

00538 **Walking-related Activity and Functional Decline Amongst Hospitalised Older Adults: A Prospective Cohort Study**

*Shamala Thilarajah<sup>1</sup>, Pua Yong Hao<sup>1</sup>, Tyrik Lee<sup>1</sup>, Ang Shin Yuh<sup>1</sup>, Ong Hwee Kuan<sup>1</sup>, Dawn Tan<sup>1</sup>, Ross Clark<sup>2</sup>*

<sup>1</sup>Singapore General Hospital, <sup>2</sup>The University of the Sunshine Coast, QLD, Australia

**Aims:** Hospitalisation of older adults due to acute medical illness can result in functional decline and accelerate loss of independence despite illness recovery. Physical inactivity may be a key modifiable factor in preventing functional decline and long-term disability. This study aims to investigate the relationship between physical inactivity (steps/day) measured using an accelerometer and functional decline amongst hospitalised older adults.

**Methodology:** This is a prospective cohort study which enrolled participants admitted to a general medical unit. An objective assessment of walking related activity (steps/day) was measured using the ActivPAL. The accelerometer was applied to the participants' thigh throughout their stay for an accurate measurement of activity pattern. Participants reported their physical function, as measured by the Katz Index of Independence in Activities of Daily Living (KIADL) at baseline (2 weeks prior to admission), admission and at discharge from hospital. Multi-variable regression analyses were used to examine the relationship between steps/day and discharge KIADL scores (adjusted for age, gender, and admission KIADL scores).

**Result:** Participants walked a median of 178 (10-411) steps/day in hospital which is considerably lower compared to data from other countries. There was a significant decline in KIADL scores between baseline and at admission ( $p \leq 0.01$ ) and a significant improvement between admission and at discharge ( $p \leq 0.01$ ). Functional decline was evident; although KIADL scores at discharge improved from baseline, it remained significantly lower than baseline. Greater inactivity in hospital was associated with a higher functional decline at discharge (OR = 1.53,  $p \leq 0.05$ , CI = 1.00-2.32).

**Conclusion:** Previous research in this area have largely utilised self-report measures of physical activity which has been criticised for over-report bias. This study demonstrates that physical inactivity in hospital contributes to functional decline amongst older adults and this should be targeted in interventions to prevent functional decline amongst older adults.