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Impact of Clinical Pharmacist Medication Review to Improve Appropriate Prescribing in Elderly Patients: A Randomized, Controlled Trial

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Introduction

Inappropriate prescribing is common among the elderly patients. A local study showed 50% of the elderly patients with polypharmacy in Hong Kong had inappropriate medications. Prior study has shown that clinical pharmacist medication review in geriatric patients can reduce inappropriate prescribing, number of medications and ADE-related hospital admissions.

Objectives

The study aims to evaluate the impact of clinical pharmacist medication review in the Specialized Outpatient Clinic (SOPC) to improve appropriate prescribing as demonstrated by Medication Appropriateness Index (MAI).

Methodology

A prospective randomized controlled trial was conducted in SOPC of the Department of Medicine in Pamela Youde Nethersole Eastern Hospital. Patients were eligible for the study if they 1. attend medical follow up in SOPC, 2. were 65 years or older, 3. had hyper-polypharmacy which was defined as 10 or more regular drugs, and 4. provided informed consent. Exclusion criteria were patients who had 1. cognitive impairment and/ or non-communicable and did not have caregivers, and 2. received pharmacist medication review within six months before randomization. Eligible patients were randomly allocated to a 1:1 ratio using a computer-generated sequence into either Pharmacist Medication Review (PMR) group or Standard Of Care (SOC) group. The primary outcome of the study was the change in Medication Appropriateness Index (MAI), which was measured at randomization before physician's visit and at follow-up (1 month after the randomization). Secondary outcomes included the change in the number of medications, the number of pharmacist interventions, physician's acceptance rate and patient satisfaction.

Result

241 patients were included in the study, 124 in PMR group and 117 in SOC group. A significant improvement in MAI was observed in PMR group as compared to the SOC

group (-5.04 4.96 vs -1.39 2.84, p