

# Hip Fracture In Older Adults: An Audit Of The Hip Fracture Care Process In A Teaching Hospital

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## INTRODUCTION

Approximately 1.6 million hip fractures occur worldwide each year with a prevalence of 150-250/100 000 in Malaysia, placing Malaysians in the moderate risk category. The morbidity and mortality rates of hip fracture are high and time to surgery(TTS) of >48 hours after admission acts as an important contributor. Length of hospital stay(LOS) has significant burden on resource utilization and cost. Therefore, identifying factors and mechanisms associated with TTS and LOS are imperative in improving quality of patient care.

## MATERIALS & METHODS:

390 hip fracture patients aged 65 and above who were admitted to University Malaya Medical Centre(UMMC) from 22<sup>nd</sup> March 2016 to 11<sup>th</sup> December 2018 were identified retrospectively from a hip fracture database. Demographic data, comorbidities, ASA score, dates and times of A&E admission; orthopedic review; ward admission; surgery and discharge dates were extracted from hospital records. These data were used to calculate TTS and LOS.

## RESULTS:

367 patients were included in data analysis. Majority were women (n=249) with mean age of 80.55±7.26 years. 63.2% of patients were admitted out of hours to the emergency department. The median waiting TTS was 4 days (Interquartile range (IQR) of 4 days) and there were no significant difference with day of the week of admission. Majority of the patients had multi-morbidity (57.5%) and ASA score of 2 (46.9%). Among 91.4% of patients who underwent surgery, 2.5% had a total hip replacement, 37.9% had bipolar hemiarthroplasty and 51% had internal fixation. The timing to surgery was also affected by patients who required medical stabilization (35.5%), awaiting theatre space (20.6%), financial constraint (7.8%), awaiting in-patient bed (6%) and on antiplatelet/anticoagulation (6%). The median LOS was 9 days (IQR of 9 days).

Figure 1: Waiting time to surgery based A&E admission (p=0.219)

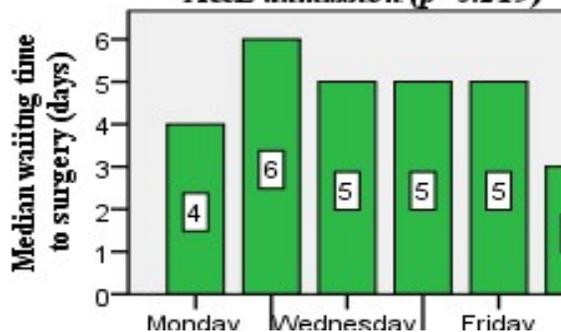
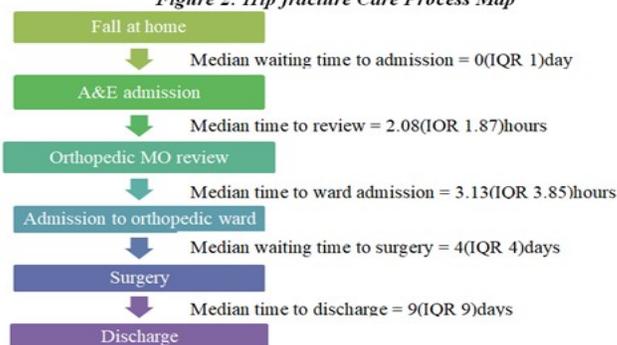


Figure 2: Hip fracture Care Process Map



## DISCUSSIONS:

Despite the insignificant statistical difference, patients admitted on Tuesday had longer waiting TTS. The absence of weekend effect is inconsistent with previous study which showed longer TTS and LOS due to scarcity of weekend resources. This study highlights the different patient and system factors which may contribute to the timing of surgery in older patients with hip fracture

## CONCLUSION:

The knowledge of the underlying factors and mechanisms involved in timing to surgery in older adults with acute hip fracture is important for future interventions targeted to minimize unnecessary delay to surgery.

## REFERENCES:

- Ricci, William M et al. "Factors affecting delay to surgery and length of stay for patients with hip fracture" *Journal of orthopaedic trauma* vol.29,3 (2015):e109-14