



# PROCEEDING

THE 2<sup>ND</sup> INTERNATIONAL CONFERENCE ON

PHARMACY AND ADVANCED PHARMACEUTICAL SCIENCES

*Book 2:  
Clinical and Social Pharmacy*

PERPUSTAKAAN  
UNIVERSITAS Gadjah Mada  
JOGJAKARTA INDONESIA



**PROCEEDING**

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## HOW DO INDONESIAN COMMUNITY PHARMACISTS MANAGE THEIR MEDICINES?

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Management of medicines in the community pharmacies has been an interesting topic recently. Mostly in Indonesia, pharmacies are not adequately supervised by the pharmacists. Data showed that 67.3% of patients who visited pharmacy were not encountered by the pharmacist. Another research stated that only 55% of pharmacist was available at the pharmacy everyday. As a consequence, poor drugs handling might be one of the problems exists in the pharmacy. A survey carried out in 5 region in East Java (Surabaya, Malang, Madiun, Jember and Bangkalan) started from February to May 2011. A total 360 community pharmacists were selected and they were voluntarily asked 9 questions on the management of medicines by using questionnaire sheet. The objective of this research is to get the profile of medicines management by community pharmacists. 331 respondents were willing to fill the questionnaire. 68.3% of respondents stated that the owner of the pharmacy was not a pharmacist and majority (75.5%) pharmacy employed only one pharmacist. In medicine procurement, consumption rate was the elected method by 43.3% of respondents. 51.1% of respondents chose distributor as the trusted supplier. Most of the respondents (62.2%) stated that quality guarantee was the prime reason to select drug supplier. When accepting the medicine, 0.3% pharmacists never check expiration date and registration number was always checked by 44.2%. 69% of respondents returned almost expired drugs to the supplier, while 2.5% sold it with cheaper price. High percentage of respondents stated that they had standard operating procedures (SOP) for management process. Serious attention must be pointed to the facts that most of the pharmacist did asset evaluation only once a year and some of them did not possess a standard operating procedure in their daily practices.

**Key words:** community pharmacist, medicine, management

### INTRODUCTION

Management of medicines in the community pharmacies has been an interesting topic since decades ago. The purpose of this management process is to assure the quality of medicines provided in order to fill the patients' demand. Many issues related to poor handling of drugs raise questions on what pharmacy workers usually do behind their desk.

Latest newspaper headlines showed that pharmacy possibly become one of entry points for the distribution of expired medicines (Jawa Pos, 2011).

Mostly, Indonesian Community Pharmacies are not adequately supervised by the pharmacists therefore the legality and the effectiveness of drugs are still questionable subjects for the patients or healthcare providers. Data showed that almost 67% of patients who visited pharmacy were not encountered by the pharmacist (Sukorini et al, 2009). Another research stated that only 55% of pharmacist who frequently available at the pharmacy (Faturrohman,

2007). As a consequence, poor drugs handling might be one of the problems exists in the pharmacy.

## METHODOLOGY

This research focused on how Indonesian Community Pharmacies manage their medicines at the pharmacy. To answer it, a survey carried out in 5 cities in East Java (Surabaya, Malang, Madiun, Jember and Bangkalan) started from February to May 2011. The locations were chosen to represent the heterogeneity of pharmacy practice in Indonesia. A total 360 community pharmacists were selected and they were voluntarily asked 9 questions on the management of medicines in their daily practice. The questionnaire was divided in two main sections, first was characteristic of respondent that covered common issues on age, sex, working experience etc. The second section mainly questioned the involvement of pharmacists on the management of medicines group which was antibiotics.

## RESULTS AND DISCUSSIONS

Management of drugs is a vital part of the pharmacy practice. Management of drugs covers wide range aspects from planning, procurement, handling, storage, service for the patients up to the disposal of unused drugs. Pharmacists are responsible to supervise those steps in order to guarantee the quality of products and the pharmacy service. However, not all pharmacists regularly supervise the management of medicine in the pharmacy. In fact, many pharmacies were not managed properly due to pharmacist inexistence.

This paper evaluated the role of pharmacist in managing medicines in the pharmacy with a purpose to find out the coverage of pharmacist work in managing antibiotics.

From 360 pharmacists who had been asked to fill the questionnaire, 331 respondents were willing to fill questionnaire which response rate of 92%. Characteristic of respondent was shown in Table 1.

Table 1. Characteristic of The Respondent

Item	Antibiotics (N=331) (%)
Gender:	
Male	25.3
Female	74.7
Age:	
22-39year	73.2
40-59year	22.5
> 59 year	4.3
Pharmacy ownership:	
Pharmacist	31.4
Non-pharmacist	68.3
Number of the	



pharmacists:	75.5
One	17.7
Two	4
Three	2.8
Four	
Availability of Pharmacist at open hours:	50.9
Often	43.9
Seldom	4.6
Never	0.6
Missing	
Working hours (per week):	16.2
<10	32.3
10-20	31.4
21-30	20.1
>30	
Working experience (years):	48
<5	18
5-10	20
11-15	14
>15	

Female respondents constituted 74.7% of respondents wherein young age (22-39 year) respondents dominated which was 73.2%. It was also reported that 68.3% of pharmacies were not owned by pharmacist, perhaps this will be a conflict between the owner and manager (pharmacist) in managing a pharmacy. High percentage of pharmacy employed only one pharmacist (75.5%), that have a responsibility to manage the pharmacy due open hours. Meanwhile, 4.6% of respondent stated that they were not available in pharmacy at open hour. Then, 48% of respondent had less than 5 year experience.

