Primary Care Assessment of Suspected Stroke/TIA

Rapid onset of new neurological deficit or symptom
Rapid means over seconds or minutes, or rarely, hours

Exclude/ treat hypoglycaemia — Click for more info

Perform face, arm, speech test (FAST)
- Has the person's face fallen on one side? Can they smile?
- Can they raise both arms and keep them there?
- Is their speech slurred?

FAST positive

Facial nerve weakness only?

YES

Upper or Lower Motor Neurone
Sparing of the forehead, and possibly maintenance of spontaneous smiling = UMN lesion.
Whole of one side affected, including the forehead = LMN lesion. This could be caused by a brainstem stroke in which case it would be accompanied by other signs such as tremor, ataxia, vertigo and horizontal gaze palsy

Lower Motor Neurone facial weakness

Upper Motor Neurone (sparing of forehead)

NO

See pathway **Management of Suspected Stroke**

FAST negative

Negative, but history of FAST positive now resolved — Click for more info

Quick assessment for other neurological deficit

Leg weakness

Rapid onset of other motor symptoms or signs

Other cranial nerves

Diplopia squint 3rd, 4th, 6th

Weakness 11th of shoulder elevation, ninging of scapula, weakness of head turning

Deviation of tongue or uvula 12th nerve

Rapid onset sensory symptoms or signs

Numbness or altered sensation

Exclude peripheral nerve or dermatomal pattern — Click for more info

Sensory inattention

Rapid onset deficit in higher functions

Comprehension difficulties may be for the spoken or written word or for both or for one language only

Speech difficulties
Slurring of the speech is covered in the FAST test – but expressive dysphasia, difficulties finding the right words and fluency may be affected by stroke

Visual agnosia:
https://www.youtube.com/

Facial agnosia:
https://www.youtube.com/

https://www.youtube.com/

Apraxia/ dyspraxia

Co-ordination problems

Past pointing

Dysdiadochokinesis
https://www.youtube.com/

Acute confusion

Full physical assessment for underlying cause — Click for more info

Underlying cause found; treat accordingly

No underlying cause found

Follow appropriate management pathway

Isolated Lower Motor Neurone facial nerve weakness — Click for more info

Symptoms or signs suggestive of stroke have resolved

See pathway **Primary Care Risk Stratification of Suspected TIA**

Symptoms or signs suggestive of stroke persist

See pathway **Primary Care Management of Suspected Stroke**

New Fall
Conduct neurological assessment to identify any potential stroke symptoms in a patient who has an unexplained fall

Neurological symptoms/signs - treat as potential stroke

YES

NO - manage appropriately

Isolated vertigo, nystagmus but no other signs
Isolated vertigo in the absence of past pointing and/or dysdiadochokinesia should be assumed to be due to a problem peripherally with the vestibular branch of the eighth nerve. Nystagmus may be present. In the absence of any other signs, a brain stem stroke can be excluded

Past pointing +/or dysdiadochokinesia

YES

NO

Likely labyrinthitis

Manage as labyrinthitis

Click for more info

Isolated hearing loss, with or without vertigo

Sensorineural hearing loss
Isolated sensorineural hearing loss should be assumed to be due to a problem peripherally with the auditory branch of the eighth nerve. Sudden complete sensorineural hearing loss in one ear is an emergency and needs emergency assessment

Emergency referral to ENT

Conductive hearing loss

Assess for cause, treat accordingly

Isolated rapid onset visual loss

See pathway **Rapid Onset Isolated Visual Loss**

Loss of consciousness

Still unconscious or reduced Glasgow coma score/neuro deficit on regaining consciousness

Emergency referral to Emergency Department

Full recovery
Loss of consciousness with a full recovery and no neurological deficit is not due to stroke or TIA. Patient should be assessed as usual for syncope

Assess for cause, Investigate and treat accordingly

Isolated transient amnesia
http://www.gpnotebook.co.uk/

First seizure lasted <5 minutes, full recovery

Arrange urgent MRI scan

Urgent referral to Neurology

First seizure, reduced GCS with or without neurological deficit

First seizure lasting >5 minutes

Emergency referral to Emergency Department via ambulance

Back to pathway

Exclude/ treat hypoglycaemia

The diagnosis of hypoglycaemia rests on three criteria (Whipple's triad):

- Plasma hypoglycaemia (< 3.0mmol/L)
- Symptoms attributable to a low blood sugar level
- Resolution of symptoms with correction of the hypoglycaemia

Those with poor diabetic control may experience symptoms of hypoglycaemia with normal blood glucose levels.

