

**UNIVERSITI TEKNOLOGI MARA**

**A RETROSPECTIVE STUDY**

**PRESCRIBING PATTERN OF ANTIHYPERTENSIVE DRUGS  
IN AN OUTPATIENT SETTING IN HOSPITAL KAJANG,  
SELANGOR**

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Dissertation submitted in partial fulfillment of the requirements for the

Degree of

**BACHELOR OF PHARMACY (HONS.)**

**FACULTY OF PHARMACY**

**JUNE 2015**

## ACKNOWLEDGMENT

Alhamdulillah, praised to Allah SWT, the Most Gracious, the Most Merciful, for his blessing, I am able to complete this thesis. First of all, I would like to take this opportunity to express my profound gratitude to my supervisor, Madam Hanis Hanum bt Zulkifly, for her exemplary guidance, monitoring and constant support throughout the course of this thesis.

I would also like to express a deep sense of gratitude to the Director of Hospital Kajang, Dr Kuldip Kaur A/P Prem Singh for giving me permission to do this research in the hospital as well as the head outpatient pharmacy department, Madam Zahrah bt Samsuri. I am obliged to the pharmacy outpatient staff, as well as provisionally registered Pharmacist (PRP) that help in analyzing the prescriptions. I am really grateful for their cooperation during the data collection.

My deepest gratitude goes to my beloved parents, Mr Jusoh @ Mohd Bin Abdullah and Mrs Zabedah Binti Ngah who have been constant source of inspiration during the preparation of this research and also to my sibling for their endless love, prayers and encouragement.

Last but not the least, I would like to extend my thanks to all my faculty members and everyone that involve directly or indirectly in this research. I have taken efforts in this research. However, it would not have been possible without the support and help of many individuals and organizations. I would like to extend my sincere thanks to all of them.

Nurul Aina Binti Jusoh @ Mohd.

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## ABSTRACT

**Introduction:** Hypertension is known as a silent killer that can affect the global health crisis. Elevated blood pressure is difficult to control if the diagnosed patients have comorbidities.

**Aim:** The aim of this study is to identify the characteristics of hypertensive patients treated in Hospital Kajang. This study also aim to observe the trend of the management of hypertension in terms of drug classes and types of medication and to observe the trend of the management of hypertension among patients with comorbidities.

**Method:** Complete data from antihypertensive prescriptions were collected retrospectively from October 2014 until December 2014. A total of 1002 prescriptions for patients diagnosed with hypertension were identified using convenient sampling and undergo further analysis.

**Results:** The dominant gender in hypertensive patients were male (52.3%). The majority of patients were Malay (53.5%), followed by 24.1% of Chinese and 22.0 % for Indian. Most hypertensive patients were in the range of 50-59 years old. The most common drug classes involved in this study was calcium channel blockers (58.5%) followed by beta blockers (50.6%).Combination therapy 653(65.2%) were used more than monotherapy 349(34.8%). Most hypertensive patients with comorbidities use calcium channel blockers.

**Conclusion:** This study showed that most hypertensive patients were given combination drug therapy rather than monotherapy as most of them have comorbidities. The frequently used class of antihypertensive drugs was calcium channel blockers. Based on the Eighth Joint National Committee (JNC 8), calcium channel blockers are also highly recommended as first line treatment as monotherapy or combination therapy for hypertension.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Hypertension**

Hypertension is known as a silent killer that can affect the global health crisis (WHO, 2013). Hypertension is defined when a person prolonged systolic blood pressure of greater than 140 mm Hg or which sustained diastolic blood pressure of greater than 90 mmHg. Hypertension is caused by the increase of peripheral vascular arteriolar smooth muscle tone, which it can lead to the increase of arteriolar resistance and reduce of capacitance of the venous system (Clark, Harvey, Finkel, Rey, & Whalen, 2011). Hypertension commonly occurs in Malaysia, which is about 15 % - 20 %, and subsequently generates many types of disease such as heart failure, stroke, myocardial infarction and renal disease (L Rampal, Rampal, Azhar, & Rahman, 2008). According to a survey conducted, an estimate of 65 million US adults showed increased diagnosed of hypertension as the epidemic of obesity increased (Ma, Lee, & Stafford, 2006).

According to World Health Organization (2013), high blood pressure affects more than one in three adults and leads to more than nine million deaths worldwide every year.