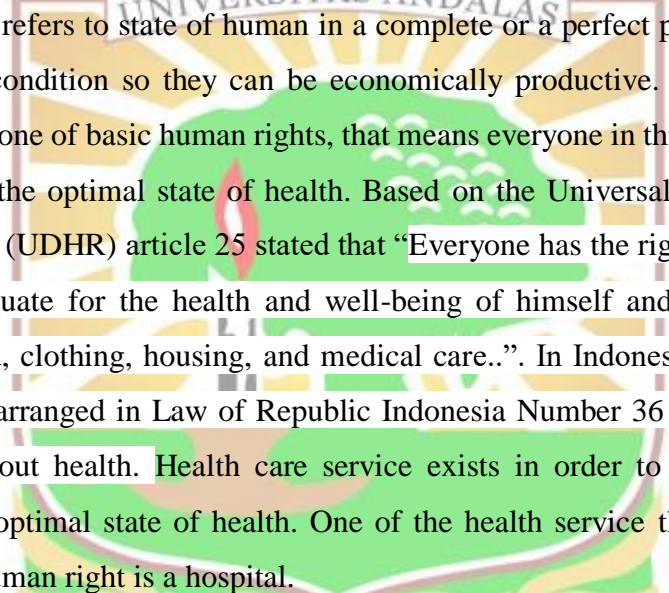


# CHAPTER I

## INTRODUCTION

In this chapter will be discussed the background of the research, problem formulation, the objectives of the research, research scope and the outline of the research.

### 1.1 Background

The logo of Universitas Andalas is a circular emblem. At the top, it says 'UNIVERSITAS ANDALAS'. The center features a green tree with a red flame-like shape in the middle. Below the tree, it says 'KEDJAJAAN' and 'UNTA'. At the bottom, it says 'UNTA KEDJAJAAN' and 'UNTA'.

Health refers to state of human in a complete or a perfect physical, mental and spiritual condition so they can be economically productive. Good health is determined as one of basic human rights, that means everyone in this world has the right to be in the optimal state of health. Based on the Universal Declaration of Human Rights (UDHR) article 25 stated that “Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing, and medical care..”. In Indonesia, this right of health is also arranged in Law of Republic Indonesia Number 36 Year 2009 that concerning about health. Health care service exists in order to help people to maintain this optimal state of health. One of the health service that available to support this human right is a hospital.

Hospital is one of the facilities that provide health service to improve health status. Based on Law of Republic Indonesia Number 44 Year 2009, hospital is a health service institution for the community which is influenced by the development of health science, technology, social-economic life to improve the quality and affordable service in order to improve health status. So, hospital must provide a quality service with an established standard and the most important thing is it can reach all levels of society in Indonesia. In order to reach all of levels society then every region should have a qualified hospital so it can fulfill the necessity of health aspects. Hospital as an institution required to maintain customer trust by improving their service to gain a high level of customer satisfaction (Amin and Nasharuddin,

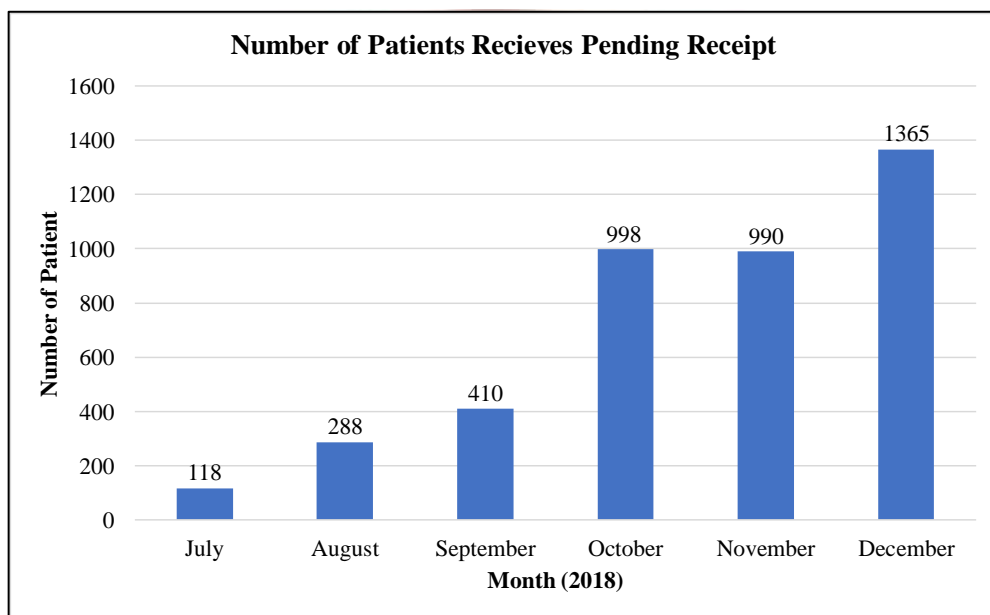
/2013). One of the regions is Padang, as the capital city of West Sumatera which has many hospitals that provide health service for its citizen.

