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Logistic Management Analysis of Medical Equipment in Padang Port Health Office

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ABSTRACT

⁴The objective of this study is to know the process of storage, distribution, maintenance and control on logistic management of medical equipment at Padang Port Health Office. This research uses qualitative approach. The result of the study shows that the policy is guided by the Guidelines of Medical Device Management in Health Facilities in 2015 and regulations related to the management of state property but the existing policy has not been socialized to all health equipment managers and has not been downgraded in the form of technical guidelines or standard operating procedures. Human resources are less in terms of quality and quantity. The budgets are still lacking primarily. Infrastructure are still lacking mainly for the storage of medical equipment and warehouses. Implementation of storage, distribution, maintenance and control of health equipment logistic has not been implemented properly. The function test for 357 medical devices obtained 45 units (12,60%) of medical equipment can not be functioned, 3 units (0,84%) of health equipment can not be tested because there is no officer available and 21 units (5,88%) unknown health equipment.

Index Terms— Analysis, Distribution, Logistic Management, Medical Equipment, Planning, Procurement, Storage.

INTRODUCTION

World Health Organization (WHO) in 2015, states that more than 50% of health equipment in developing countries is not functioning or cannot be used optimally due to lack of maintenance efforts. WHO also estimates that 95% of medical equipment³ in developing countries is imported, most of which do not meet the needs of national health services and are not used effectively and efficiently^{1,2,3}.

Padang Port Health Office (PHO) is one of 49 Port Health Office in Indonesia. Padang PHO has been awarded as the best manager of State Property in all of PHO in Indonesia in 2014 and implementing logistics management system especially health equipment in order to achieve excellent service. However in the subsequent execution of whether this system is retained to date in accordance with regulations relating to logistics management⁴.

Based on preliminary survey results, there are still many health tools that are stacked in some storage

places, even some health equipment stored in the home office. Based on the review of documents from the State Property Report of Padang PHO in 2016 from 357 units of existing health equipment, 311 units (87.11%) of good health equipment, 5 units (1.40%) health equipment in damaged condition lightweight and 41 units (11,48%) health equipment in a state of severely damaged. The amount of equipment that is in a state of damage is closely related to the process of maintaining the tool.

In addition to the accumulation of goods, the problem found in the Padang Port Health Office is still there were health equipment that is not given the code number of goods. According to Decree of the Minister of Finance No. 29 / PMK.06 / 2010 of 2010 concerning the classification and verification of State Property, User of Goods / Proxy of Users of Goods must register and record State Property (BMN) into List User / List of User Power of Attorney according to and goods codification in order to realize the orderly administration and support the orderly management of State Property.

The results of the interviews that researchers conducted in the initial survey with the officer of BMN management on March 07, 2017 revealed that there are several items of medical equipment that has not been known to exist with the total initial value of IDR 4.791.477.250, - (four billion seven hundred ninety one million four hundred seventy seven thousand two hundred and fifty rupiah). The equipment is Blood Chemistry Analysis, Stethoscope, Defibrillator and Pacer Analyzer / tester, Pressure Transducer for NIBD and Filter Compressor. Besides, there is also a mutation of medical equipment without the knowledge of BMN managers.

Based on the above description, we need to conduct research on analysis of logistics management of health equipment at the Port Health Office of Padang.

METHOD

This type of research is qualitative research and data were analyzed with Miles and Huberman model through data reduction, Data Presentation and Verification. This study was conducted from January to December 2017 at Port Health Office of Padang.

Technique of taking informant in this research by purposive sampling that is sampling technique with certain consideration made by researcher based on characteristic or characteristic of population which have been known. Data collection in this research was conducted in several ways such as observation (observation), in-depth interview (Indepth Interview), and document review⁵.

RESULTS

Policy

The policy for managing medical devices at Padang PHO is carried out based on the rules relating to the management of BMN such as the Regulation of the Minister of Finance of the Republic of Indonesia Number: 181 / PMK.06 / 2016 concerning Administration of State Property, Minister of Finance Decree Number 29 / PMK.06 / 2010 in 2010 concerning classification and codification of State property, Republic of Indonesia Minister of Finance Regulation No. 244 / PMK.06 / 2012 concerning Procedures for Implementation of BMN Supervision & Control, Minister of Home Affairs Regulation No. 17 of 2007 concerning Technical Guidelines for Regional Property Management and Tool

Management Guidelines Health at the Health Facility and the user guide for each tool. Besides that, the manager of medical devices who work in the work area does not get a decree from the Head of the Padang PHO and the task as manager of the medical device is not included in the job description in employee work goals of each management officer.