Symptoms that may present like stroke:

- **Hypoglycaemia**
- Pins and needles in lips and tongue
- Slurred speech
- Double vision
- Confusion
- **Sub-acute hypoglycaemia/ hypoglycaemia unawareness (seen in those on insulin)**
- Reduction in spontaneous movements and speech
- Hemiplegia
- Diplopia/strabismus

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Negative, but history of FAST positive now Resolved

IF THE PATIENT STILL HAS SYMPTOMS/SIGNS, REFER AS AN EMERGENCY VIA THE SUSPECTED STROKE PATHWAY (BLUE LIGHT AMBULANCE TO NEAREST E.D. AT A HOSPITAL WITH HASU STATUS)

High risk patients

Does your patient have any of these?

- Known AF or currently in AF and NOT anti-coagulated
- >1 episodes within 1 week (Crescendo)
- On warfarin or NOAC
- A young patient with neck pain with TIA
- Prosthetic valve and under coagulated

If any yes - Please contact the stroke team: Drs office 01438 285436 Reception desk 01438 285323

In other cases please complete the TIA referral form on the left of the main website page.

If in doubt regarding referral please discuss your patient with the stroke team on: Drs office 01438 285436 Reception desk 01438 285323

If your patient has cognitive difficulties, is severely frail, has learning disability or if there are safe guarding concerns or mobility or transport issues please also contact the stroke team on this number to discuss referral

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Exclude peripheral nerve or dermatomal pattern

Stroke will not cause sensory loss in a dermatomal pattern or in the distributions of a peripheral nerve.

http://patient.info/diagram/dermatomes-front-view-diagram

http://patient.info/diagram/dermatomes-back-view-diagram

http://patient.info/diagram/dermatomes-leg-diagram

http://patient.info/diagram/dermatomes-arm-diagram

http://www.chiro.org/ChiroZine/FULL/Paresthesias_files/mckfig2.jpg

http://classconnection.s3.amazonaws.com/472/flashcards/602472/png/lower_ext1310578815607.png

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Isolated hearing loss, with or without vertigo

Isolated sensorineural hearing loss should be assumed to be due to a problem peripherally with the auditory branch of the eighth nerve. Sudden complete sensorineural hearing loss in one ear is an emergency and needs emergency assessment.

Weber Test*

The Weber test identifies an asymmetry of hearing when hearing changes are recent.

Method: Strike the tuning fork and place it high on the forehead in the midline. Ask the patient if the sound is louder in one ear or equally loud in both ears.

Interpretation: If the Weber lateralises, there is either a conductive loss in the ear to which the sound lateralised, or a sensorineural loss in the opposite ear.

Example 1: A patient reports a recent decrease of hearing in their right ear. The Weber refers to the right. This suggests a conductive hearing loss on the right.

Example 2: A patient reports a recent decrease of hearing in their right ear. The Weber refers to the left. This suggests a sensorineural hearing loss on the right.

If the hearing loss is longstanding or there is loss in both ears, the Rinne test will help with an interpretation by confirming if a conductive loss is present.

The Rinne Test*

The Rinne test identifies the presence of conductive loss.

Method: Strike the tuning fork lightly and place it on the base of the mastoid of the ear being tested. Ask the patient to tell when they can no longer hear the sound. Immediately move the tuning fork to hold it close to the ear canal but not touching the ear. Ask the patient if they can hear the sound, and if so to advise when they can no longer hear the sound.

Interpretation: If the sound cannot be heard by air conduction or doesn't continue to be heard for at least as long as it was heard by bone conduction, there is a conductive hearing loss in the ear being tested.

* The results of tuning fork tests may be compromised if the patient has had middle ear reconstructive surgery or a fracture to the temporal bone. Tuning fork tests are not reliable in children under eight years of age.

http://www.thebsa.org.uk/resources/recommended-procedure-rinne-weber-tuning-fork-tests/

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Full physical assessment for underlying cause

Acute confusion may be due to a severe disturbance of comprehension, speech and agnosia. However, in the older more frail individual it is more commonly caused by intercurrent illness such as UTI, chest infection, acute abdomen, and so a full clinical examination should be undertaken before assuming that it is caused by stroke

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Isolated Lower Motor Neurone facial nerve weakness

LMN seventh nerve (facial nerve) palsy without vertigo, tremor, ataxia, post pointing, dysdiadochokinesia, hemiparesis or sixth nerve palsy excludes a brain stem stroke, and should be treated as Bell's Palsy

http://patient.info/doctor/facial-nerve-palsy