Following a review of the literature, we have determined published barriers to specific clinical practices we are interested in targeting in the T³ Trial.

We would be very grateful if you could complete this survey and by doing so, help us prioritise actions to address these barriers.

Please consider your responses on a national level and not related to your own hospital.

**Desired behaviour 1a: TRIAGE**
All patients presenting with persistent signs and symptoms of suspected stroke should be triaged ATS Category 1 or 2 (seen within 10 mins)

Please rank the following barriers from 1 to 6 in terms of which you believe are the most influential in preventing clinicians from meeting the desired behaviour shown in the box above.

Remember:

Please consider your responses on a national level and not related to your own hospital.

**Most influential in preventing clinicians from meeting the desired behaviour**
(Biggest barrier = 1; to smallest barrier = 6)

- ED nurses do not perceive treatment of stroke to be urgent/ a medical emergency
- A validated stroke screen tool (eg FAST, ROSIER) is not routinely used in the ED to assist in rapid patient assessment
- ED staff, residents and ambulance staff may be inadequately trained in the recognition of stroke symptoms
- Patients presenting with resolving symptoms or coordination loss are less likely to be triaged category 1 or 2
- Lack of stroke leadership to enable a culture of rapid effective stroke care
- No formal/established hospital protocol (critical pathway) for stroke management including 'Code Stroke' for rapid effective stroke care
**Desired behaviour 1b: TRIAGE**

All patients presenting with persistent sign and symptoms of suspected stroke should be triaged ATS Category 1 or 2 (seen within 10 mins)

Please rank the following barriers from 1 to 6 in terms of which you believe are the most difficult barriers to overcome in relation to the desired behaviour shown in the box above.

**Remember:**
Please consider your responses on a national level and not related to your own hospital

**Difficulty overcoming the barrier**

(Most difficult to overcome= 1; to least difficult to overcome = 6)

- ED nurses do not perceive treatment of stroke to be urgent/ a medical emergency
- A validated stroke screen tool (eg FAST, ROSIER) is not routinely used in the ED to assist in rapid patient assessment
- ED staff, residents and ambulance staff may be inadequately trained in the recognition of stroke symptoms
- Patients presenting with resolving symptoms or coordination loss are less likely to be triaged category 1 or 2
- Lack of stroke leadership to enable a culture of rapid effective stroke care
- No formal/established hospital protocol (critical pathway) for stroke management including 'Code Stroke' for rapid effective stroke care
Desired behaviour 2a: THROMBOLYSIS

- All stroke patients to receive full assessment for tPA eligibility

Please rank the following barriers from 1 to 9 in terms of which you believe are the most influential in preventing clinicians from meeting the desired behaviour shown in the box above

Remember:

Please consider your responses on a national level and not related to your own hospital

Most influential in preventing clinicians from meeting the desired behaviour

(Biggest barrier = 1; to smallest barrier =9)

- Physician lack of knowledge/ limited experience with tPA
- ED non-triage staff have poor recognition of stroke symptoms and have inadequate appreciation of the critical importance of time in the management of acute ischaemic stroke
- Stressful and overburdened working conditions
- Lack of staff continuity - staff turnover, leadership changes
- Lack of tPA protocol
- Lack of clinical leadership and institutional support for tPA
- Delays in obtaining CT scans (accessing CT scanner - pt block, distance from ED to CT, reading/interpreting scans)
- Disagreements between emergency services staff and neurologists regarding benefits of tPA
- Lack of teamwork
Desired behaviour 2b: THROMBOLYSIS

- All patients to receive full assessment for tPA eligibility

Please rank the following barriers from 1 to 9 in terms of which you believe are the most difficult barriers to overcome in relation to the desired behaviour shown in the box above.

Remember:

Please consider your responses on a national level and not related to your own hospital

 Difficulty overcoming the barrier

(Most difficult to overcome= 1; to least difficult to overcome = 9)

☐ Physician lack of knowledge/ limited experience with tPA

☐ ED non-triage staff have poor recognition of stroke symptoms and have inadequate appreciation of the critical importance of time in the management of acute ischaemic stroke

☐ Stressful and overburdened working conditions

☐ Lack of staff continuity - staff turnover, leadership changes

☐ Lack of tPA protocol

☐ Lack of clinical leadership and institutional support for tPA

☐ Delays in obtaining CT scans (accessing CT scanner - pt block, distance from ED to CT, reading/interpreting scans)

☐ Disagreements between emergency services staff and neurologists regarding benefits of tPA

☐ Lack of teamwork
Desired behaviour 3a: THROMBOLYSIS

- All eligible patients receive tPA

Please rank the following barriers from 1 to 8 in terms of which you believe are the most influential in preventing clinicians from meeting the desired behaviour shown in the box above.