One of those hospital in Padang is Semen Padang Hospital that operates based on the international standard hospital which located in Bypass street no. KM. 7, Pisang, Padang, Sumatera Barat. This hospital is owned by PT Semen Padang has been established since July 5<sup>th</sup>, 2013. This hospital is known as the first international hospital in Sumatera Barat that was built to facilitate the citizen in term of health services and reducing the trend that revealed in Padang for prioritize going abroad only for medical treatment where it needed extra cost and time. Semen Padang Hospital is one of the biggest hospital in Padang and recently receives Paripurna accreditation from KARS (Komisi Akreditasi Rumah Sakit) version 2012 related to the recognition of excellent service quality. So, in term of managing the quality, this hospital must provide the service efficiently and effectively in order to preserve the reputation in society.

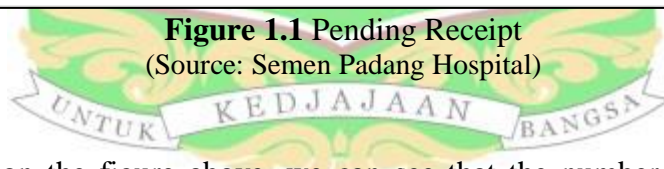
One of the installations that support the operational activity at Semen Padang Hospital is the Pharmacy Installation. Semen Padang Hospital has one pharmacy as the central place that is responsible for the procurement, storage and distribution of medication throughout the hospital. As the main aspect for revenue stream in this hospital, Semen Padang Hospital must be aware of the management in pharmacy especially on pharmacy inventory management. Hospital is in the risk if they cannot provide an appropriate medication for the patient when it is needed. With an adequate pharmacy inventory management, it can improve customer satisfaction, reduce the risk of patient safety and improving financial performance because the revenue cycle in hospital is run effectively (Deloitte and Ahia, 2015).

According to the interview with the head of Pharmacy Installation, there is no policy to manage the procurement of medication in Semen Padang Hospital. The current order quantity is determined based on the average of the last month demand and that will be ordered to fulfill the next 2 until 3 months of demand for each medication. The time to make an order is based on the assumption of the supervisor,

there is no specific calculation to determine it. Because there is no proper policy to manage the stock, many types of medication that run out of stock. Semen Padang Hospital could not fulfill the demand of the medicine for its patients. The patients could not received the medicine in time because there are out of stocks for several medicines at the inventory. So, it affect to the period of getting those required medicines where most of them have a pending issue. The number of pending receipt significantly increase month-by-month and it is getting bigger all the time as shown by **Figure 1.1** below.



