Investigating the relationship between increased stroke therapy during inpatient stay and patient health outcome.

The Sentinel Stroke National Audit Programme: Investigating and Evaluating Stoke Therapy (SSNAPIEST)

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Background

• 45 min of therapy/day at least is recommended but few patients receive this for many reasons.
• Therapy amount is a driving factor behind recovery but does simply more therapy better, SSNAPIEST’s aims to find out.

Methods

• SSNAP (n=94,905) stroke patients from Jul 2013-15, still in hospital after three days, with key NIHSS severity measures present.
• Therapy (PT, OT and SLT) defined as ‘average min of therapy / day of inpatient stay’.
• Investigated the influence of therapy amount on disability at discharge modified-Rankin Scale (mRS) by fitting a multilevel mixed effects regression model with robust standard errors adjusted for all measured confounders.
• Therapy amount fitted using flexible ‘Natural Cubic Splines’ to investigate the relationship between average therapy per day of stay and mRS at discharge

Results

• 93%, 90%, 60% patients received average 15.1, 14.8, 8.7 min PT, OT, and SLT per day of stay
• Plots give Odds Ratio (OR) and 95% C.I. associated with increased mRS at discharge per increased average min therapy per day of stay.

Conclusions/Limitations

• More OT & SLT associated with improved disability at discharged, PT indicates much more complicated relationship

CAUTION – LIMITATIONS!!!

• Observational Study = bias, confounding, misclassification
• mRS very crude measure
• Therapy min per day of stay very crude measure
• Cannot determine nature of therapy, patterns of care (e.g. 10 min per day/two 30 min sessions, one or multiple therapies per day, time since stroke occurred therapy received)

• Urgently needs prospective research to confirm/refute

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