# Acute Stroke: when to perform brain imaging. An audit to assess compliance with the NICE guidelines; Diagnosis and initial management of acute stroke and transient ischaemic attack (TIA).

**Descriptor:**

The NICE guidelines for the diagnosis and initial management of acute stroke and transient ischaemic attack were published in July 2008 and updated in March 2017. This audit evaluates compliance with them.

**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 transient ischaemic attack (TIA) is defined as stroke symptoms and signs that resolve within 24 hours.

## The Cycle

**The standard:**

1. CT brain should be performed and reported in next scanning slot or at latest within 1 hour in the assessment of acute stroke when:

   • Thrombolysis/early anticoagulation treatment indicated

   • On anticoagulant treatment

   • Known bleeding tendency

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

   • Unexplained progressive or fluctuating symptoms

   • Papilloedema, neck stiffness or fever

   • Severe headache at onset of stroke symptoms

2. For all others 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

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 or as soon as possible

**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 cases

**Suggestions for change if target not met:**

Look at cases where target 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. National Institute for Health and Clinical Excellence. Stroke: the diagnosis and initial management of acute stroke and transient ischaemic attack. 2008. Updated 2017 (Clinical Guideline 68). <https://www.nice.org.uk/guidance/cg68>
2. Stroke: the diagnosis and initial management of acute stroke and transient ischaemic attack: summary of NICE guidance. BMJ 2008;337:a786

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