Remember:

Please consider your responses on a national level and not related to your own hospital.

**Most influential in preventing clinicians from meeting the desired behaviour**

(Biggest barrier = 1; to smallest barrier = 8)

- No point of care testing in ED and/or delays in laboratory testing
- Emergency department staff don’t triage stroke as an emergency and therefore not considered time critical
- Delays - in requesting CT scan, transporting the patient to Radiology, conducting CT scan and reporting scan by radiologist
- Tasks performed sequentially rather than concurrently lead to delays
- tPA not stored in ED
- Lack of appropriately trained staff to monitor tPA patients and manage any complications
- Difficulties obtaining informed consent (patient/relative) for thrombolysis
- Out of hours delays due to staffing/resourcing issues
Desired behaviour 3b: THROMBOLYSIS

- All eligible patients receive tPA

Please rank the following barriers from 1 to 8 in terms of which you believe are the most difficult barriers to overcome in relation to the desired behaviour shown in the box above.

Remember:

Please consider your responses on a national level and not related to your own hospital.

Difficulties overcoming the barrier

(Most difficult to overcome = 1; to least difficult to overcome = 8)

- No point of care testing in ED and/or delays in laboratory testing
- Emergency department staff don't triage stroke as an emergency and therefore not considered time critical
- Delays - in requesting CT scan, transporting the patient to Radiology, conducting CT scan and reporting scan by radiologist
- Tasks performed sequentially rather than concurrently lead to delays
- tPA not stored in ED
- Lack of appropriately trained staff to monitor tPA patients and manage any complications
- Difficulties obtaining informed consent (patient/relative) for thrombolysis
- Out of hours delays due to staffing/resourcing issues
Desired behaviour 4a: FEVER

- All patients should have their temperature taken on arrival to Emergency Departments (ED) and then sixth hourly whilst they remain in ED

Please rank the following barriers from 1 to 5 in terms of which you believe are the most influential in preventing clinicians from meeting the desired behaviour shown in the box above

Remember:

Please consider your responses **on a national level** and not related to your own hospital

Most influential in preventing clinicians from meeting the desired behaviour

(Biggest barrier = 1; to smallest barrier = 5)

- Managing and organising busy nursing workload
- Belief that a patient's condition and individual nurse's clinical judgement should determine the frequency of patient observations
- Lack of fever protocols defining monitoring and treatment
- The longer the patient stays in the ED, the longer the interval between vital signs' assessment
- Patients with less acute (higher triage) category have their vital signs monitored less frequently than patients with a higher acute triage category
**Desired behaviour 4b: FEVER**

- All patients should have their temperature taken on arrival to Emergency Departments (ED) and then sixth hourly whilst they remain in ED

Please rank the following barriers from 1 to 5 in terms of which you believe are the most difficult barriers to overcome in relation to the desired behaviour shown in the box above.

**Difficulty overcoming the barrier**

(Most difficult to overcome = 1; to least difficult to overcome = 5)

- Managing and organising busy nursing workload
- Belief that a patient's condition and individual nurse's clinical judgement should determine the frequency of patient observations
- Lack of fever protocols defining monitoring and treatment
- The longer the patient stays in the ED, the longer the interval between vital signs' assessment
- Patients with less acute (higher triage) category have their vital signs monitored less frequently than patients with a higher acute triage category
**Desired behaviour 5a: FEVER**

- Treatment of a temperature 37.5°C or greater with paracetamol within one hour

Please rank the following barriers from 1 to 4 in terms of which you believe are the most influential in preventing clinicians from meeting the desired behaviour shown in the box above

**Remember:**

Please consider your responses on a national level and not related to your own hospital

**Most influential in preventing clinicians from meeting the desired behaviour**

(Biggest barrier = 1; to smallest barrier = 4)

- Concern for patient safety issues: does administering paracetamol at ≥ 37.5°C mask infection?
- If patient Nil by mouth (NBM) intravenous (IV) paracetamol is not prescribed due to cost
- Reluctance of nurses to administer paracetamol per rectum
- Local protocols restrict nurses to only initiate 1-2 doses of paracetamol
- Other(s) [Please list] ______________________________________________________
  ______________________________________________________
  ______________________________________________________
Desired behaviour 5b: FEVER

- Treatment of a temperature 37.5°C or greater with paracetamol within one hour

Please rank the following barriers from 1 to 4 in terms of which you believe are the **most difficult barriers to overcome in relation to the desired behaviour shown in the box above**.

