ISRCTN77453332 https://doi.org/10.1186/ISRCTN77453332

# Specialist pre-hospital redirection for ischaemic stroke thrombectomy (SPEEDY)

| | | |
|---|---|---|
| **Submission date**<br>25/07/2022 | **Recruitment status**<br>No longer recruiting | [X] Prospectively registered<br>[X] Protocol<br>[_] Statistical analysis plan<br>[_] Results<br>[_] Individual participant data<br>[X] Record updated in last year |
| **Registration date**<br>12/08/2022 | **Overall study status**<br>Ongoing | |
| **Last Edited**<br>15/07/2026 | **Condition category**<br>Circulatory System | |

**Plain English summary of protocol**

Background and study aims

Stroke is a common medical emergency and time-critical treatments reduce the chance of disability or death. About 1 in 10 patients are suitable for an emergency operation to remove blood clots blocking large arteries in the brain (known as thrombectomy) which greatly improves their chances of recovery. However, this operation is only available at specialist regional hospitals and unless patients live nearby, they are first admitted to their local hospital and must be transferred for treatment. A transfer typically delays thrombectomy by at least 90 minutes and reduces its benefit. Faster treatment might occur if patients could attend specialist regional hospitals directly but at present no accurate assessment or portable test exists to guide ambulance staff to make a confident diagnosis of stroke, or to determine that thrombectomy is needed.

In an earlier research project, a specialist prehospital redirection pathway was developed which involves communication between ambulance practitioners and specialist hospital thrombectomy staff to decide whether the emergency operation is likely to be required, followed by direct admission to the specialist hospital if this is the case. This study will now test the impact of this new pathway.

Who can participate?

All suspected and confirmed acute stroke patients from participating geographical regions will be involved

What does the study involve?

Ambulance stations (work bases for ambulance practitioners) or ambulance staff teams will be assigned at random to use the new pathway or to continue with current standard care when attending suspected stroke patients. Data will be collected about thrombectomy treatments and other aspects of emergency medical care received which will be compared between the two groups.

What are the possible benefits and risks of participating?

This study is testing whether a new emergency care pathway improves access to thrombectomy treatment for some people. The pathway may result in faster treatment and better recovery after stroke but this is not yet known.

Where is the study run from?
Newcastle University (UK)

When is the study starting and how long is it expected to run for?
August 2021 to March 2027

Who is funding the study?
National Institute for Health Research (UK)

Who is the main contact?
Dr Lisa Shaw, lisa.shaw@newcastle.ac.uk

# Contact information

### Type(s)
Scientific

### Contact name
Dr Lisa Shaw

### Contact details
Stroke Research Group
Population Health Sciences Institute
The Medical School
Newcastle University
Newcastle
United Kingdom
NE2 4HH
+44 (0)191283826
lisa.shaw@newcastle.ac.uk

# Additional identifiers

### Integrated Research Application System (IRAS)
312053

### Central Portfolio Management System (CPMS)
53148

# Study information

### Scientific Title
Specialist pre-hospital redirection for ischaemic stroke thrombectomy (SPEEDY): a cluster randomised controlled trial with included health economic and process evaluations

### Acronym
SPEEDY

### Study objectives

The aim of the study is to determine the clinical and cost-effectiveness of a novel specialist prehospital redirection pathway intended to facilitate thrombectomy treatment for acute stroke.

## Ethics approval required
Old ethics approval format

## Ethics approval(s)
Approved 26/06/2022, North East - Newcastle & North Tyneside 1 Research Ethics Committee (NHSBT Newcastle Blood Donor Centre, Holland Drive, Newcastle upon Tyne, NE2 4NQ, UK; +44 (0)207 1048091; newcastlenorthtyneside2.rec@hra.nhs.uk), ref: 22/NE/0103

## Primary study design
Interventional

## Study design
Randomized; Interventional; Design type: Process of Care, Complex Intervention, Management of Care

## Study type(s)
Treatment

## Health condition(s) or problem(s) studied
Suspected and confirmed acute stroke

## Interventions
This research study is a multicentre cluster randomised controlled trial with included health economic and process evaluations. The intervention to be evaluated is a new pathway which involves communication between ambulance and specialist hospital staff to select patients for direct admission to a specialist regional hospital who are likely to need emergency thrombectomy treatment. Clusters will be ambulance stations (work bases for ambulance practitioners) or ambulance staff teams which prior to the start of the study will be assigned at random to use the new pathway or to continue with current standard care when attending suspected stroke patients.

