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Drug Management in Pharmaceutical Installation of Health Office at Jayapura District

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ABSTRACT

Background: Management of Pharmacy Installation medicine Jayapura District Health Office which is a series of planning, procurement, storage, distribution, use, recording and reporting, monitoring and evaluation. From the results obtained there are still many things that need to be addressed, especially from the facilities and infrastructure and the lack of understanding of the officers in calculating the number of quarterly drug needs.
Purpose of research: Increasing the need for essential drugs in health facilities, rational use of drugs by the community, ensuring safety, efficacy, and quality of medicines and distribution.
Research method: Qualitative with survey studies conducted in April-May 2018 in Jayapura District Pharmacy Installation and 3 (Three) Puskesmas working areas of Jayapura District Health Office involving 8 (Eight) informants. The data obtained is processed in a qualitative descriptive manner.
Result of research: Drug planning in drug management of the Jayapura District Pharmacy Installation saw the use of drugs in the Puskesmas and the remaining warehouse stock of the Pharmacy District of Jayapura Regency. Insufficient understanding of officers in calculating drug needs. There is no planning team formed. Procurement of drugs according to drug needs is a budget source. Narrow drug storage and the absence of a refrigerator as a place to store reagents. NAPSA cabinets and antiretrovirals have been placed separately and regulated by the FEFO. Medicines are routinely and specifically distributed and drug requests are in accordance with the use and VEN analysis system used. The prescription was received by the clerk then screened the prescription to see the rationality of prescription with a minimum waiting time for prescription services of 5 (Five) minutes at the most 1 (one) hour. For records, only the stock card and expired drugs are destroyed. Monitoring only when the routine distribution goes down to the Puskesmas.

Keyword: Management, drug management, IFK Jayapura

1. INTRODUCTION

Based on Presidential Regulation No. 4 of 2015 concerning the fourth amendment to Presidential Regulation no. 54 of 2010 concerning the procurement of Government goods and services. The selection of drug procurement is done through e-purchasing by e-catalgue system. The principle of electing goods / services providers electronically aims to be efficient, effective, transparent, open, competitive, fair / non-discriminatory and accountable. With the establishment of the E-Catalog Medicine system, all Work Units in the Central and Regional health and First-Level Health Facilities (FKTP) or Advanced Level Health Facilities (FKRTL) in the procurement of medicines for both the National Health Insurance program and other health programs no need to do the auction process, but can directly utilize the drug e-catalog system with E-Purchasing procedures. With the change in the procurement system of this drug, an adaptation process is needed for both the work units as users, industries as drug providers, and distributors. This affects the

procurement of medicines at every level and has an impact on the availability of drugs.

The drug distribution cycle starts when the drug product leaves the factory or distributor, and ends when the drug consumption report is submitted to the procurement unit. Effective drug distribution must have good system design and management by, among other things: keeping the supply of drugs constant, maintaining good quality drugs during the distribution process, minimizing unused drugs because they are damaged or expired with appropriate planning according to their individual needs regions, have accurate records of storage, rationalization of drug depots and provision of information to estimate drug needs. (Clark, 2012).

Every health facility needs to store and manage the medicine. Storage systems aim to ensure safe storage, proper storage in environmental conditions, accurate recording, effective structuring, and monitoring expired drugs, and preventing theft. Storage must be located inside a building that can withstand dry weather. Drugs must be arranged and easily accessed, stored on shelves (most drugs in health facilities are stored on shelves). Space and cooling equipment must be provided for vaccine coolers and other items. Temperature and humidity levels must be controlled within the proper limits, and the space must be well ventilated. (Sallet, 2012).The Health Office as an element of the Regional Government in the health sector is expected to provide the best to the community, the Jayapura District Health Office. One of the Health Office's policies in achieving the vision is the healthy Jayapura community in a new Jayapura.

Based on the results of the initial interviews of researchers, planning of drug needs at the Jayapura District Health Office was carried out by the Head of the Pharmaceutical Section using the consumption method and the Epidemiology method, carried out manually and not computerized, this could make it difficult for officers to determine the amount of inventory. Puskesmas often experience delays in sending the Usage Report file and the Drug Request Sheet (LPLPO) to the Health Office. Observations of researchers at the Jayapura District Health Office Pharmacy Installation show that there is still a build-up of several types of drugs that have not been distributed for quite a long time, this reflects inaccurate planning of drug requirements or poor distribution systems. There is still a build-up of drugs that have expired in the Pharmacy Installation, possibly because of frequent changes in Medical staff and the frequent presence of the Ministry of Health program in administering drugs which ultimately results in cost losses. According to Cheng and Whittemorre (2008), which examines supply chain management in hospitals, a system that is still manual is one of the causes of excess orders which ultimately results in excess inventory. Logistics management is very much determined by planning activities, for example in determining goods whose procurement exceeds requirements. This can damage a whole logistical management cycle, resulting in waste and swelling in costs, eventually the drug is not channeled causing damage or expiration even though it is well maintained at the Pharmacy Installation. (Seto, 2004).

