



Service Priorities and Programmes
Electronic Presentations

Convention ID: 905

Submitting author: Dr May CHAN

Post title: Pharmacist, TKOH, KEC

A Step Forward to Improve Medication Safety in Patients with Renal Impairment

MAK CK, CHAN MWY, LAW WL, CHAN NC, CHEN J, KOO HY, LAM YY, LAU CK, LUI LK, SUEN KW

Department of Pharmacy Tseung Kwan O Hospital

Keywords:

Renal impairment

Pharmacists

Medication safety

Introduction

Safe medication practices play a key role to prevent medication errors in the hospital setting. High risk medications that need renal dosage adjustment bear a significant heightened risk of causing patient harm. Current inpatient medication order entry (IPMOE) in Hospital Authority can prevent errors at the ordering and transcribing stage by ensuring legible and complete orders. However, it lacks clinical decision support that provides laboratory information and fails to alert clinicians when ordering medications that require renal dosing adjustment for patients with elevated serum creatinine. To enhance medication safety, a pilot program was implemented in an acute hospital pharmacy to heighten the awareness of appropriate dosing for renally impaired patient, especially when high risk medications that need renal dosage adjustment are ordered.

Objectives

1)To enhance safe medication hospital practices in patients with renal impairment. 2)To facilitate pharmacists in renal dosage checking. 3)To evaluate the impact of the program post implementation in terms of numbers and type of medications intervened and acceptance rate by clinicians.

Methodology

Renal dosage tables covering over 120 commonly prescribed drugs were compiled and cross-checked by pharmacists. Eleven drugs including acyclovir, digoxin, vancomycin, aminoglycosides and anticoagulants were selected as high risk medications. Prompts were set in IPMOE to alert pharmacists when high risk medications were vetted to check patients' renal function from electronic patient record (EPR). Pharmacists were also encouraged to check renal function of geriatric patients and patients on medications for chronic renal impairment. When necessary, pharmacists would make recommendations to clinicians on renal dosage adjustment. Recommendations documented in October and November 2017 were evaluated

Result

From October to November 2017, a total of 267 recommendations for renal dosage

adjustment were made. 32 (12%) were related to high risk medications: acyclovir (4), aminoglycosides (5), anticoagulants (16), digoxin (5) and vancomycin (2). Recommendations for other medications included beta-lactam antibiotics (155), quinolones (41), antivirals (15), opioids/NSAIDS (11) and miscellaneous (13). 239 (90%) recommendations were fully accepted by clinicians, 9 (3.4%) partially accepted, 7 (2.6%) non-traceable and 1(0.4%) declined. Results of this pilot program is encouraging as it shows that pharmacists can make a step forward to improve medication safety. It helps pharmacists to better safeguard patients with renal impairment, optimize treatment and preventing medical errors.