A data visualisation quality improvement tool to improve the provision of thrombolysis through the Sentinel Stroke National Audit Programme (SSNAP)

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BACKGROUND

SSNAP is the stroke register of England and Wales, with national participation from all admitting hospitals and an estimated 95% of stroke admissions entered on the register.

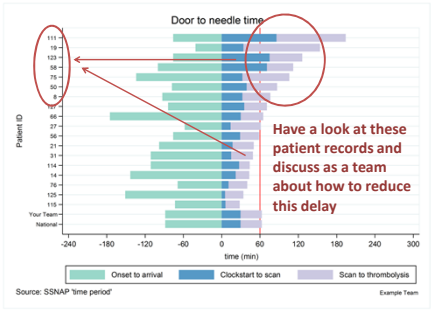
Thrombolysis (tPA) is a treatment administered to stroke patients which can break down and disperse a clot that is preventing blood from reaching the brain.

Evidence shows that tPA **improves outcomes** after stroke and the **quicker** it is given after stroke, the **more effective** it is.

National clinical guideline for stroke has made recommendations using this evidence. Current guideline recommendations are that patients should be thrombolysed **within 3 hours** if eligible and the upper limit of benefit being 4.5 hours if they are under 80 years.

SSNAP reports back to hospitals their performance and their adherence to the recommendations

SSNAP has developed a **quality improvement tool** for tPA to identify **who is not** getting thrombolysed who should be and why, and the overall provision of tPA.



The aim of the tPA tool is for individual hospitals to see how they can improve their provision of tPA utilising data visualisation.

METHOD

Using data submitted by hospitals each quarter, SSNAP analyses **stroke patient characteristics and processes of care**.

Each team receives their **bespoke tPA tool** in an Excel document **within 3 months** of each data input deadline, which enables them to:

identify EXACT patients and moments in time

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investigate the **reasons** of any shortfalls and missed targets

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implement new strategies across the team while the data are still relevant

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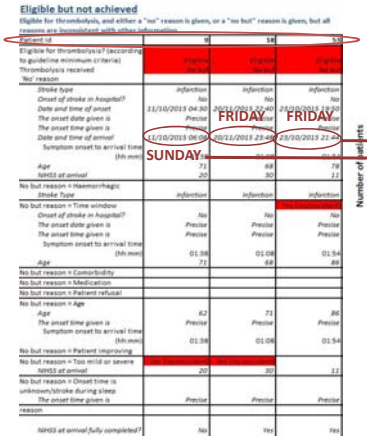
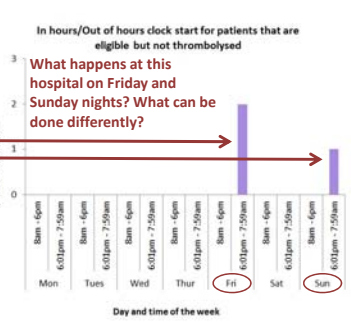
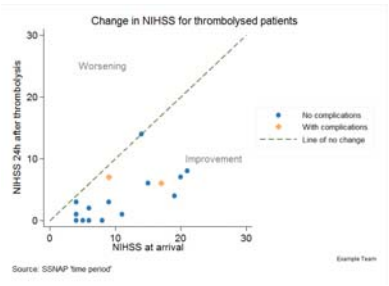
see **improvements** the next quarter







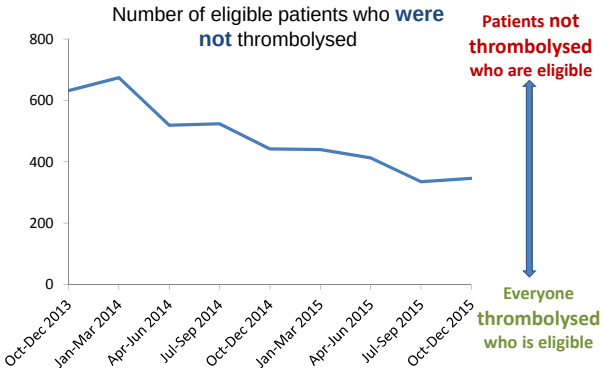
The **data visualisations** display the key information in a clear and succinct way and includes door to needle timing pathway, door to thrombolysis, and door to scan time distribution, provision of tPA in hours/out of hours and change in NIHSS after tPA.

RESULTS

This tool has been used extensively by healthcare professionals, with 978 downloads of the tool in 2014 and 1709 downloads of the tool in 2015.

More eligible patients are receiving tPA. 85.6% of eligible patients in October to December 2015 received tPA compared to 74.7% in the comparable quarter in 2013 before the tool was produced.

The data visualisations **better enable healthcare professionals to analyse their hospitals' acute care.**



Case study quote

*"Thanks for the spreadsheet, it is **very useful** for the **thrombolysis** indicator"*

Manager, **King's Mill Hospital**

CONCLUSION

This tool explains hospitals' provision of tPA and therefore hospitals can **diagnose EXACT moments of the acute pathway where improvements can be made**, and an improvement in care quality has been apparent since implementation. Similar quality improvement tools could be produced in other healthcare settings.