**Figure 1.1** Pending Receipt  
(Source: Semen Padang Hospital)

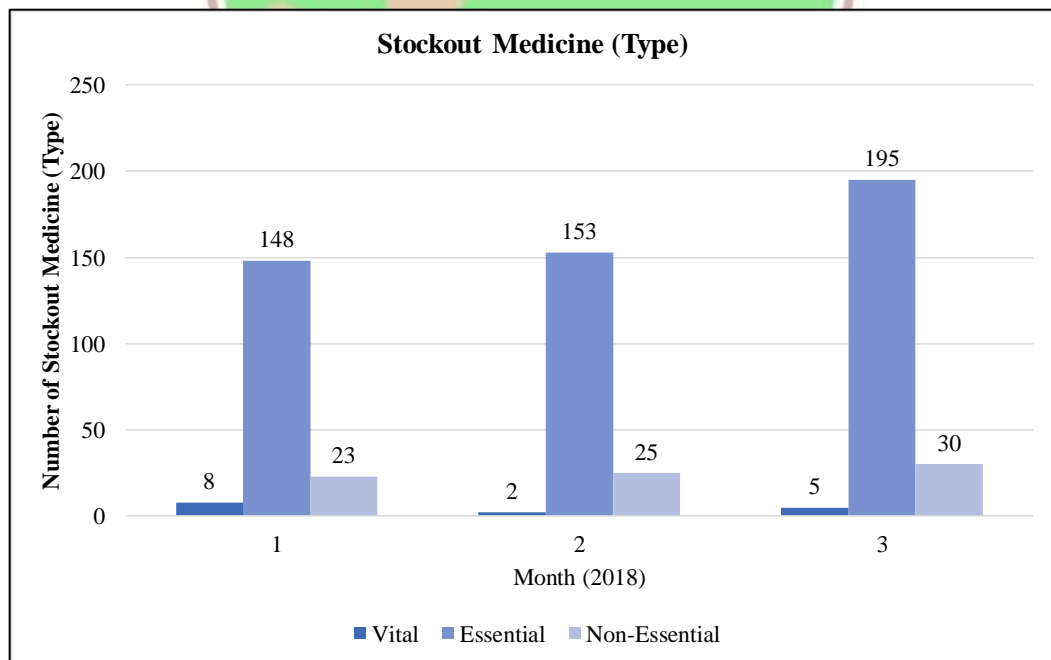


Based on the figure above, we can see that the number of patients that receive pending receipt are increasing ten times greater from July until December. But this data only shows the number of pending receipt, further investigation is needed to know the level of importance for each type of medicine that is pending. However, this condition shows the poor quality of service level in Semen Padang Hospital and it can give a bad impact for the image of this hospital and make the patients move to another hospital.

Medications are categorized into 3 groups based on the level of importance, there are vital, essential, and non-essential (Quick, 1997). The medication that

categorize into vital group is a medicine that must exist and there should be no out of stock condition. Because it has potential for saving live and have significant adverse effects. This medicine has very critical value and that is used to cope with diseases that cause death or for basic health services. The medication that is categorize into essential groups is an effective medicine to reduce pain and widely used in the treatment of most disease. Out of stock condition in this group of medication can be tolerated for less than 48 hours (Quick, 1997). For the last group, non-essential, the medications that are categorize in this group is used for diseases that can heal themselves or self-limiting diseases and the medicine that doubt the benefit compared to other similar medicine. The stockout condition for this group can be tolerated for more than 48 hours (Quick, 1997).

Regarding to **Figure 1.1** the highest pending receipt happened in the last 3 month in 2018 which is October until December. This pending receipt happened because the increase of stockout medicine that shown monthly by **Figure 1.2**. On the figure below, it shows the number of stockout medicine based on the type each month and separated based on the level of importance.



**Figure 1.2** Stockout Medicine  
(Source: Semen Padang Hospital)

Based on the figure above, in each months there are some type of medicine that is categorize in vital group that out of stock. For the essential group, there are more than 150 types of medicine that are out of stock and it increase monthly. Details of stockout medicine that already classified based on level of importance can be seen on **Appendix A**.

The pharmacy in Semen Padang Hospital has a particular book on recording the pending receipt that is called “Buku Dijanjikan”. In this book there is an information about patient’s personal data, type of pending medicine, date of pending receipt and date when they receive the medicine. Based on this book, the average time period between the date of pending receipt and date when they receive the medicine is 6 days for all groups, with minimum period is 3 days dan maximum period is 14 days of weekday.

**Table 1.1** below is example of data in data recapitulation stock out medicines that happened in October – December 2018.

**Table 1.1** Recapitulation of Stockout Medicine in October – December 2018

No	Name of Medicine	Unit	Form	Classification	Stockout	Price	Stockout Cost	Total Stockout Cost
1	ABILIFY SYRUP	BOT	SIRUP	ESENSIAL	12	Rp 222,850	Rp 44,570	Rp 534,840
2	ACETIN TAB EEF	TAB	TABLET	ESENSIAL	2	Rp 86,200	Rp 17,240	Rp 34,480
3	ACYCLOVIR 400 MG	TAB	TABLET	ESENSIAL	1	Rp 675	Rp 135	Rp 135
4	ADALAT OROS 30 MG	TAB	TABLET	ESENSIAL	7	Rp 9,157	Rp 1,831	Rp 12,820
5	AFAMED 320 MG TAB	TAB	TABLET	NON ESENSIAL	1	Rp 11,000	Rp 2,200	Rp 2,200
6	AKILEN 200 MG	TAB	TABLET	ESENSIAL	11	Rp 57,700	Rp 11,540	Rp 126,940
7	ALCO ORAL DROPS	BOT	SIRUP	ESENSIAL	1	Rp 84,439	Rp 16,888	Rp 16,888
8	ALCO PLUS DMP SIRUP 100ML	BOT	SIRUP	ESENSIAL	2	Rp 56,925	Rp 11,385	Rp 22,770
9	ALCOHOL SWAB BD / PCS	PCS	ALKES	VITAL	3	Rp 9,091	Rp 1,818	Rp 5,455
10	ALINAMIN FINJ	AMP	INJEKSI	ESENSIAL	1	Rp 1,054	Rp 211	Rp 211
11	ALLOPURINOL 100 MG	TAB	TABLET	ESENSIAL	1	Rp 130	Rp 26	Rp 26
12	ALPENTIN 100 MG	KAP	KAPSUL	ESENSIAL	54	Rp 995	Rp 199	Rp 10,748
13	ALPENTIN 300 MG	KAP	KAPSUL	ESENSIAL	55	Rp 7,970	Rp 1,594	Rp 87,670
14	ALPRAZOLAM 0.5 MG TAB	TAB	TABLET	ESENSIAL	4	Rp 7,970	Rp 1,594	Rp 6,376
15	ALPRAZOLAM 1 MG TAB	TAB	TABLET	ESENSIAL	4	Rp 1,249	Rp 250	Rp 999

