UNIVERSITI TEKNOLOGI MARA

DRUG UTILIZATION REVIEW
AMONG GERIATRIC PATIENTS AT PRIMARY CARE SETTING

NURULAIDA BINTI BAHAROM

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ABSTRACT

Background : Definition of geriatric population or elderly people as those people aged more than 60 years old that undergo aging process. Changes in both pharmacodynamics and pharmacokinetics is more pronounced in patients exposed to multiple drugs consumption due to multiple diseases, adverse drug reaction (ADRs) and potentially inappropriate medication (PIMs), which contribute to the reasons for hospitalisation. Potentially inappropriate medication (PIMs) can be identified by using the drug utilization research (DUR). DUR is used to assess the rationality of medicine use, which is beneficial in elderly and allows insight on how drugs are being used compared to current recommendation or guidelines.

Objective: The objective of this study was to investigate the medication prescribed to elderly patients at primary care setting.

Method: This was a retrospective medical records review study. The utilized medications were assessed and identified from electronic Clinic Management System (eCMS) from 1 January 2013 until 31 December 2013. Define daily dose (DDD) per 1,000 inhabitants per day calculated to provide rough estimation of geriatric population receiving standard treatment on a daily basis. List of utilized medications and potentially inappropriate medication was listed.

Result: 200 patients were eligible for the final analysis. By using eCMS database, its showed that 2843 medications were prescribed to geriatric patients attending the health clinic in Klang district from January 2013 until December 2013. Out of 200 patients, female has higher percentage than male with 59% female versus 41% male. Most of the patients were Malay, accompany by Chinese and India. The percentage as per distribution was 49.50%, 30% and 20.50% respectively. The top five most utilised medications (DDD) were amlodipine (1.973) followed by perindopril (1.277), metformin (1.243), paracetamol (1.037) and atenolol (0.867). The

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INTRODUCTION

1.1 Background

In many countries, the population around 60 to 65 years old is said to be starting of old age or specifically called the elderly. The ageing process is out of human control and has its own dynamics. In Malaysia the population aged 70 is increasing from 2.21 % in 1990 to 3.5% in 2020 (Karim, 1997). In some instances, other parties defined meaning of old age as an event due to physical fitness decline, reduction in homeostatic mechanisms and a response to receptor stimulation (Eldesoky, 2007). Alteration of pharmacodynamics and pharmacokinetics in elderly induces use of multiple drug (Jörgensen, Johansson, Kennerfalk, Wallander, & Svärdsudd, 2001).

According to World Health Organization (WHO), drug utilization is the marketing, distribution, prescription and use of drugs in society. Generally, drug utilization studies also labelled analytical pharmacoepidemiology as a research which emphasizes on effects of drugs, both the beneficial and adverse effects. Data on drug utilization can be used to estimate sex, age, social class and possible under- or over- utilization that will lead to PIMs.

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