Practitioner, patient and public views on the acceptability of Mobile Stroke Units in England and Wales: a mixed methods study

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Introduction

Mobile stoke units (MSUs), specialist ambulance with scanning capabilities, point of care testing and the ability to give treatment outside of hospital, are growing in popularity. There have been numerous trials that have shown that MSUs can speed up access to treatment. This includes thrombolysis (a clot busting medication) and in recognising a large vessel occlusion, which can benefit from mechanical removal (thrombectomy).

Despite the growing evidence for MSUs there has been little research about the acceptability of them amongst relevant stakeholders. Acceptability is an important aspect of any new potential intervention without which it can fail despite evidence of benefits.

Methods

A concurrent mixed methods study design consisting of a quantitative cross-sectional survey and qualitative workshop, focus group and semi-structured interviews. Survey participants were recruited opportunistically from a clinician stroke event. Qualitative participants were recruited using a combination of purposive, opportunistic and snowball sampling.

Survey data was descriptively analysed and qualitative data was thematically analysed. Data was then triangulated using a convergent coding matrix.

Participants

1. 25 Survey participants including stroke consultants, junior doctors, stroke nurses and other medical professionals.
2. 21 qualitative participants including PPI representatives, stroke consultants and ambulance service staff.

Results

Overall positive perceptions

- The majority of participants felt that MSUs were acceptable however a number of concerns would need to be addressed to make them feasible

Staffing challenges

- Participants reported concerns about current staffing challenges in the NHS, particularly the shortage of stroke clinicians and whether they could realistically be staffed

The use of telemedicine

- The use of telemedicine as an alternative to a stroke physician onboard was mixed. While some felt this was viable concerns were raised about connectivity, particularly in more rural parts of the country

Economic considerations

- The high start up and running costs of the MSU was raised as a concerned. This was balanced with views on potential cost saving from earlier treatment, potential non-stroke patients being left at home and the potential to reduce A&E attendance

Effective triage

- Current triage systems lacking the sensitivity and specificity was raised as a concern and more effective triage would be required to ensure the MSU was responding to stroke patients to increase efficiency

Base of the MSU and geographic coverage

- Participants were unsure where the MSU should be based with it being recognised that existing trials have mainly based them in comprehensive stroke centres but that the ambulance service have the infrastructure to dispatch and maintain them. Whether they should be based in an urban or rural area was also unclear – rural would give better access to those who currently have long travel times but urban would mean the MSU would attend more patients

Impact on equitable access to stroke care

- Participants felt that MSUs had the potential to improve equitable access to stroke care, by providing treatment to those who would have long travel times to hospital, however the concerns remained about underutilisation of the resource in rural areas.

Public awareness of MSUs

- Raising public awareness of MSUs was felt to be important in raising the acceptability of MSUs. Participants also raised concerns about the name ‘mobile stroke unit’ and felt this conveyed a health screening vehicle rather than a specialist ambulance

Discussion

This is the first study to consider acceptability of MSUs in the NHS in England and Wales. While participants had an overall positive perception of MSUs a number of concerns about implementation were raised. These concerns are similar to the only other previous work, conducted in Australia, to consider stakeholder views on MSUs. It is recommended that future modelling work into implementation of MSUs in the NHS consider how these concerns are addressed. Further modelling work should also focus on the potential economic benefits and disadvantages given the potentially high costs of MSUs.

Limitations

Consideration of responder bias to the survey was considered as this was a voluntary and anonymous survey. There was also a high representation of participants from the North East of England.

Sampling of qualitative participants may have introduced some bias due to them already having an interest, although some scepticism that was expressed would suggest this was minimal.

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