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Unpredicted visits of the Emergency Department due to medications? Can we prevent it?

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Introduction

Medication Related Visits (MRVs) are a substantial cause of hospital admissions. However, little is known about the incidence, preventability and severity of MRVs resulting in Emergency Medical Ward (EMW) visits in Hong Kong. To address this issue, we conducted a retrospective survey in the EMW of a teaching hospital in Hong Kong.

Objectives

Medication-related visit (MRV) is an event or circumstance involving drug therapy that actually or potentially interferes with the desired health outcome. The extent and characteristics of MRVs in the emergency department (ED) of Hong Kong are unknown. The aim of this study is to determine the epidemiology of and identify risk factors for MRVs in a bustle and rustle ED in Hong Kong.

Methodology

Patients (n= 479) were selected randomly from EMW during the one-month study period (01/09/2015 to 30/09/2015). Clinical Data Analysis & Reporting System (CDARS) was used to select fifteen beds daily at EMW on different time frame. Patient was eligible to be included if either transferred to EMW or admitted through it due to MRVs. All medical records were subsequently validated by one clinical pharmacist, one emergency physician and one medical physician to determine whether the visit was the result of a MRV.

Result

Results: Among the 479 patients (mean age: 65.5 years; female to male ratio: 1.5:1) included in the study, the EMW visit was identified as medication related for 31 patients (6.5%); of these, 22 visits were deemed preventable. Severity was classified as mild in 27.3% of the 22 cases, and moderate in 72.7%. The most common reasons for medication related visits were non-adherence (39.3%), non-adverse drug reactions (27.9%) and the use of the wrong or suboptimal drug (11.5%). The most frequently incriminated drug classes were: (i) cardiovascular drugs (n = 15; 68.2%); (ii) analgesics including NSAIDs (n =4; 18.2%), (iii) hypoglycemic agents (n = 2; 9.1%) and; (iv) anti-epileptic agent (n = 1; 4.5%). Conclusions: A medication-related cause was estimated to be 31/ 479 (~ 1 in 15). The figure may even be higher for the minor MRV cases in daily EM visit that are not requiring EMW admission. MRVs leading to emergency department visits are frequent, and many are preventable, confirming that there is a need to develop prevention strategies. Medication review, medication monitoring and enhancing drug adherence strategies should be emphasized. Finally, further study with longer duration focusing on MRVs before the transferal to

EMW should be conducted.