



## Service Priorities and Programmes Electronic Presentations

**Convention ID:** 883

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### **Pharmacist steps to integrated care in high-risk geriatrics Ward Aged Patient Pharmacist Service (WardAPPS)**

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#### **Keywords:**

WardAPPS

Pharmacist

Geriatrics

ICM

Drug-related problems

Drug-related problems

#### **Introduction**

Integrated care model (ICM) was commenced in KCC hospitals since Oct 2011 to categorize elderly patients with HARRPE score  $\geq 0.2$  which are 20% risk of emergency admission in 28 days. These high-risk elderly are prone to drug-related problems (DRP) including polypharmacy, non-adherence, interactions, adverse drug events. WardAPPS is a service that pharmacists proactively review the medications of geriatric inpatients under ICM and conduct an effective medication review by collaborating with physicians.

#### **Objectives**

- Identify reconciliation errors - Identify DRP and advise potential mitigation solutions - Provide medication counseling to patients

#### **Methodology**

ICM office informed pharmacy about patients with HARRPE  $\geq 0.2$  in 5A medical extended care ward. The pharmacist performed clinical medication review three sessions weekly to identify any reconciliation errors or DRP and to assess patient compliance as far as possible. Weekly grand round was performed by pharmacist and geriatrician. Appropriate pharmacist interventions were made to patients, prescribers, nurses or ICM office and were documented in a web-based program.

#### **Result**

From July to December 2012, a total of 238 patients (44.5% male, 47.5% old-aged home resident) were studied. Their mean age was  $83.2 \pm 9.8$  and HARRPE score was  $0.36 \pm 0.13$ . Reconciliation error Admission and discharge reconciliation was performed in 238(100%) and 42 patients(17.6%) respectively. There were 16 reconciliation errors(6.7%) identified, with 11 errors(68.8%) caused by omission of

drugs. 75.0% pharmacist interventions were accepted by prescribers. Drug-related problem 78 DRP were found in 238 patients and classified according to Pharmaceutical Care Network Europe(PCNE). - Treatment effectiveness:54(69.2%) - Adverse reactions:20(25.7%) - Treatment costs:4(5.1%) 8(10.3%) and 53(67.9%) DRP were rated as serious and significant severity. 85 pharmacist interventions were made. Among these, 41 interventions were made to prescribers in which 37(90.2%) were approved that led to 36 drug regimens changed. There were 27 drug information provided to prescribers and 17 drug compliance counseling delivered to patients/carers. 6(7.7%) and 55(70.5%) pharmacist recommendations were classified as contributing very significant and significant value in patient care. Medication counseling 46 patients/carers received individualized drug education and 13 patients received discharge counseling. Doctors, nurses and patients generally agreed WardAPPS can optimize pharmacological management of geriatrics. Conclusions WardAPPS is a pioneering service in Hong Kong to involve pharmacists in managing high-risk geriatrics. Over 75% drug-related problems with significant severity were prevented. Pharmacists contribute notably to improve medication safety and therapeutic outcomes. We also establish effective patient medication counseling and implement multidisciplinary care in geriatrics.