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Submitting author: Miss Lorraine LI

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Implementation of Pharmacist-Led Medication Reconciliation Service in Surgical Wards targeting High Risk Patients

Li LLY(1)(2), Tsoi HHY(2), Ewig CLY(2)

(1)Department of Pharmacy, United Christian Hospital, (2)School of Pharmacy, Faculty of Medicine, The Chinese University of Hong Kong

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Introduction

Medication errors are common during transitions of care. Surgical patients are particularly at risk due to transfer of patients in and out of operating theatre, change of medications before and after surgical intervention, and frequent use of high risk medications such as opioids and anticoagulants. Clinical pharmacist involvement in medication reconciliation has been shown to improve the effectiveness of identifying and rectifying drug-related problems (DRPs), and to enhance medication safety. For this reason, medication reconciliation has been prioritized as one of five top patient safety strategies, within World Health Organisation (WHO) Action on Patient Safety: High 5s Project.

Objectives

This project aimed to provide medication reconciliation service to high-risk surgical patients to enhance medication safety.

Methodology

A pilot targeted approach medication reconciliation service was implemented at two surgical wards in the United Christian Hospital since fall 2014. Clinical pharmacists provided medication reconciliation services to high-risk patients by interviewing patients and reviewing their medication history. High-risk patient screening criteria include at least one of the followings: 1) Patients older than 65 years of age; 2) Concurrent use of five or more regular medications; 3) An active order of anticoagulants, insulin or dual antiplatelets. Clinical pharmacists identified and recorded DRPs using documentation form based on Pharmaceutical Care Network Europe (PCNE) version 6.2. Following institutional review board approval, data were collected prospectively over 3 months. The potential severity of the DRPs was rated according to The National Coordinating Council for Medication Error Reporting and Prevention (NCC MERP) index by four independent pharmacists.

Result

A total of 1183 patients including 738 admission cases and 445 discharge cases were reviewed by clinical pharmacists. The mean \pm -SD age of the patients was 75.00 \pm -11.62 years. For admission cases, a total of 618 patients (83.7%) were over 65 years, 501 patients (67.9%) were taking five or more regular medications, while 69 patients (9.35%) were on an active order of anticoagulants, insulin or dual antiplatelets. There were 150 DRPs identified, the proportion of DRPs with severity ratings of level 1, 2, 3 was 45.3%, 45.3% and 9.3% respectively, with Cohen's Kappa 0.513. The most frequent type of DRPs was medication omission (43.7%), followed by unnecessary medication (18.5%). The most frequent medication involved according to WHO ATC classification was medications for alimentary tract and metabolism (28.0%), followed by cardiovascular medications (20.0%), anti-infective for systemic use (14.7%) and nervous system medications (11.3%). There were 150 interventions recommended to physicians, of which 148 (98.7%) were accepted.