

Stroke/Transient Ischaemic Attack (TIA) [108, 478–483]

1. Introduction

Stroke is a major health problem in the UK. Improving care for patients with stroke and transient ischaemic attack (TIA) is a key national priority, with a National Stroke Strategy published by the Department of Health in 2007, and guidelines published by the National Institute for Health and Clinical Excellence (NICE) in 2008.

1.1 Acute Stroke

Acute stroke is a medical emergency. For patients with thrombotic stroke, treatment with thrombolytic therapy (alteplase) is highly time-dependent. In order to determine suitability for treatment, patients must undergo a brain scan; therefore, patients need to be transferred to an appropriate hospital as rapidly as possible once the diagnosis is suspected.

It is important to remember that thrombolysis is not the only management proven to benefit stroke patients. Admission to a stroke unit for early specialist care is known to be life saving and to reduce disability, even if thrombolysis is not indicated.

Symptoms of stroke include:

- Numbness.
- Weakness or paralysis.
- Slurred speech.
- Blurred vision.
- Confusion.
- Severe headache.

The most sensitive features associated with diagnosing stroke in the prehospital setting are facial weakness, arm and leg weakness, and speech disturbance.

1.2 Transient ischaemic attack (TIA)

Transient ischaemic attack (TIA) is defined as stroke symptoms and signs that resolve within 24 hours. However, there are limitations to these definitions. For example, they do not include retinal symptoms (sudden onset of monocular visual loss), which should be considered as part of the definition of stroke and TIA. The symptoms of a TIA usually resolve within minutes or a few hours at most, and **anyone with continuing neurological signs when first assessed should be assumed to have had a stroke**.

The risk of a patient with TIA developing a stroke is high and symptoms should always be taken seriously.

2. Incidence

Each year in England, approximately 110,000 people have a first or recurrent stroke and a further 20,000 people have a TIA.

3. Severity and Outcome

Stroke accounted for over 56,000 deaths in England and Wales in 1999, which represents 11% of all deaths. Most people survive a first stroke, but often have significant morbidity.

More than 900,000 people in England are living with the effects of stroke, with half of these being dependent on other people for help with everyday activities.

4. Pathophysiology

The majority (70%) of strokes are ischaemic. Distinguishing between ischaemic and haemorrhagic strokes is not currently feasible in the prehospital setting.

A TIA occurs when blood supply to part of the brain is temporarily interrupted.

5. Assessment

Assess ABCDs

- Record time of onset if known.
- May have airway and breathing problems ([refer to dyspnoea guideline](#)).
- Level of consciousness may vary ([refer to decreased level of consciousness guideline](#)).

Evaluate if the patient has any TIME CRITICAL features

— these may include:

- Any major ABC problem.
- Positive FAST test.
- Altered level of consciousness.

If any of these features are present, start **correcting A and B problems then transport to the nearest suitable receiving hospital. Local arrangements will determine pathways (e.g. bypassing a local hospital for the nearest 'hyperacute' stroke centre)**.

- Provide an alert/information call stating clearly that the patient is FAST positive/suspected acute stroke.
- En-route – continue patient **management** (see below).
- Assess blood glucose level, as **hypoglycaemia** may mimic a stroke.

Suspected acute stroke – a positive FAST test should be considered a TIME CRITICAL condition. Perform a brief secondary survey but do not allow this to delay transport to hospital:

- Assess blood pressure to provide a baseline for hospital assessment.
- Assess Glasgow Coma Scale (GCS) on **unaffected side** – eye and motor assessments may be more readily assessed if speech is badly affected.

Table 3.74 – FAST TEST

Facial Weakness	Ask the patient to smile or show teeth. Look for NEW lack of symmetry.
Arm Weakness	Ask the patient to lift their arms together and hold for 5 seconds. Does one arm drift or fall down? The arm with motor weakness will drift downwards compared to the unaffected limb.
Speech	Ask the patient to repeat a phrase. Assess for slurring or difficulty with the words or sentence.