

# AB081. SOH21AS178. Exploring variation of length of in-hospital stay (LOS) in various elderly acute surgical admission cohorts

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**Background:** Increased length of in-hospital stay (LOS) indicates more complex health care needs. It is unclear if age, alone, can be used as an indicator of longer LOS and complexity of care. We aim to explore age as a reliable predictor of LOS in the elderly.

**Methods:** Retrospective review of acute surgical admissions in a university hospital [2016–2018] was performed. Three age groups, Group 1 (65–74 years), Group 2 (75–84 years) and Group 3 ( $\geq 85$  years) were analysed for effect of independent variables, including age, groups of episodes with similar diagnosis (GESD) and surgical interventions on the LOS, discharge disposition and mortality. Sub-group analysis was performed for admissions with above average-LOS (aveLOS).

**Results:** A total of 1,880 patients were analysed with aveLOS =  $12.81 \pm 0.54$  days. AveLOS for each age group was 12.5, 13.3 and 12.5 days respectively ( $P=0.68$ ). A mean increase noted in patients with acute surgical intervention under General Anaesthesia, Interventional Radiology and Emergency Endoscopy was 13, 7.3 and 5 days respectively. Patients discharged home accounted for 79.6%. Out of the patients transferred to convalescent centres 66.0% were over 75 years. In Group 3, 22.0% of the admissions were discharged to nursing homes. Admissions with above

aveLOS; 57.5% were male, 38.8% had gastrointestinal pathology and 47.6% underwent GA. No significant correlation was found between gender, diagnosis and interventions among admissions with above aveLOS.

**Conclusions:** Variables other than age are important to understand the variation in LOS. LOS is significantly influenced by GESD, acute surgery and type of intervention performed. Elderly acute surgical patients who are more likely to require surgery, should be pre-screened for discharge pathways.

**Keywords:** Acute surgical admission; age; elderly population length of in-hospital stay; surgical intervention; surgical outcomes

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## Footnote

*Conflicts of Interest:* The authors have no conflicts of interest to declare.

*Ethical Statement:* The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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