Resources

The results of the study found that personnel in the implementation of medical logistics management in the Padang PHO in terms of quantity were not enough. Padang PHO should have as many as 6 electromedical personnel while the Padang PHO has only one electromedical staff. Existing electromedical technicians have not been fully involved in the management of medical devices because they are deemed not to understand the equipment available in the PHO and the other reason is that there is no electromedical technical function in the PHO position map. In terms of quality it is still lacking because the officers have never received training or socialization about the management of medical devices in addition to multiple positions.

Tools

Padang PHO does not yet have facilities and infrastructure in accordance with the standards set by the Indonesian Minister of Health as outlined in the Guidelines for Standardization of Human Resources, Facilities and Infrastructure in the Port Health Office Number 1314 / MENKES / SK / IX / 2010 Year 2010. Cabinets and shelves storage is still not good at the main office or in several regional offices.

Storage

The storage process begins with the acceptance stage carried out by electromedical personnel, BMN users and managers. The acceptance process is carried out through three stages, namely physical examination, function test and tool testing. Then the recording of the tool is done with the Application for BMN and tool labeling. Then the tool is submitted to the head of the section (user) using the Handover Minutes. Tools received by the user are then stored or distributed to the work area office. Tool storage is carried out according to the function of the tool. Tools that function to diagnose diseases are stored in polyclinics or blood chemistry laboratories. Tools for vector control and sanitation are stored in

vector laboratories and sanitation and warehouses for equipment and pesticides. Small tools are placed on the floor and large tools are placed on shelves or on the floor. Similar items but various sizes are grouped together by sorting from the smallest to the largest size.

Distribution

The process of distributing of medical devices in Padang PHO is carried out according to BMN rules, namely Minister of Home Affairs Regulation No. 17/2007 concerning Technical Guidelines for Regional Property Management and Guidelines for Management of Medical Devices in Health Facilities. The activity begins with a request for medical devices to the head section, after being approved for a physical examination, a functional test and a tool test. Transportation facilities for shipping medical devices and drivers are available. The process of physical expenditure of goods, transportation processes and demolition processes is pursued as best as possible to avoid damage during the shipping process. Some things that are not yet in line are the Minutes of Examination of distributed Goods and reports on the realization of medical devices distributed to working area is not been found yet. This happens because technical instructions and standard operating procedures on how to distribute medical devices at PHO are not yet available. Besides, medical officers have never received training or socialization.

Maintenance

The process of maintaining medical devices in Padang PHO has not been carried out in accordance with the Guidelines for Management of Medical Devices in Health Facilities because preventive maintenance and inspection activities have not been carried out. Maintenance activities carried out in the form of corrective maintenance carried out by each section without involving electromedical personnel except for maintenance of ambulance cars. There is no record book of corrective actions including the length of time for repairs and no reports of maintenance, in addition to the number of uncalibrated ales.

Control

The process of controlling medical devices at the Class II Padang Health Office has not been fully in accordance with Minister of Home Affairs Regulation No. 17 of 2007 concerning Technical Guidelines for

Management of Regional Property. Control is carried out by the section head through bookkeeping / records checking.

DISCUSSION

Policy

According to the researchers' assumptions, seeing the many problems related to this policy indicate that health equipment management activities have not been a priority either by the Director General of Disease Prevention and Control of the Ministry of Health of the Republic of Indonesia the Padang Port Health Office. Whereas in carrying out medical device management activities at the Padang PHO, the first and fundamental step that must be carried out is to make the operational policies themselves from activities in real terms. This operational policy will move the organization to meet the management needs of medical devices in Padang PHO. Although nationally there are guidelines and regulations related to BMN as a reference, but in its implementation at the Padang PHO, technical guidelines and standard operating procedures need to be made in accordance with the characteristics of the Padang PHO so that implementation of standardized medical equipment management activities can be evaluated. Implementers of policies should be given a decree so that in carrying out their duties they have a legal basis for all actions that are used as legal aspects to determine or maintain something that is decided. It is recommended that the Head of the Padang PHO make a standard operating procedures for the management of medical devices so that the medical administrators in implementing management activities become more clear, systematic and standardized so that they can implement them appropriately.⁷