2. MATERIALS AND METHODS

This type of research uses a qualitative approach. The problem approach was carried out by descriptive analysis, namely obtaining in-depth information about the Management of Drug Management in the Jayapura District Pharmacy Installation. According to Bungin (2010), qualitative research is research that views meaning as an inseparable part of one's experience in social life with others. The meaning is not something that is born outside the experience of the object of research or researchers, but becomes the biggest part of the life of research or the object of research.

This research will be conducted at the Jayapura District Health Office on the grounds that this location still has problems in drug management. The object of the research included Head of Pharmaceutical Section, Head of Airu Health Center, Airu Puskesmas pharmacy staff, Airu Puskesmas patient, Kemtuk Puskesmas Doctor, Kemtuk Puskesmas pharmacy staff, Nimbokrang Puskesmas pharmacy staff. The time of the study is planned to be conducted from April to May 2018. Activities start from the initial survey, search materials, retrieves data to the presentation of research results.

Informants are people who are expected to be able to provide information about situations and conditions regarding the focus of research. The research informants are divided into: a. Key informants (key informants), namely those who know and have basic information needed. The informants who knew the process of managing drugs in this study were: Head of the Pharmaceutical Section.
b. The main informants were those who were directly involved in the use of drugs, namely the Head of Airu Pusesmas, Pharmacy staff at Airu Health Center, Pharmacy staff at the Puskesmas Kemtuk, Nimbokrang Community Health Center pharmacy staffs. Participants showed that the most effective role was in the individuals studied, namely doctors and patients. The selection of this study was purposive and snowball

3. RESULTS AND DISCUSSION

1. Research Informants

Table 1 Research informants

NO	Inisial Informan	Umur	Suku	Jenis Kelamin	Pendidikan	Masa Kerja	Jabatan
1.	TM	40 thn	Non Papua	Perempuan	Apoteker	13 thn	Kasie Kefarmasian
2.	AM	31 thn	Papua	Laki-laki	D-III Keperawatan	8 thn	Kepala PKM Airu
3.	AO	31 thn	Papua	Laki-laki	D-III Keperawatan	7 thn	Staf Farmasi PKM Airu
4.	F	28 thn	Non Papua	Perempuan	Apoteker	10 bln	Staf Farmasi PKM Kemtuk
5.	ME	36 thn	Non Papua	Perempuan	Apoteker	2 thn	Staf Farmasi PKM Nimbokrang
6	AS	35 thn	Non Papua	Perempuan	Dokter	2 thn	Dokter PKM Kemtuk
7.	P	33 thn	Non Papua	Perempuan	D-III Keperawatan	2 thn	Suster PKM kemtuk
8.	S	50 thn	Papua	Laki-laki	SMA	-	Pasien PKM Airu

Based on table 1, it can be seen that the age of the informants ranged from 28 to 50 years with the number of sex of informants in women as many as 5 (five) people and 3 (three) people who were male. There were 5 (five) informants from outside Papua who were native people and there were 3 (three) native Papuan informants.

2. Drug Planning in the Management of Drug Management in the Pharmacy Installation of the Jayapura District Health Office.

a. Data availability

The availability of data is very important; therefore there were statements from several informants interviewed as follows:

"Jayapura Regency Pharmacy Installation gets data from drug use / average consumption, drug administration program according to age, certain disease season, drug waiting time, damaged / expired drug, remaining drug stock" (Informant 1)
"That collected report is what we use" (Informant 2)
"Use of drugs, waiting times, cases of illness, program medicines, warehouse drug stock and services" (Informant 3)
"We use data from drug use, disease cases, waiting times, program medicines, remaining drugs" (Informant 4)

"Many things are considered in the data for drug availability in the form of drug use, number of diseases, drugs lost and damaged / expired, drugs that are still there, waiting time" (Informant 5)
"Asked to provide diagnostic information on the patient's prescription so that it was easier for officers to calculate drug needs" (Informant 6)