**Remember:**

Please consider your responses **on a national level** and not related to your own hospital

**Difficulty overcoming the barrier**

(Most difficult to overcome = 1; to least difficult to overcome = 4)

- Concern for patient safety issues: does administering paracetamol at ≥ 37.5°C mask infection?
- If patient Nil by mouth (NBM) intravenous (IV) paracetamol is not prescribed due to cost
- Reluctance of nurses to administer paracetamol per rectum
- Local protocols restrict nurses to only initiate 1-2 doses of paracetamol
**Desired behaviour 6a: SUGAR**

- Record finger prick blood glucose level (BGL) on admission and monitor finger prick BGL every 6 hours (or greater if elevate)

Please rank the following barriers from 1 to 2 in terms of which you believe are the **most influential in preventing clinicians from meeting the desired behaviour shown in the box above**

**Remember:**

Please consider your responses **on a national level** and not related to your own hospital

**Most influential in preventing clinicians from meeting the desired behaviour**

(Biggest barrier = 1; to smallest barrier = 2)

- EENs are not assessed to test BGL
- Not enough BGL machines
Desired behaviour 6b: SUGAR

- Record finger prick blood glucose level (BGL) on admission and monitor finger prick BGL every 6 hours (or greater if elevate)

Please rank the following barriers from 1 to 2 in terms of which you believe are the most difficult barriers to overcome in relation to the desired behaviour shown in the box above.

Remember:

Please consider your responses on a national level and not related to your own hospital

**Difficulty overcoming the barrier**

(Most difficult to overcome= 1; to least difficult to overcome = 2)

- EENs are not assessed to test BGL
- Not enough BGL machines
**Desired behaviour 7a: SUGAR**
- Administration of insulin to all patients with BGL > 10 mMol/L within one hour

Please rank the following barriers from 1 to 7 in terms of which you believe are the most influential in preventing clinicians from meeting the desired behaviour shown in the box above.

**Remember:**

Please consider your responses on a national level and not related to your own hospital.

**Most influential in preventing clinicians from meeting the desired behaviour**

(Biggest barrier = 1; to smallest barrier = 7)

- Not enough syringe drivers or pumps
- Workforce issues, nurse: patient ratio an issue with insulin infusions
- Patient will require nurse escort to tests if on insulin infusion
- ED staff fear of hypoglycaemia
- Lack of consensus about the treatment of hyperglycaemia in stroke
- Lack of insulin dosage algorithms
- EENs not able to adjust insulin under their scope of practice
Desired behaviour 7b: SUGAR
- Administration of insulin to all patients with BGL > 10 mMol/L within one hour

Please rank the following barriers from 1 to 7 in terms of which you believe are the most difficult barriers to overcome in relation to the desired behaviour shown in the box above.

Remember:

Please consider your responses on a national level and not related to your own hospital

Difficulty overcoming the barrier
(Most difficult to overcome= 1; to least difficult to overcome = 7)

- Not enough syringe drivers or pumps
- Workforce issues, nurse: patient ratio an issue with insulin infusions
- Patient will require nurse escort to tests if on insulin infusion
- ED staff fear of hypoglycaemia
- Lack of consensus about the treatment of hyperglycaemia in stroke
- Lack of insulin dosage algorithms
- EENs not able to adjust insulin under their scope of practice
Desired behaviour 8a: SWALLOWING
- Patients remain NBM until a swallow screen by non-speech pathologist (SP) or swallow assessment by SP is undertaken

Please rank the following barriers from 1 to 8 in terms of which you believe are the most influential in preventing clinicians from meeting the desired behaviour shown in the box above

Remember:
Please consider your responses on a national level and not related to your own hospital

