00467 Factors Associated With Inpatient Major Injurious Falls of a Tertiary Hospital in Singapore

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Aims: Inpatient major injurious falls (MIF) have adverse effect on morbidity, mortality and cost of care. This study aimed to identify factors associated with MIF among all inpatients fallers of a tertiary hospital in Singapore.

Methodology: We conducted a retrospective cohort study on all inpatient fall records of a tertiary hospital between 1 September 2006 and 31 August 2016. An inpatient fall was classified as MIF if the fall resulted in death, or fracture, or the faller requiring surgery, or cast, or traction, or neurological consultation subsequently. Using univariate analysis, fallers with MIF were then compared against other inpatient fallers on demographics, pre-fall Morse Fall Scale scores, mobility status, consciousness levels, independent transfer ability, sedation history, activities and times of falls, medical specialties and ward locations of fallers. Multivariate logistic regression was then performed to study the combined effects of the identified significant factors.

Result: Among the 3,105 inpatient fall records, 97 (3.1%) were MIF. Multivariate analysis showed that significant factors associated MIF included age of fallers, activities and times of falls, ward locations. Fallers aged 70 and above had higher risk of MIF (OR=2.6, p=< 0.0001) than others. The odds of MIF among fallers who fell at 10pm to 9:59am was 1.8 times (p=0.008) that of fallers who fell at other times. Fallers who fell when they were bathing or after bathing were also found to have 5.6 times higher odds of MIF relative to other activities. Falls which occurred in three ward locations were also found to have higher odds (OR=2.3 to 3.5 with p= <0.0001 to 0.031) of MIF compared to others.

Conclusion: This study offer insights on potential areas which need to be addressed to avert MIF. Such understanding will be crucial for development of interventional measures which could effectively reduce avoidable MIF.