From the interview above, the results can be obtained in the form of information that the six informants are not all the same data collection methods can be seen as the first informant uses a lot of data on average drug use, waiting time, broken / expired drugs, drug delivery program according to age, disease season certain, drug waiting time, drug that is damaged / expired, the remaining drug stock. The second informant only conveyed the collected data that was used. The third informant to the fifth informant collected data on drug use, waiting time, disease cases, program medicines, warehouse drug stock and services. The sixth informant can only provide data from the diagnosis of the patient's disease through writing in the recipe. With the availability of data, many things can be prevented in the form of:

1. Avoid overlapping drugs, which means there is no accumulation of the same drug,
2. Integrated evaluation
3. Similarity of perception
4. Estimates
5. Coordination
6. Use of Funds

b. Planning Method

The statements obtained from several informants were obtained interviewed as follows:
"In planning drugs using consumption methods and epidemiological methods" (Informant 1)
"Consumption methods and epidemiological methods used in our Puskesmas in drug planning" (Informant 2)
"In our opinion, the consumption method and epidemiological method are very helpful in making planning for drug needs" (Informant 3)
"So far, we have always used the Consumption method and the epidemiological method that is highly regarded as accurate in calculating drug needs even though it misses a bit" (Informant 4)
"Using the" us use consumption and epidemiology methods in planning drug needs "(Informant 5)
Based on the results of the interview above, it can be concluded that in the 5 (Lima) informant's drug planning stated that the consumption method and epidemiological method strongly support each other in calculating drug needs and 2 (Two) informants we did not participate in this interview because they did not have a drug plan. The Consumption Method is based on an analysis of previous drug consumption data. Planning drug needs according to consumption patterns has the following steps:

1. Collection and processing,
2. Calculation of estimated drug needs,
3. Adjustment of the number of drug needs with the allocation of funds.

The amount of drug needed according to the consumption method can be calculated by the following formula:

> Planned drug needs this year = Total usage last year + empty stock + lead time requirements + stock buffer - last year's remaining stock - damaged drugs / ED

The advantage of consumption method is that the data obtained is accurate, the easiest method, does not require disease data or treatment standards. If the complete consumption data of the writing pattern does not change and the needs are relatively constant, then the possibility of deficiencies or excess drugs is very small. The disadvantages include not being able to assess the use of drugs in improving prescription writing, deficiencies and excess

drug difficulties, does not require recording good morbidity data.

The Epidemiology method is based on the number of visits, frequency of illness and standard of treatment. The main steps in this method are as follows:

1. Determine the number of residents to be served,
2. Determine the number of case visits based on the frequency of the disease,
3. Providing treatment standards used for planning,
4. Calculating estimated drug needs,
5. Adjustment of drug needs with allocation of funds.

The advantage of epidemiological methods is that estimates of need are close to truth, standard treatment supports efforts to improve drug use patterns. While the disadvantages include requiring time and skilled labor, disease data is difficult to obtain with certainty; good recording and reporting are needed. How to calculate the epidemiological method:

Children:
One episode required 15 ORs of @ 200 ml of ORS.
Number of episodes of 18,000 cases.
The amount of ORS needed = 18,000 X 15 bks
= 270,000 bks @ 200 ml
Adult:
One episode 6 ORS @ 1 liter.
Number of episodes of 10,800 cases.
The number of ORS needed = 10,800 X 6 bks
= 64,800 bks @ 1 liter
a. Time and calculation in preparing drug planning

How the informant calculates a plan for the puskesmas and also calculating the District Pharmacy Installation itself, the interview as follows:"For planning the drug calculation of the Pharmacy Installation of Jayapura Regency is different from the calculation of the Puskesmas because what we take into account is the use of Puskesmas and Pustu for 1 (One) year and the remaining available drug stock" (Informant 1.)
"Puskesmas in a way that is used from drug use" (Informant 2).
"The matter of calculating drug planning is done by looking at the usage / quarterly and remaining drug available" (Informant 3)
"The calculation of drug needs we use the method of using drugs for 3 (three) months plus warehouse stock" (Informant 4)
"We at the puskesmas system calculate the usage of 3 (three) months from routine requests and the remaining stock in the service units and drug warehouses" (Informant 5)

The results of the interviews of the five informants can be concluded that 3 (Three) informants used the method of calculating the use of drugs and drug stock warehouse, while 1 (One) informant how to use the drug for 3 (three) months and calculate the warehouse stock and stock in the unit the service unit and 1 (One) informant, namely from the Jayapura Regency Pharmacy Installation, calculated the drug planning from the use of the Puskesmas and pustu for 1 (one) year and the remaining stock of the drug warehouse. The report on the use of drugs received from the Puskesmas is around 20 (twenty) puskesmas and Pustu around 34 (thirty four) pustu. Not all Pustu who directly report the use of their drugs to the Jayapura Regency Pharmacy Installation only have a distance that is closer to the Jayapura Regency Pharmacy Installation, while the Pustu that is closer to the puskesmas directly reports its use to the puskesmas and the usage report is combined into a report on the use of puskesmas drugs.

