



## Service Priorities and Programmes Electronic Presentations

**Convention ID:** 955

**Submitting author:** Mr Man Tung Ng

**Post title:** Physiotherapist I, United Christian Hospital,

### **Physiotherapy 'SmartMove Programme' – A Revolutionary Intervention for Elderly with Early Cognitive Impairment in Hospital Authority**

*Ng MT(1), Lo MY(1), KM HO(1), Wong SW (1) Wong ST(2), Wong KT(2), Chan KL(2), Ma CY(3), Chan CC(3), Yung CY(3)*

*(1) Physiotherapy Department, United Christian Hospital (2) Physiotherapy Department, Haven of Hope Hospital (3) Department of Medicine and Geriatrics, United Christian Hospital*

#### **Keywords:**

cognitive impairment  
exercise intervention

#### **Introduction**

Cognitive impairment is one of the most prominent healthcare concerns worldwide. It imposes a high social–economic burden to the society. Research evidence strongly suggested exercise not only improves physical function in the elderly, but also improves their mood and slows the progression of the cognitive decline. Physiotherapy Department Kowloon East cluster, pioneer the development of a contemporary exercise programme - 'SmartMove' based on a systematic, evidence-based approach in management of patients with early cognitive impairment. This programme is unique in focusing (1) Multi-component and cognitive-targeted exercise (2) Lifestyle modification and (3) Carer empowerment.

#### **Objectives**

To investigate the effect of SmartMove exercise programme on the patients with early cognitive impairment.

#### **Methodology**

This is a controlled pilot study. 18 patients (age: 57-87) diagnosed with early cognitive decline were recruited from Cognition Clinic in United Christian Hospital from September to December 2013. Patients at waiting time were recruited as control group follow by exercise programme as intervention group. This multi-facet exercise protocol was designed based on the best-available evidence that consisted of aerobic training at moderate intensity, cognitive-targeted exercise, home exercise and carer empowerment. Clients and their carers attended a total of 8 sessions of weekly training. Behavioral strategies were also adopted to motivate and monitor patient progress for exercise compliance. Outcomes including cognitive and executive function (CMMSE, C-ACER, computerized stroop test), carer burden (C-Zarit Burden, C-QOL-AD), dual task gait (computerized gait analyzer) and physical activity level (C-IPAQ) were measured at 8 weeks before intervention, start of intervention and post intervention. Data collected from the two groups was analyzed by SPSS with Mann-Whitney U Test.

## **Result**

A statistically significant change was found in dual task gait time of naming and calculation ( $p < 0.05$ ). A significant improvement in executive function was also found via computerized stroop test ( $p < 0.05$ ). Moreover, a significant increase was found in patients' health related physical activity via IPAQ ( $p < 0.05$ ). No significant change was found in MMSE and carer burden in 8 weeks training. Conclusions: The preliminary result of SmartMove program showed promising results in improving patient's cognitive function and exercise compliance for sustainable outcomes.