

**UNIVERSITI TEKNOLOGI MARA**

**THE STUDY OF ORAL ANTI-DIABETIC DRUGS UTILIZATION  
AT OUTPATIENT DEPARTMENT OF  
HOSPITAL TENGKU AMPUAN RAHIMAH;  
A CROSS SECTIONAL STUDY**

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## ABSTRACT

This study was mainly designed to determine drug use pattern of oral anti-diabetic medications among patients with type 2 diabetes mellitus and to compare drug and dose of oral anti-diabetics drugs prescribed to adults and geriatric patients. A retrospective cross sectional quantitative descriptive study had investigated by involving ambulatory patients of Hospital Tengku Ampuan Rahimah with confirmed with Type 2 Diabetes Mellitus. 2893 of 9927 prescriptions from November 2013 had been selected and 291 patients had used oral anti-diabetic medications. Half of diabetic patients had prescribed with metformin. Only 3% patients had prescribed anti-diabetic medication out the recommended dose. Almost all (97%) physicians follow the Malaysian's Clinical Practice Guideline in term of dose of anti-diabetic medications. There is not much difference in drug prescribing pattern among adult and geriatric patients. However, physicians do not follow the Malaysian's clinical practice guideline in prescribing of glibenclamide to geriatric patients. It can lead to hypoglycemic episodes. As an conclusion, majority of physicians of Hospital Tengku Ampuan Rahimah (HTAR) had followed the guideline in giving the best pharmaceutical care to patients

Keyword: ambulatory patients, oral anti-diabetic medications, metformin, glibenclamide, hypoglycemic episodes.

# CHAPTER 1

## INTRODUCTION

### 1.1 Background

Diabetes mellitus is a global health problem that keeps growing among patients without considering any ages (Ahmad et al., 2013). It is also known as a chronic disease with increasing morbidity and mortality rate and physical and sexual dysfunction in worldwide (Yun et al., 2007). In the worldwide, the estimated diabetic prevalence for all ages in year 2000 was 2.8 % and expected to rise to 4.4 % in 2030 (Shaw et al., 2010). Epidemiologist predicts the diabetic population will be escalated up to 300 million in 2025 and half of them will be in the Asia/Ocean areas (Zaini, 2000).

The main causes of diabetes mellitus are aging of population and increase in obesity prevalence (Virally et al., 2007). The majority of the diabetes prevalence appears to be increasing in proportion > sixty five years old. The greatest increase in diabetes prevalence is estimated among elderly who  $\geq$  seventy five years of age around 27.1% in women and 43.7% in men (Boyle et al., 2001). The number of diabetic patients is rising due to growth of population, aging of people, urbanization, increasing the obesity prevalence and lack of physical activity (Wild et al., 2004).