Resources

The quality of human resources involves two aspects as well, namely physical aspects, and non-physical aspects that involve the ability to work, think, and other skills. Therefore, efforts to improve the quality of human resources can also be directed to both aspects. To improve physical quality can be pursued through health and nutrition programs. Whereas to improve the quality or non-physical abilities, education and training efforts are the most needed.⁸

The implementation of logistic management of medical devices can run well should electromedical

personnel be added to 6 people in accordance with the Joint Regulation of the Minister of Health and Head of State Personnel Agency Number 46 of 2014 and Number 23 of 2014 concerning Implementation Guidelines for the Minister of Administrative Reform and Bureaucratic Reform of the Republic of Indonesia Number 28 of 2013 concerning the Functional Position of Electromedical Technical and Credit Numbers states that the number of electromedical personnel in the Class II Port Health Office environment is electromedical personnel of 6 people, consisting of; skilled 4 (four) people and experts 2 (two) people. In order for each work area to have one electromedical staff to manage medical devices that are available throughout the work area of the Padang PHO, the technical officers are more focused on working on their activities. Besides that, the electromedical personnel available are given roles according to their educational background. It is recommended that the Director General of Disease Prevention and Control as the main unit of the PHO add electromedical functional positions to the PHO position map.

Tools

Means are tools to facilitate and facilitate work. In the business world to achieve better results, besides human beings who are experts in their fields, materials / materials are needed as a means because material and means cannot be separated. Support for facilities such as workplaces, tools, transportation and funds is important for smooth work. The facilities used for logistics management of medical devices include cabinets, shelves and operational vehicles. Facilities that are available at this time should be maintained both in terms of quality and quantity because the facilities are very important to support the implementation of good health equipment management activities. It is expected that the Padang PHO can budget funds for the purchase of shelves or cabinets for the main office or regional office.⁹

Storage

Storage can be interpreted as an activity and business to carry out management, organization and arrangement of inventory items in the storage room. The process of storing medical devices in the Padang PHO is carried out based on BMN rules and Guidelines for the Management of Medical Devices in Health Facilities.¹⁰

DISTRIBUTION

The logistics distribution activity is basically

a continuation of the process of storing or storing logistics or empirically is one part of the logistics warehousing activity itself. It is better if the manager of the medical device makes a Minutes of Examination of the Distributed Goods and reports on the realization of medical devices that are distributed to working are. In addition, officers need to be given training or outreach on ways of distributing good medical devices.

Maintenance

Maintenance of health equipment is a series of preventive and corrective activities carried out to maintain quality medical equipment, safe and usable). It is better if the manager of the medical device keeps a schedule of preventive inspections and maintenance and records corrective actions including the length of time for repairs. Electromedical power is involved in the maintenance of medical devices. For this reason, all medical personnel management is given training in maintaining good medical devices.

Control

In the control process, the delivery of the minutes of the results of the inspection to the manager of medical devices is very important to do as feedback from control activities. The delivery of this minutes will be a correction for managers to improve the process of managing medical devices at the next Padang PHO. The results of this examination need to be submitted to the Head of Padang PHO to be a note for policy makers in determining the steps to improve the management of logistic equipment in Padang PHO.

It is hoped that these control activities will be carried out by all section heads to all work areas. The results of the examination are poured into the Minutes of Examination Results. The event news is sent to the manager of medical devices and sent to the Head of Padang PHO. Training and outreach should be given to implementers of logistical control equipment in Padang PHO.

CONCLUSION

The logistics management policy for medical devices at the Port Health Office in Padang is guided by regulations relating to the management of State Property and Guidelines for Health Equipment Management in Health Facilities of the Directorate General of Health Efforts of the Ministry of Health, but the policies have

not been disseminated to all medical administrators and have not been revealed in the form of Technical Guidelines and Standard Operating Procedures that are specific to Padang Port Health Office. Managing staff in logistics equipment management activities at the Padang Port Health Office in terms of quantity and quality are still lacking. Funds and facilities for logistics equipment management activities are still lacking. The implementation of logistics equipment management activities at the Padang Port Health Office has not been implemented properly so that not all available medical devices are available in ready-to-use conditions.

Ethical Clearance: Not required.

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Conflict of Interest: Nil.

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