## Intervention Type
Other

## Primary outcome(s)
Data collected from routine healthcare sources throughout the study period:
1. Thrombectomy rate
2. The time from stroke symptom onset to thrombectomy (when thrombectomy is received)

## Key secondary outcome(s)
Data collected from routine healthcare sources throughout the study period:
1. Key emergency care time intervals
2. Receipt of and time to thrombolysis treatment
3. Stroke severity 24 hours post reperfusion treatment (NIHSS)
4. Length of hospital stay
5. Dependency at discharge (mRS)

### Completion date
31/03/2027

## Eligibility

### Key inclusion criteria
1. An ambulance practitioner from a randomised station/team attended the incident
2. Conveyance was to either a local stroke hospital which refers patients to the participating specialist regional hospital, or directly to the participating specialist regional hospital
3. Acute stroke was suspected by the attending ambulance practitioner (i.e. Face, Arm, Speech Test (FAST) positive or any observed new focal neurological symptoms which indicated acute stroke according to the ambulance practitioner's clinical judgement) OR acute stroke was diagnosed following arrival at a participating hospital irrespective of ambulance practitioner initial judgement of symptom cause

### Participant type(s)
Mixed

### Healthy volunteers allowed
No

### Age group
Adult

### Sex
All

### Total final enrolment
0

### Key exclusion criteria
Does not meet the inclusion criteria

### Date of first enrolment
01/09/2022

### Date of final enrolment
31/12/2025

## Locations

### Countries of recruitment
United Kingdom

England

### Study participating centre

**North East Ambulance Service NHS Ft**
Bernicia House
Goldcrest Way
Newcastle upon Tyne
England
NE15 8NY

**Study participating centre**
**The Newcastle upon Tyne Hospitals NHS Foundation Trust**
Freeman Hospital
Freeman Road
High Heaton
Newcastle upon Tyne
England
NE7 7DN

**Study participating centre**
**North West Ambulance Service NHS Trust**
Ladybridge Hall
399 Chorley New Road
Bolton
England
BL1 5DD

**Study participating centre**
**Lancashire Teaching Hospitals NHS Foundation Trust**
Royal Preston Hospital
Sharoe Green Lane
Fulwood
Preston
England
PR2 9HT

**Study participating centre**
**Salford Royal NHS Foundation Trust**
Salford Royal
Stott Lane
Salford
Manchester
England
M6 8HD

**Study participating centre**
**West Midlands Ambulance Service University NHS Foundation Trust**
Millennium Point
Waterfront Business Park
Dudley Road
Brierley Hill
England
DY5 1LX

**Study participating centre**
**University Hospitals of North Midlands NHS Trust**
Newcastle Road
Stoke-on-trent
England
ST4 6QG

**Study participating centre**
**University Hospitals Birmingham NHS Foundation Trust**
Queen Elizabeth Hospital
Mindelsohn Way
Edgbaston
Birmingham
England
B15 2GW

**Study participating centre**
**South Western Ambulance Service NHS Foundation Trust**
Abbey Court
Eagle Way
Exeter
England
EX2 7HY

**Study participating centre**
**North Bristol NHS Trust**
Southmead Hospital
Southmead Road
Westbury-on-trym
Bristol
England
BS10 5NB

# Sponsor information

### Organisation
Newcastle upon Tyne Hospitals NHS Foundation Trust

### ROR
https://ror.org/05p40t847

# Funder(s)

### Funder type
Government

### Funder Name
NIHR Central Commissioning Facility (CCF); Grant Codes: NIHR202361

# Results and Publications

### Individual participant data (IPD) sharing plan

### IPD sharing plan summary
Not expected to be made available

### Study outputs

| Output type | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---|---|---|---|---|---|
| Protocol article | | 13/01/2026 | 14/01/2026 | Yes | No |
| HRA research summary | | | 28/06/2023 | No | No |