## When to perform brain imaging for acute stroke and transient ischaemic attack (TIA): An audit to assess compliance with the latest NICE guidelines.

## Descriptor

The most recent NICE guidelines for the diagnosis and initial management of acute stroke and transient ischaemic attack (TIA) were published in May 2019 and updated in April 2022 [1]. This audit evaluates compliance with these guidelines.

## Background

Stroke is a major health problem in the UK but a preventable and treatable disease. There is evidence accumulating for more effective primary and secondary prevention strategies, better recognition of people at highest risk and interventions that are effective soon after the onset of symptoms [1].

Stroke is defined by the World Health Organization as a clinical syndrome consisting of ‘rapidly developing clinical signs of focal (at times global) disturbance of cerebral function, lasting more than 24 hours or leading to death with no apparent cause other than that of vascular origin’. A TIA is defined as stroke symptoms and signs that resolve within 24 hours.

## The Cycle

### The Standard

1. CT brain should be performed within 1 hour of arrival to the Emergency Department when:

   • Thrombolysis/early anticoagulation treatment indicated

   • On anticoagulant treatment

   • Known bleeding tendency

   • Depressed level of consciousness (Glasgow Coma Score <13)

   • Unexplained progressive or fluctuating symptoms

   • Papilloedema, neck stiffness or fever

   • Severe headache at onset of stroke symptoms

2. For all other clinical presentations, CT brain should be performed within 24 hours of onset of symptoms

3. Patients with suspected transient ischaemic attack at high risk of stroke (ABCD2 score of 4 or above, or with crescendo TIA) should undergo urgent brain imaging – preferably diffusion-weighted MRI – within 24 hours of presentation

4. Patients with suspected transient ischaemic attack at lower risk of stroke (ABCD2 score of less than 4) should undergo brain imaging within one week

### Target

100% compliance with NICE guidelines

## Assess local practice

### Indicators

Time from CT head request to generation of report

### Data items to be collected

1. The time the request was made

2. The time the report was generated

3. Category into which patient falls according to NICE guidelines

### Suggested number

1 month's data or 30 consecutive cases

## Suggestions for change if target(s) not met

Look at cases where target(s) not met

Breakdown process into stages to try and identify the reason for delay, for example:

   • Porter delay

   • Availability of escort staff

   • Access to CT in hours

   • Availability of radiographer and radiologist – out of hours

   • Access to MRI

## Resources

• 2-3 hours for data collation

• 2-3 hours to write up audit

## References

1. NICE Guideline NG 128. Stroke and transient ischaemic attack in over 16s: diagnosis and initial management. Published May 2019. Updated April 2022. Available at https://www.nice.org.uk/guidance/ng128

## Editors’ Comments

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