School of Medicine

Funded and supported by NHS National Institute for Health Research

WISE — What is the Impact of Stroke ESD?

The University of Nottingham

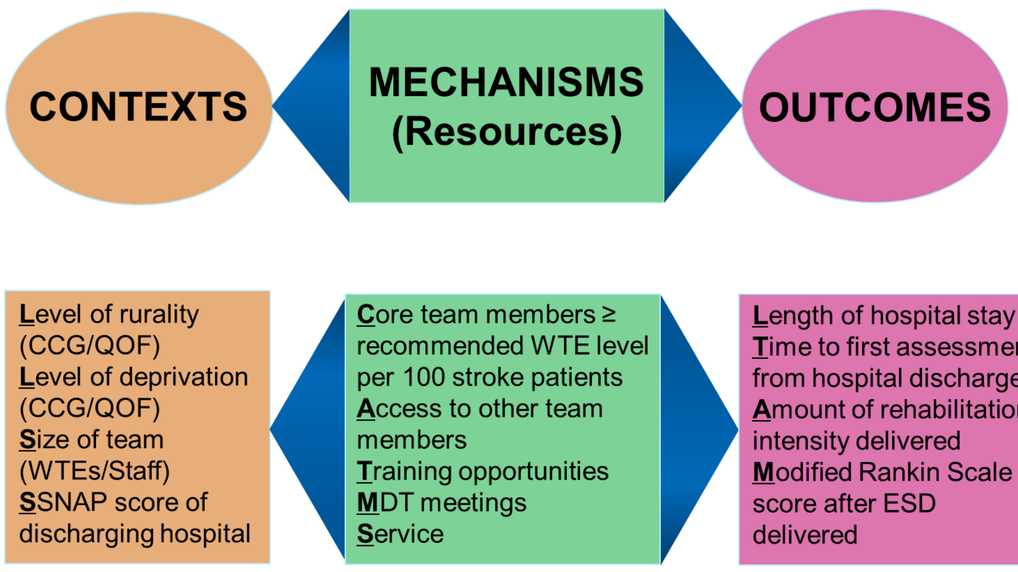
UNITED KINGDOM · CHINA · MALAYSIA

Large scale implementation of stroke Early Supported Discharge: Effectiveness of services in real world conditions

Adrian Byrne[1], Sarah Lewis[1], Niki Chouliara[1], Lizz Paley[2], Alex Hoffman[2], Anthony Rudd[2], Claudia Geue[3], Justin Waring[1], Thompson Robinson[4], Marion Walker[1], Peter Langhorne[3] & Rebecca Fisher[1];[1] University of Nottingham, [2] King's College London, [3] University of Glasgow, [4] University of Leicester

INTRODUCTION

Implementation of stroke Early Supported Discharge (ESD) services has been recommended in national clinical guidelines, based on clinical trial evidence. This observational study investigated the effectiveness of ESD service models operating in real world conditions as part of a wider realist evaluation approach.



METHODS

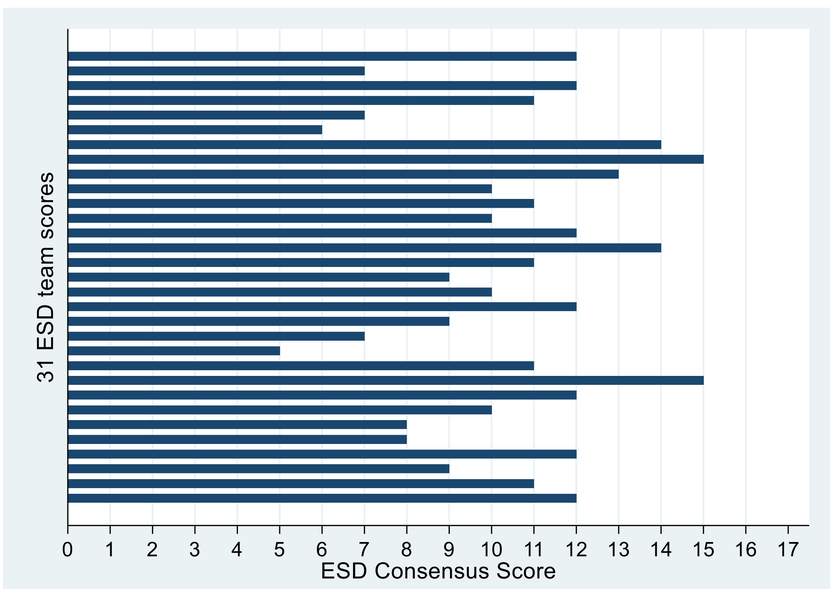
- Historical prospective Sentinel Stroke National Audit Programme (SSNAP) data (1 Jan 2016 – 31 Dec 2016)
- Outcome measures: responsiveness (time from hospital discharge to first contact; n = 6,222); rehabilitation intensity (total number of treatment days / total days with ESD; n = 5,891); and stroke survivor outcome (modified Rankin Scale; n = 6,222)
- ESD services (derived from 2015 SSNAP post-acute organisational audit data) were examined with a 17-item score
- Patients were clustered within ESD teams (n = 31) and multilevel modelling analysis was undertaken

