSA Hospital, also minimizes the use of PPE, one of which is by using cloth masks in certain units. In several hospitals in Indonesia the number of PPE that meets the standards is still insufficient, of course it is the duty of the Government to provide and facilitate medical personnel while on duty [9].

Empty PPE in hospitals is sometimes difficult to avoid. If the demand from the service unit is difficult to fulfill, anticipation is carried out by increasing the volume of purchases or borrowing from the relevant agencies. The factors causing the shortage of PPE stock at the Bahteramas RPSA Hospital are influenced by internal factors and external factors. For internal factors, the hospital procurement has minimized the occurrence of stock shortages by evaluating the availability of PPE stock every month. Evaluation is carried out to determine whether the stock will be fulfilled until the time of purchasing PPE for the next period, but if the stock is insufficient then the purchase of PPE can be made before the purchase period that has been determined previously, every three months. For every purchase of hospital PPE, the need for three months is calculated plus a buffer stock of 1 month, so that the stock is safely maintained in the hospital inventory warehouse.

The external factors that affect the vacancy of PPE in hospitals can occur due to the delay in distribution from suppliers to hospitals. Under normal time conditions, routine PPE procurement is carried out by utilizing timely delivery services. During the planning of PPE for hospitals during the Covid-19 pandemic in the future, use a projection system to estimate future demand for goods, because it is very important to do this in reducing the risks that occur for both PPE providers and patients, by always maintaining adequate stock of PPE savings [2]. In several hospitals in Indonesia the number of PPE that meets the standards is still insufficient, of course it is the duty of the Government to provide and facilitate medical personnel while on duty [9].

In order to anticipate the vacancy of PPE at the Bahteramas RPSA Hospital, the hospital made loans and requests for assistance, it was considered good enough considering that, in principle, all goods/services in the context of handling Covid-19 whose utilization is urgent and must be fulfilled properly. This is in line with the mandate of the Regulation of the Minister of Health of the Republic of Indonesia Number 72 of 2016 concerning Pharmaceutical Service Standards, which states that procurement is an activity intended to realize needs planning. Effective procurement must ensure

availability, quantity, and time at an affordable price and in accordance with quality standards. Procurement can be done through purchases, production of pharmaceutical preparations, and donations/dropping/grants.

The results of this study are in line with research conducted by [14] which said that the government should immediately procure PPE from various sources, both imports and driving domestic PPE production, with technical standards and according to WHO requirements. The government needs to involve the private sector, textile experts, health experts, relevant health organizations to encourage the realization of the procurement and production of PPE which is very urgent, effective distribution is needed, the government immediately distributes PPE to all hospitals involved in the response to Covid-19, at once take firm action against the perpetrators of selling PPE at unreasonable prices. This research is also in line with research [2] which says that the shortage of personal protective equipment is substantially worldwide due to the Covid-19 disease pandemic causing an unprecedented surge in PPE demand.

5. Conclusion

Procurement of supplies for the PPE needs of the RPSA Hospital in addition to making their own procurement from the hospital also makes loans and requests for assistance from related agencies. Procurement of PPE needs for hospitals is based on proposals from each hospital service unit. The availability of PPE in hospitals is influenced by internal factors in the form of the amount of need and use of PPE, while external factors are influenced by the distribution of PPE from suppliers to hospitals. Recommendation; The Hospital Logistics Section should always monitor the procurement of PPE to ensure the availability of PPE is still met as needed.

Compliance with ethical standards

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Disclosure of conflict of interest

All informants/respondents involved in this study have stated their consent as informants/respondents to be interviewed and provided information/information in accordance with research needs.

Author contribution

Suhadi, Niken Indah Prastika, Rahman, and Adrian Tawai as designers, implementers of research and drafts of Reports. Adrian Tawai as the reviewer of the manuscript. Niken Indah Prastika as data collector, analyzer and interpreter of data. All authors read and agree to the Final Report.

Statement of informed consent

All informants/respondents involved in this study have stated their consent as informants/respondents to be interviewed and provided information/information in accordance with research needs.

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