1602 A Quality Improvement Project on The Management of Patients with Traumatic Head Injury Presenting to A District General Hospital

A. Muthusami[1], S. Techaboonanake[2], N. Desai[2], N. Malik[2], M. Reynolds[2], K. Ahn[2], L. De Carvalho[2], M. Gawley[2], N. Waraich[2]
[1]*Russells Hall Hospital, Dudley, United Kingdom,* [2]*Walsall Healthcare NHS Trust, Birmingham, United Kingdom*

Introduction: Traumatic Brain Injury (TBI) is associated with morbidity and mortality. All District General Hospitals (DGH) in West Midlands liaise with Neurosurgery centres for management of these patients through a referral system (NORSe). The aim of this study was to assess outcomes in TBI following the implementation of vital interventions.
Method: A retrospective data was collected between 1/1/2019 and 1/12/2020. We included all patients admitted with traumatic brain injury over the age of 16. We accessed the data from the hospital database, clinical notes, and NORSe. A re-audit was performed following implementations of recommendations (proforma and care of elderly input). Further data were collected prospectively.
Results: Our cohort included n1=61 patients (first cycle) and n2= 29 (second cycle). The demographic age and gender were comparable in both cycles. The median time for Neurosurgery advice was 229 minutes (IQR 60-690) in the first cycle as compared to 80 minutes (IQR 40-120, $P < 0.05$) and the main cause for delay was inadequate information transfer. The mortality rate was 24% (5 were attributed to sepsis), as compared to 14% in the second cycle. The median length of stay (LOS) was 4 days (IQR 3-13.5) in the first cycle, which translates to a cost of £26,815 per quarter. In comparison, LOS was 3 days (IQR 2-4), which translates to the cost of bed occupancy of £12,771 and saving of £14,043 per quarter, in the second cycle.
Conclusions: The introduction of simple interventions in a DGH can help to significantly improve patient outcomes in those admitted with Traumatic brain injury.