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Evaluation of a Pharmacist-driven Inpatient Discharge Counseling Pilot Service for High-risk Patients: Impact on 30-day Unplanned Readmission Rates

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Introduction

Hospital readmission is a key undesirable outcome of healthcare systems. Care transitions with a focus on medication management are well known to improve health outcomes and preventing costly readmissions. Pharmacist plays an essential role in identifying and resolving medication problems and providing medication education to patients in order to prepare them managing medication therapy at discharge. Pharmacists' counseling interventions at discharge and continued follow-up activities could be expected to reduce adverse drug events, use of emergency care and hospital readmissions.

Objectives

This study aimed to investigate the impact of pharmacist-driven inpatient discharge counseling pilot service on reducing 30-day unplanned hospital readmission and 30-day emergency department visit in patients with high-risk disease states.

Methodology

Design. Randomized, controlled trial of 63 participants were recruited. **Subjects.** Patients aged over 18 who were admitted to medical wards (E4 and N3) with primary diagnosis of atrial fibrillation, chronic obstructive pulmonary disease, diabetes mellitus, heart failure, or ischemic heart disease and were taking more than or equal to five chronic medications. **Intervention.** Participants received admission medication reconciliation, discharge counseling and 72 hours post-discharge follow-up telephone call. **Outcomes.** 30-day unplanned hospital readmission rate and 30-day emergency department visit rate were compared among study groups. Other outcomes are number and nature of interventions (using Pharmaceutical Care Network Europe (PCNE) drug related problems (DRP) Registration Form V6.2), and patient

satisfaction at the end of study.

Result

The hazard ratio of intervention group for 30-day unplanned all-cause readmission and 30-day emergency department visit rate was (0.950, CI 0.255-3.540; $p=0.94$). The hazard ratio of intervention group for 30-day unplanned same-cause readmission was (0.386, CI 0.040-3.711; $p=0.410$). Two drug related problems were identified during medication reconciliation. Among the intervened patients, 83.3% of participants found that the discharge counseling service has improved their understanding about the medication. 94.4% of participants were satisfied or very satisfied with the discharge counseling service and telephone follow-up. In conclusion, the project results of the current study demonstrated a numerical reduction in the 30-day unplanned readmission rate and 30-day emergency department visit rate. This counseling service is associated with a positive effect on medication understanding and patient satisfaction.