(Source: Semen Padang Hospital)

(See on **Appendix A**)

Regarding to the explanation above, the period of waiting for the pending receipt cannot be tolerated. If this condition continuously happens it will worsen the patient's illness and increase the probability of mortality.

According to the interview with the head of Pharmacy Installation, in order to resolve this issue, the managerial in Semen Padang Hospital implement a solution which is ordering the medicines from partnered hospital and drugstore. However, this solution gives a negative impact for its financial aspect where it is increasing

the price of medicine by 20% higher than normal price and the worst condition is getting loss up to a hundred million rupiah. Based on the calculation of the total stockout cost that can we see on **Appendix A**, the total stockout cost reach thirty million rupiahsSS. The other things that implemented by this hospital are ensuring their patients about the medicines will coming immediately or ask the patients to purchase the medicines from outside hospital or drugstore because out-of-stock condition. Even though the hospital already implements those solutions, these kind of solution gives a bad impact for its financial aspect because it spent more cost than it should be and their quality of service.

Based on the current condition, we can conclude that Semen Padang Hospital does not have an appropriate medication inventory management system and it gives many bad impacts for both patients and hospital. There has been no analysis and evaluation of the medication inventory management system because the negligence of the policy maker. The inventory management on pharmacy installation in Semen Padang Hospital has a complex situation which is concern with patient's safety, quality of service and financial aspect and needed to solve immediately so they can achieve their goals. In order to accomplish the crucial issue then it will be necessary to review their inventory management and proposing the new inventory policy to take care of this issue and conduct a calculation for resolving these issue.

## **1.2 Problem Formulation**

Based on the background above, the problem is Semen Padang Hospital did not have an appropriate ordering system in their pharmacy installation system that cause out of stock condition in several types of medicine. This condition can affect to the performance of Semen Padang Hospital itself both in financial aspect and customer satisfaction. This problem could be solved by proposing policy of medication inventory system in pharmacy inventory management.

The problem formulation in this research is how to design a propose medication inventory control policy that can be applied in the hospital to reduce the stockout condition. This research will be focus on the last three months in 2018 because in that time Semen Padang Hospital has the largest quantity of receipt pending.

### **1.3 Research Objectives**

The objective of this research is to propose medication inventory control policy that can be applied in the hospital to control the inventory level and develop a program application based on excel for the system, so it can minimize the stockout medicine and maintain the quality of service level in Semen Padang Hospital.

### **1.4 Research Scope**

The scope of this research is focusing on managing the inventory system in Semen Padang Hospital. This research is limited only focuses on the last three months in 2018, October until December. Additionally, recommendation about new inventory policy might not be implemented in another hospital because it is adjusting with the hospital itself.

### **1.5 Outline of Research**

The outline of this final project consists of five chapters with the systematic as follows:

#### **CAHPTER 1 INTRODUCTION**

This chapter introducing the subject to be discussed that contains of background problem formulation, objectives, scope and outline of the research.

#### **CHAPTER 2 LITERATURE REVIEW**

Literature review provides an overview of all the theoretical basis that related to the subject of final project. This chapter defines the

inventory such as definition, types and function, inventory control and economic order quantity

### CHAPTER 3 RESEARCH METHODOLOGY

This chapter discusses about the research methodology that is used in this final project. Research methodology describes the systematically step to solve the problem of this research, from the beginning until the end of the study.

### CHAPTER 4 RESULT AND DISCUSSION

Result and discussion will be present and analyze the data collected.

### CHAPTER 5 CONCLUSION AND RECOMMENDATION

This chapter contains the conclusion of the research and the recommendation for the next research