In the second section, nine questions regarding management of medicine were asked to the pharmacists. The questions were basis of the pharmacist to procure antibiotics medicine in the pharmacy, the supplier of drug, the reasons for choosing the supplier, checking activity before accepting medicine from supplier, the experience on returning drug product, reasons for returning the product, time for performing asset calculation in a year, basis of the pharmacist to layout the medicine, the management of almost expired drug and provision of standard operating procedure. Table 2 showed the result of the above questions.

Table 2. Profile of Management of Medicines in The Pharmacy

Item	Antibiotics (N=331) (%)
Procurement of medicine based on:	
Consumption rate	40.8
Epidemiology	24.2
Request	29.7
Promotion	4.5
Others	0.8
The supplier of medicines:	
Distributor	51.1
Sub distributor	35
Main Pharmacy	5.4
Other Pharmacy	8.5
Reason for choosing the selected supplier:	
Price	22
Quality guarantee	62.2
Accessibility of service	11.9
Others	1.5
Variables checked when accepting medicine from supplier:	(always/of ten/seldom/never)
a. Product name	95.1/3/1.5 /0
b. Package	88.7/6.7/4.
c. Manufacture date	6/0
d. Expiration date	56.4/16.5/24.7/2.4
e. Strength of drug	86/7.6/5.8 /0.3
f. Product price	61/12.2/21 .9/4
g. Batch number	67.4/13.4/17.7/0.6
h. Registration number	53.4/14.3/29.6/2.4
i. Quantity of product	44.2/14.3/34.2/7
	84.5/7/6.3



	/0.3
Ever returning the product:	63.4
Yes	35.4
No	
Reason for returning the product:	(N=210)
Product defect	18.2
Unsold	5
Inappropriate	32
Expired	41.4
Others	3.4
Missing	0
Frequency of asset calculation per year:	
Every month	11.9
Every 3 month	28.7
Every 6 month	17.1
Once a year	36
Others	6.3
Layout of medicines:	(yes/no)
Alphabetical order	92.1/7.9
Therapeutics group order	32/68
Expiration group order	39.3/60.7
Managing the almost expired medicines:	(yes/no)
Disposal	16.5/83.5
Return to the supplier	69/31
Distribute to other pharmacy	6.7/93.3
Sell with cheaper price	2.5/97.5
Others	5.3/94.7
Having standard operating procedures for below activity:	(yes/no)
Procurement	80.2/19.8
Acceptance	86.6/13.4
Storage	82.9/17.1
Service	82.6/17.4
Disposal	61.6/38.4

When procuring antibiotics, consumption rate was the elected method to procure the drugs which were 40,8%. The majority of the respondents, 51,1% chosed distributors as the trusted supplier of the medicines. Most of the respondents (62.2%) stated that quality guarantee was the prime reason to select drug supplier, 62,2%.

Product name, product package, expiration date, strength of drug, product price and quantity of medicines were the variables that were always checked when accepting the medicines from supplier. Those variables generated more than 60% of pharmacists' response. While, manufacture date, batch number and registration number were least likely to be checked. Checking the medicines was a screening process to assure the quality of those medicines, not only to check the appropriateness between received medicines and the list of order. Consideration must be appointed to the expiration date because 0.3% of pharmacists stated never checked it.

63.4% of the respondents who ever returned the product to the supplier mostly because it was expired (41,4%),

Asset calculation was a regular activity to calculate the medicine stock and to check the physical condition of medicines in order to assure that the medicines were in a safe quantities to fill the patients' demand and still in a good condition to be used as therapeutics substance for patients. The majority of the respondents prefer to perform asset calculation once a year (36%). This fact must be considered, because the pharmacists have to provide a standard operating procedures of medicines services to prevent giving a substandar medicines to the patients.

Alphabetical order was most likely method chosen by the pharmacists to layout their medicines in the pharmacy, while therapeutics group order was least likely method. Therefore, the pharmacists and staffs have to be careful and strictly imply the standard operating procedures to prevent providing a wrong medicines because of a similar name or a similar product.

Most of the respondents inform that returning the product to the supplier was the commonsense reason to manage the almost expired medicines (69%). Meanwhile 6.7% will distribute it to other pharmacy and 2.5% will sell it with cheaper price.

Standard operating procedure is a written procedure contains operational guideline about pharmaceutical works (procurement, production, distribution, and services) and must be available at pharmaceutical facilities. This procedures are continuously revised in accordance with development of science and technology also law and regulation (Government of Indonesia Republic, 2009). The purpose of it is to assure that every process are standardized therefore patient definite outcome will be achieved. More than 60% of repondents stated that they have standard operating procedures for procurement, acceptance, storage, service, and disposal.

## **CONCLUSION**

Serious attention must be pointed to the facts that most of the pharmacist did asset evaluation only once a year, a few number pharmacists manage the almost expired medicines by sold it with cheaper price, and some of the pharmacy did not possess a SOP in the daily practices. These might be a potential entrance for the pharmacy to distribute substandard drug for the patients.



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