



Service Priorities and Programmes
Electronic Presentations

Convention ID: 937

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A Prospective Study to Evaluate Pharmacist Interventions on Inappropriate Medication Use and Polypharmacy in Elderly Patients

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Keywords:

Polypharmacy
potentially inappropriate medications
drug-related problems
pharmacist interventions
medication appropriateness index
geriatrics

Introduction

Inappropriate medication use and polypharmacy are linked to various drug-related problems. Over the years, efforts have been made around the world to reduce inappropriate prescribing. However, in Hong Kong, pharmacists' involvement in combating this problem has been relatively limited and there is a lack of local studies addressing this issue.

Objectives

The objectives were to evaluate the impact of pharmacists' intervention on medication appropriateness and polypharmacy in geriatric patients.

Methodology

This was a prospective study conducted in the Medicine & Geriatrics (M&G) Department of Tai Po Hospital, an 800-bed rehabilitation hospital of the Hospital Authority. Patients in intervention group received medication review by pharmacists during ward round twice weekly; while patients in control group received standard care. Medication Appropriateness Index (MAI) was used to assess medication appropriateness.

Result

The primary outcomes were the difference in MAI on admission and discharge between intervention group and control group and the difference in the average number of drugs upon admission and at discharge. Over a period of 5 months, 308 patients were included in the study. MAI changed from 4.18 ± 3.14 to 2.23 ± 2.27 ($p < 0.001$) and 4.01 ± 3.48 to 4.04 ± 3.64 ($p = 0.992$) in intervention and control group respectively. The difference in change in MAI between the two groups was statistically

significant ($p < 0.001$). There was no difference in the change in number of medication between the two groups. This study demonstrated that pharmacist intervention on ward level was effective in reducing inappropriate medication in geriatric patients as defined by the MAI.