Most influential in preventing clinicians from meeting the desired behaviour
(Biggest barrier = 1; to smallest barrier = 8)

- Doctors reluctance to use formal swallowing screen (i.e. ASSIST tool)
- Doctors prescribing immediate aspirin when patient ‘Nil by mouth’
- Nurses administering aspirin before a swallow screen or assessment
- Clinicians believing 'Nil by Mouth' does not include oral medications
- Speech pathology staff shortages lead to delay in training nurses in swallow screen
- Lack of communication between Speech pathologists, doctors and nursing staff
- Swallow screening will add to nurses' already multiple complex care responsibilities in the ED
- Lack of standardised swallow screening tools in ED
**Desired behaviour 8b: SWALLOWING**

- Patients remain NBM until a swallow screen by non-speech pathologist (SP) or swallow assessment by SP is undertaken

Please rank the following barriers from 1 to 8 in terms of which you believe are the **most difficult barriers to overcome in relation to the desired behaviour shown in the box above**.

**Remember:**

Please consider your responses **on a national level** and not related to your own hospital

**Difficulty overcoming the barrier**

(Most difficult to overcome= 1; to least difficult to overcome = 8)

- Doctors reluctance to use formal swallowing screen (i.e. ASSIST tool)
- Doctors prescribing immediate aspirin when patient Nil by mouth
- Nurses administering aspirin before a swallow screen or assessment
- Clinicians believing 'Nil by Mouth' does not include oral medications
- Speech pathology staff shortages lead to delay in training nurses in swallow screen
- Lack of communication between Speech pathologists, doctors and nursing staff
- Swallow screening will add to nurses' already multiple complex care responsibilities in the ED
- Lack of standardised swallow screening tools in ED
Desired behaviour 9a: TRANSFER

- All patients to be discharged from ED to stroke units within 4 hours

Please rank the following barriers from 1 to 4 in terms of which you believe are the most influential in preventing clinicians from meeting the desired behaviour shown in the box above.

Remember:

Please consider your responses on a national level and not related to your own hospital.

Most influential in preventing clinicians from meeting the desired behaviour

(Biggest barrier = 1; to smallest barrier = 4)

- Unavailability of inpatient beds in stroke unit
- Delay in obtaining a porter to transport patient from ED to SU
- Administrative procedures for transferring patients too long
- Pressure to transfer patients out of ED within 4 hours and where no stroke unit bed available means stroke patients go to general wards or medical assessment units
Desired behaviour 9b: TRANSFER

- All patients to be discharged from ED to stroke units within 4 hours

Please rank the following barriers from 1 to 4 in terms of which you believe are the most difficult barriers to overcome in relation to the desired behaviour shown in the box above.

Remember:

Please consider your responses on a national level and not related to your own hospital

Difficulty overcoming the barrier

(Most difficult to overcome = 1; to least difficult to overcome = 4)

- Unavailability of inpatient beds in stroke unit
- Delay in obtaining a porter to transport patient from ED to SU
- Administrative procedures for transferring patients too long

Pressure to transfer patients out of ED within 4 hours and where no stroke unit bed available means stroke patients go to general wards or medical assessment units
Demographics

Please indicate your gender

1. ☐ Male    ☐ Female

2. How old are you?
   - ☐ <20 years
   - ☐ 20-24 years
   - ☐ 25-29 years
   - ☐ 30-34 years
   - ☐ 35-39 years
   - ☐ 40-44 years
   - ☐ 45-49 years
   - ☐ 50-54 years
   - ☐ 55-59 years
   - ☐ 60-64 years
   - ☐ 65-70 years
   - ☐ > 70 years

3. How many years have you worked in emergency care/ stroke care?
   - ☐ 5 years or less
   - ☐ 5-10 years
   - ☐ 11-15 years
   - ☐ 16 years or more

4. What is your principal role?
   - ☐ Emergency Physician
   - ☐ Neurologist
   - ☐ Geriatrician
   - ☐ Registered Nurse
   - ☐ Emergency Nurse Specialist
   - ☐ Stroke Nurse Specialist
   - ☐ Academic
   - ☐ Other, please specify __________________________
5. What is your highest education program?

☐ Diploma/Certificate
☐ Bachelor’s Degree
☐ Medical Degree
☐ Master’s Degree
☐ PhD, DN