Using Simulation to Improve Medical Registrars' Confidence in Out-of-Hours Stroke Management

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Introduction

- For General Internal Medicine (GIM) trainees in the South West there are considerable inter-hospital variations in hyperacute stroke care delivery. This is down to different staffing levels, experience and services offered between primary and comprehensive Stroke Centres.
- Variations also occur in training, most often being presented as online NIHSS training and ad-hoc discussions.
- What is common is that hyperacute stroke care needs to be delivered in a rapid manner for improved patient outcomes.
- We introduced a stroke simulation programme to address these issues and improve trainee confidence.

Method

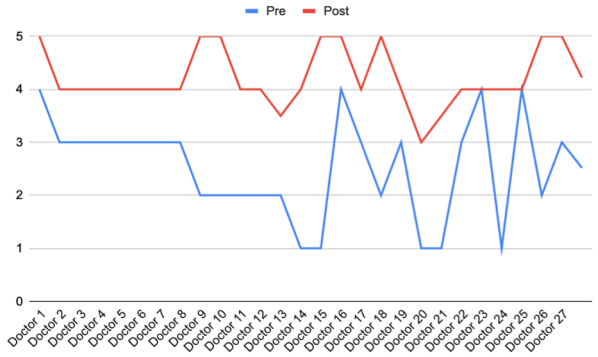
- Following a successful pilot and with deanery COVID recovery funding, the South West Deanery and the University Hospital Plymouth Neurology Team developed a multi-disciplinary Stroke simulation programme.
- This comprised of three stroke scenarios including thrombolysis, thrombectomy and management of blood pressure complications.
- It was offered to all GIM trainees in the South West.
- Participant questionnaires collected pre-course and post-course ratings on stroke knowledge, confidence and overall usefulness of the scenarios.

Results

- Average confidence improved from 2.52 to 4.22/5, range (1-4) to (3-5).
- 100% of participants would recommend this to other GIM colleagues.
- 100% participants questioned up to three months after the programme felt it had improved their door-to-needle time.

Variation of abstract also submitted to ESOC 2022

Stroke simulation including participant, simulation actor and Stroke CNS.



Reported confidence of participants before and after the stroke simulation course

Open feedback:

"Vital for all who are involved in stroke assessment. I think this should be mandatory for IMT3 and treated like ALS with repeated certification every 2-3 years."

"Excellent coverage of a broad range of consideration in context of acute stroke/thrombolysis/thrombectomy."

"Going through the sim session has improved my awareness and ability to manage a patient requiring thrombolysis."

Discussion

- This stroke simulation programme identified consistent improvements in participant confidence of managing hypercacute strokes.
- The surveyed GIM SpRs have suggested at least yearly opportunities for further simulation sessions.
- All respondents felt that stroke thrombolysis should be offered at trust induction. 89% felt this should be an absolute requirement.
- We faced difficulties in terms of COVID limiting participation including isolation and work pressures causing cancellations.
- This programme was offered through the dedication of two GIM trainees which is not sustainable. Further work includes petitioning the deanery and Comprehensive Stroke Centre to create a sustainable and reliable training programme.

Plans for the future

- Deanery/local discussions about making it akin to ALS with regular simulation opportunities extending to the MDT including the Overnight Acute Care and ED Team.
- Further scenarios are being developed to include basilar artery thrombosis, post-thrombolysis bleed and spontaneous Intracranial haemorrhage.
- There is a planned IMT2 stroke Simulation training which will be also open to return to work registrars. To make it sustainable, regular funding and dedicated consultant time is being petitioned.