Proof of concept – can the addition of an acute physician improve stroke thrombolysis performance?

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Background

St George’s Hospital runs a busy 24/7 stroke service including thrombolysis. In spite of many attempts, the door-to-needle (DTN) time has not come down to the target of <30 minutes. As a proof of concept, an additional consultant acute physician with a CCT in stroke medicine was employed to supervise the stroke team in the emergency department providing leadership and training on the shop floor. The skill set of an acute physician was felt to be ideal for this role with the consultant also educating staff and supervising thrombolysis DOPS (directly observed procedural skills) assessments for trainees.

Methods

The acute physician attended all the stroke thrombolysis calls in the emergency department when available. Mean and median DTN data were collected before and during this intervention. Non parametric data were analysed using the Mann Whitney U test.

Outcome

144 patients were thrombolysed in the nine months from Jan 2015 to Sept 2015. 55 patients were thrombolysed in the four months (Oct 2015 - Jan 2016) after the addition of the supervising consultant. The DTN decreased from mean (SD) 53 (36) min before to 41 (26) after and median (IQR) 45 min (32 - 57) before to 33 min (29 - 49) afterwards. This represents a significant improvement of 12 min (p = 0.00142, Mann Whitney U). The trend demonstrating improvement is shown graphically below. There was no change in the average number of thrombolysis calls per month.

Discussion

This study suggests that the introduction of a dedicated consultant to supervise the stroke team led to a significant improvement in thrombolysis DTN times. As a pilot study, the outcome has encouraged the department to continue the provision of consultant presence at the frontline for stroke service. While it is possible that other variables may have confounded the results, the main change was the additional consultant. Of interest the national median DTN for 2015 was 55 min. Our post-intervention performance of 33 min compares favourably with this.