



## Service Priorities and Programmes Electronic Presentations

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### **Evaluating Medication-Related Fall Risks in Hospitalized Patients who Fell during Hospital Stay**

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#### **Keywords:**

Fall

Polypharmacy

Fall-risk increasing drugs

#### **Introduction**

Many studies have proven polypharmacy and use of fall risk-increasing drugs are associated with increased risk of fall. A multifactorial fall risk assessment followed by interventions such as minimization of polypharmacy and fall-risk increasing drugs is an effective strategy to reduce the risk of fall in elderly. Vitamin D supplementation is also recommended by guidelines as it can improve muscle strength and may reduce fall in those who are vitamin D deficient. Although elderly with a history of fall is at particular risk of recurrent fall, medication-related fall risk assessment, review for medications and vitamin D supplementation were often overlooked in patients who fell in wards where clinical pharmacists are not routinely present. In recent years, the tool called Medication Fall Risk Score (RxFS) was endorsed by the Agency for Healthcare Research and Quality in the US to identify medication-related fall risks in hospitalized patients and guide for medication evaluation by pharmacists.

#### **Objectives**

To evaluate the medication-related fall risks in patients who fell during hospital stay, and the frequency of prescribing vitamin D supplementation for secondary fall prevention.

#### **Methodology**

All cases of in-patient falls which occurred in six medical admission wards in Queen Mary Hospital and reported via Advanced Incident Reporting System between Feb 2017 and Nov 2017 were analyzed retrospectively. Outcome measures were categorized as (1)prevalence of polypharmacy ( $\geq 4$  regular non-external medications), (2)mean RxFS at the fall episode, and (3)frequency of Vitamin D supplementation one month after the fall episode.

#### **Result**

Fifty-seven cases (46% female, mean age 70.0 years, SD 13) were collected during the 10-month period. Eighty-six percent of patients had polypharmacy with mean number of medication of 7.2. The mean RxFS is 5.9, and 47.3% were categorized as

higher risk for fall and warrants medication evaluation (score  $\geq 6$ ). Only 4 out of 50 patients (8%) were given Vitamin D after the fall episode. Polypharmacy was highly prevalent and high medication-related fall risks were not uncommon in patients who fell in hospital. In addition, awareness to guideline recommendations of vitamin D supplementation was suboptimal. Ward pharmacists could play an indispensable role in conducting medication-related fall risk assessment and providing pharmacological interventions in these patients to reduce risks of recurrent fall.