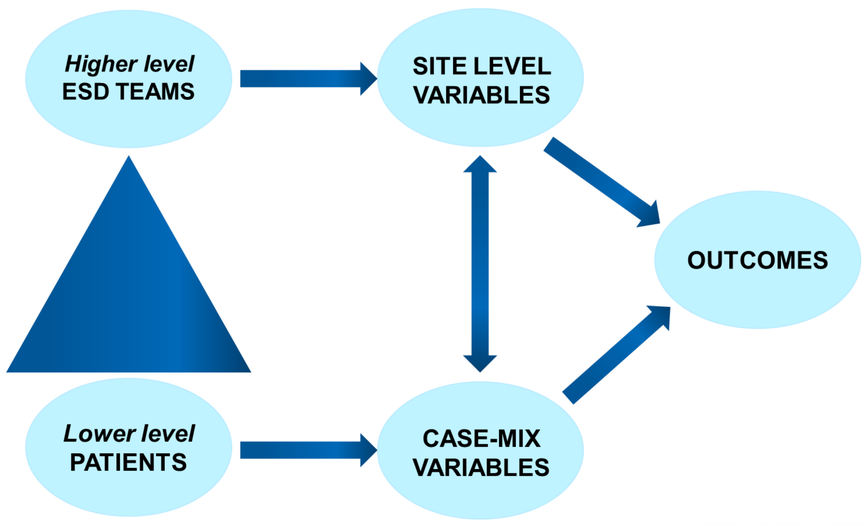
ESD Consensus Score Components	Yes	No	% of 31 ESD teams
Core team members meeting or exceeding recommended WTE level per 100 stroke patients:			
Doctors ≥ 0.1	1	0	9.7%
Nurses ≥ 0.4	1	0	48.4%
Occupational therapists ≥ 1	1	0	48.4%
Physiotherapists ≥ 1	1	0	48.4%
Speech and language therapists ≥ 0.3	1	0	71.0%
Access to other team members:			
Clinical psychologists	1	0	48.4%
Social workers	1	0	12.9%
Rehabilitation assistants	1	0	100%
Training opportunities:			
Nurses	1	0	67.7%
Therapists	1	0	96.8%
Rehabilitation assistants	1	0	96.8%
MDT meetings:			
Weekly meetings	1	0	96.8%
Core team attend	1	0	22.6%
ESD member attends acute meeting	1	0	71.0%
Service:			
Stroke specific	1	0	100%
Median waiting time between referral and ESD ≤ 1 day	1	0	64.5%
Weekly service > 5 days	1	0	45.2%

RESULTS

ESD team score range displays variability among the teams and our multilevel model setup uncovered the following results controlling for patient characteristics and ESD team level variables for each multilevel model – significant results at 5%:

- $ESD\ team\ score \uparrow 1\ unit \Rightarrow responsiveness \uparrow odds\ 29\%$
- $Core\ team\ members\ meeting\ or\ exceeding\ recommended\ WTE\ level\ per\ 100\ stroke\ patients \uparrow 1\ unit \Rightarrow responsiveness \uparrow odds\ 47\%$
- $Access\ to\ social\ workers \uparrow 1\ unit \Rightarrow responsiveness \uparrow odds\ 97\%$
- $Access\ to\ doctors \uparrow 1\ unit \Rightarrow responsiveness \downarrow odds\ 87\%$
- $ESD\ team\ score \uparrow 1\ unit \Rightarrow rehabilitation\ intensity \uparrow by\ 2\%$
- $Multidisciplinary\ team\ meetings \uparrow 1\ unit \Rightarrow rehabilitation\ intensity \uparrow by\ 8\%$
- $ESD\ team\ score \uparrow 1\ unit \not\Rightarrow modified\ Rankin\ Scale \uparrow\downarrow$





CONCLUSION

This study has shown that adopting defined core components of ESD is associated with providing a more responsive and intensive ESD service. This shows that adherence to evidence based criteria is required for services to be effective.

Funding acknowledgement
This project is funded by the NIHR HS&DR (project number 121677)
Department of Health and Social Care disclaimer
The views expressed are those of the author(s) and not necessarily those of the NHS, the NIHR or the Department of Health and Social Care.

https://www.nottingham.ac.uk/research/groups/strokerehabilitation/projects/wise.aspx