The Puskesmas has 2 (Two) systems for drug demand, namely routine requests and special requests where the second is. Routine requests are carried out in accordance with the schedule prepared by the District / City Health Office for each Puskesmas while special requests are made outside the routine distribution schedule if:

1. needs increase

2. avoid emptiness
3. handling Extraordinary Events (KLB)
4. the drug is damaged and expired

Drug planning in the Jayapura District Pharmacy Installation uses the calculation method from the beginning of the year stock, drug receipts in a year, the remaining drug stock at the end of the year, drug use for a year, average use of medication, how many months has been emptied, waiting time at count for 6 (six) months, buffer stock 20% and drugs disappear or expire in the count of drug planning, after all are calculated then totalled and the result is the drug needs to be spent in the next year.

The calculations made jointly by the Jayapura Regency Pharmacy Installation with the Puskesmas each make a routine drug request. To calculate the buffer stock, which is 1 (One) month 30 (Thirty) days, if 7 (Seven) days count 20% waiting time and stock buffer 10%, so the total buffer stock is 30% for the count of all drug items every routine request, but at in fact, the Jayapura Regency Pharmacy Installation cannot support a 30% stock with consideration of funds, the availability of drug stock in warehouse and labor, so the Jayapura Regency Pharmacy Installation only supports 25% stock buffer for all drug items and within 9 (nine) days the drug has been received by Puskesmas and Pustu. From a count of 7 (seven) days to 9 (nine) days because Saturday and Sunday are not included in the calculation of work time so that it is added 2 (two) days.

Example:

Use of Paracetamol 500 mg in July 700 tablets, August 500 tablets, September 900 tablets. The drug expires November 1, 2016, the remaining stock is 1000 tablets.

How to count:

- July 700 tablets
- August 500 tablets
- September 900 tablets +

1,100 Tablets
2,100 tablets + 25% (buffer stock) = 2,625 tablets
2,625 tablets - 1000 tablets = 1,625 tablets
1,625 tablets / 90 days (3 months) 18.1 tablets / day
20 days x 18.1 tablets = 362 tablets / month
2,625 tablets - 362 tablets = 2,263 tablets / 3 months
2,263 tablets / 3 months = 754.3 tablets / month
So Puskesmas A only needs Paracetamol 500 mg every month, which is 754.3 tablets

Requests for drug buffers to the Provincial Pharmacy Installation use estimated needs unless program drugs such as reagents and vaccines must be made according to the number of needs. In the demand for medicines, not all requests can be fulfilled both drug items and quantities because many districts must be served, so that the distribution is evenly distributed and sees the district from the level of drug needs. Drug requests to the Provincial Pharmacy Installation are carried out not every month or not every day but only when experiencing drug shortages or vacancies.

In planning as for matters that need to be considered technically according to the Ministry of Health rules, it is necessary to pay attention to whether the planned drugs include Level I Basic Health services, included in the National Formulary (FORNAS), National Essential Medicine List (DOEN), List of health program medicines.

4. CONCLUSION

Based on the results of the study it can be concluded as follows:

1. Drug planning is drug management in the Pharmacy Installation. The Jayapura District Health Office in terms of data availability only looks at the use of the puskesmas and the remaining stock. Calculating the drug needs of many health workers who do not understand calculating quarterly drug needs. There was no formation of a planning team at the Jayapura Regency Pharmacy Installation.

2. Procurement of drugs in drug management in the Pharmacy Installation of the Jayapura District Health Office according to the allocation of drug needs for the budgetary sources

3. Drug storage in drug management in the Pharmacy Installation of Jayapura District Health Office:

- From the side of the Puskesmas building all permanent, bertehel, angled angles and good lighting, only the size of the building is still small and feels tight so it cannot accommodate many drugs.
- For fans as air conditioners, shelves and pallets all puskesmas have only refrigerators that are still sitting in another room.
- Narcotics / Psychotropic Medicine Cabinets and ARV drugs are good because it is made separately as an ingredient in anticipating an error during preparation of the drug.
- The arrangement is good because it follows the FEFO (First Expared First Out) system.

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