



## Service Priorities and Programmes Electronic Presentations

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**Submitting author:** Ms Karen WONG

**Post title:** Physiotherapist I, Tseung Kwan O Hospital

**KEC Allied Health Fall Prevention Clinic - Two years' service review and associated fall risk prediction among community dwelling elderly**

*POON A (2), WONG KY (1), WONG SW (3), AU TK (1), WAN SH(2), YIP CT (4), CHAO DVK (5), CHAN PF (5)*

*(1)Physiotherapy Department (IRS), TKOH,*

*(2) Occupational Therapy Department, UCH,*

*(3) Physiotherapy Department, UCH,*

*(4)Occupational Therapy Department (IRS), TKOH*

*(5) Department of Family Medicine & Primary Health Care, United Christian and Tseung Kwa*

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**Introduction**

A study in 2007 showed that the prevalence of having at least one fall in the elderly in preceding 12 months was 19.3 %, with 7.2 % and 5.9% of fallers resulting in serious injuries and fractures respectively. In 2014, there were totally 41,249 in-patient deaths in public and private hospitals, 241 of them registered death due to falls. Fall management is not just treating the injuries resulted from falls, it should adopt a proactive approach for prevention via early identification of fall risk factors.

**Objectives**

Allied Health Fall Prevention Clinic has been implemented in GOPCs of KEC since 2009. The program includes fall risk assessment, education, empowerment and physical exercise training conducted by a physiotherapist and an occupational therapist. It aims to stratify risk levels, identify risk factors, improve balance, functional independence and reduce fall rate of community dwelling elderly.

The aims of this study were:

1. To review KEC fall prevention service in lowering fall rate, Accident and Emergency Department (AED) attendance and severe injuries as well as improving physical and behavioral outcomes.
2. To identify the risk factors for prediction of fall in 3, 6 and 12 months.

**Methodology**

A pre-test and post-test design was adopted. Outcomes measures included: (1) Fall rate, fall related fracture and AED service utilization, (2) Physical performance (pain,

Berg Balance Scale and Functional Reach Test), (3) Risky Behavior (Falls Behavioral Scale for the Elderly). Relationship between fall and determinant factors were also studied.

### **Result**

From April 2014 to July 2016, 656 patients (450 female, 206 male, mean age of  $75.8 \pm 8.9$ ) completed the fall prevention program. 412 (62.8%) patients and 244 (37.2%) patients were stratified as low and medium fall risk groups respectively. All outcome measures showed significant improvement including fall rate ( $p < 0.001$ ), AED attendance ( $p = 0.032$ ), fracture rate ( $p < 0.001$ ) and Falls Behavioral Scale for the Elderly ( $p < 0.021$ ). Logistic regression analysis revealed that the main determinants for recurrent falls were older age ( $p = 0.007$ ), female gender ( $p = 0.043$ ), previous fall history ( $p < 0.001$ ) and risky behavior ( $p \leq 0.035$ ).

#### **Conclusion:**

KEC Allied Health Fall Prevention Clinic was effective in improving functional independence, reducing fall rate, AED service utilization and injury related to fall among community dwelling elderly. The main determinants for recurrent falls were older age, female gender, history of fall and risky behavior. Further enhancement of the service by providing booster program for those elderly with higher fall risk could be considered.