CONFERENCE ABSTRACT

Can we predict your future? Using scores to predict length of stay and discharge destination

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**Background:** This audit was completed within a large teaching hospital in Dublin, St Vincents University Hospital. The cohort of patients are those admitted with an acute stroke under the care of the Stroke Multidisciplinary Team, with confirmed stroke on CTBrain/MRI.

**Problem:** It has always been assumed that poor cognitive scores were associated with longer lengths of stays and increased likelihood of discharge to a location other than the patient’s home. Stroke patients can often wait months to access appropriate care packages, further rehab settings or long term care beds resulting in significant costs as well as causing frustration for patients and their families alike. Achieving safe, timely and person centred discharge from hospital to home is an important indicator of quality and a measure of effective and integrated care (Joint Improvement Team, HSE 2014)

**Improvement related question:** We set out to confirm if early cognitive screening of acute stroke patients in a large Dublin teaching hospital could predict their discharge destination and length of stay. This has never been examined previously within an Irish/UK stroke population using a standardised cognitive assessment (MoCA).

**Methods:** We completed a retrospective audit using paper count method on the charts of 120 newly diagnosed stroke patients admitted to St Vincent’s University Hospital over a six month period. The proforma gathered information on patient sex, age, date of admission, length of stay, CT/MRI results, admission Barthel, MOCA score on initial assessment, discharge Barthel score and discharge destination.

**Intervention/Results:** 120 patients were included in the audit with a confirmed stroke on CTB/MRI. The average age was 73. There were 52 males and 68 females and the average length of stay was 44 days.

Of the 49 patients that scored within mild-no cognitive impairment, 90% (n=44) went home from SVUH, 2% to further rehab, 6% to LTC and 2% died. The average length of stay for this cohort is 17 days.

Of those that scored within the mild- moderate cognitive impairment (n=37) 30% went home, 40% went for further rehab, 27% went to LTC and 3% died. The average length of stay for this group was 49 days (more than twice the first group).
Of those that scored within moderate – severe cognitive impairment, 12% went for further rehab, 63% to long term care and 25% died and 0% went home.

Their average length of stay was 90 days, nearly five times longer than the first cohort.

Not every patient was able to complete a standardised cognitive assessment.

42% of these patients went to long-term care and 35% died. This cohort’s average length of stay was 82 days, with the number of deaths shortly after admission.

**Lessons Learnt:** The results of this audit confirm that early cognitive screening can help predict discharge destination and length of stay. Early cognitive screening (as recommended in the Royal College Of Physicians Stroke guidelines) are completed within 24 hours of admission to SVUH. Therefore the multidisciplinary has a strong indicator of discharge destination and length of stay early in the course of the patient’s hospital stay. With an increasing emphasis on the delivery of appropriate allocation of resources and constant pressures on delivering cost effective care it is estimated this knowledge will have significant cost saving benefits. This information is also imperative in early planning to reduce the number of delayed discharges.

**Effects of changes:** As a multidisciplinary team we now use these early cognitive scores prospectively, to inform discharge arrangements and the timeliness of interventions for newly diagnosed stroke patients. Family meetings are now arranged within two weeks of admissions as standard, meaning families/NOK are also informed and involved in effective early discharge planning, allowing for a more seamless discharge.

We anticipate that this focus on early scores might assist in the better distribution of healthcare resources in the hospital setting.

**Keywords:** cognition; discharge planning; cost-saving; occupational therapy; stroke