EMERGENCY DEPARTMENT MANAGEMENT

TIA & Non-Disabling Stroke

The risk of recurrent stroke after a TIA is 10-20% within 90 days; half of the strokes occur in the first two days after symptom onset.

The goal of outpatient management of TIA is rapid assessment and management to reduce the risk of a recurrent, possibly more serious, event.

1 Has the patient had a TIA?

LIKELY Carotid Territory TIA

- Transient monocular blindness (amaurosis fugax)
- Hemisensorimotor symptoms
- Speech and/or language disturbance

LIKELY Vertebrobasilar Territory TIA

- Bilateral simultaneous sensorimotor symptoms
- Homonymous visual field loss
- Diplopia with other symptoms on this list
- Vertigo with other symptoms on this list
- Dysarthria with other symptoms on this list

NOT LIKELY TIA

- Transient symptoms lasting only seconds
- Convulsion
- Transient loss of consciousness alone
- Transient global amnesia
- Non-vertiginous dizziness alone
- Vague weakness without loss of power

AND no other neurological findings.

Continue investigations and REFER TO OTHER SPECIALISTS as needed.

What is the risk category?

LOW RISK

Symptoms

- onset more than 2 weeks prior
- and/or patients with isolated sensory symptoms (such as tingling)

Requires all tests/evaluations WITHIN 1 MONTH.

Low risk patients should be referred and seen by TIA/Stroke Secondary Prevention Services within 1 month.

MEDIUM RISK

Symptoms

- onset between 48 hours and 2 weeks
  - WITHOUT persistent or fluctuating motor symptoms
  - WITHOUT persistent or fluctuating speech symptoms
  - WITHOUT other clinically localizable symptoms

Requires all testings/evaluations WITHIN 24 HOURS.

Medium risk patients should have as much of the testing and management done while they are in ED, with referral sent to TIA/Stroke Secondary Prevention Services prior to discharge.

HIGH RISK

Symptoms

- onset within the last 48 hours
- persistent or fluctuating motor symptoms
- persistent or fluctuating speech symptoms
- other clinically localizable symptoms

Requires all tests/evaluations IMMEDIATELY.

Does the following apply to patient?

- >1 TIA in preceeding 24 hours
- co-morbidity requiring hospitalization
- travel to hospital for follow up difficult
- residence >2 hours from a thrombolysis hospital
- probable or definite surgical carotid lesion

NO

YES → **Consider INPATIENT ADMISSION**

2 Tests/Evaluations

Bloodwork

- haematology (CBC)
- electrolytes
- coagulation (PTT, INR)
- renal function (creatinine, glomerular filtration rate)
- HbA1C
- thyroid-stimulating hormone (TSH)
- fasting lipid profile
- fasting glucose level

If fasting bloodwork cannot be completed while in ED, should be done ASAP, based on risk categorization noted above.

Additional blood work may be required if suspect pro-thrombotic state, vasculitic cause, or in young patients.

Non-Contrast Head CT

Hemorrhage on CT?

YES → Consider
- correcting coagulopathy
- lowering BP

→ **Admit to STROKE UNIT**

NO → Initiate medications

12 lead ECG

ECG shows AF?

YES → **Is this a pre-existing condition?**

- YES → Ensure anticoagulation coverage is adequate.
- NO →
  - Anticoagulation assessment
  - Rate control assessment
  - Refer for additional assessment as appropriate

NO → Consider Holter if suspect cardioembolic source and no other stroke mechanism identified.

Carotid Imaging

Carotid Imaging unless clear vertebrobasilar TIA OR patient is obviously not a candidate for carotid revascularization – e.g. dementia, terminal illness.

If in doubt, perform carotid imaging.

2 Carotid Imaging modalities show ipsilateral 50-99% ICA stenosis?

YES → **Refer to vascular/neurosurgery for carotid revascularization.**

Target procedure within 2 weeks of index event.

NO → Report to GP and monitor accordingly

Best Practice Medications

Patients with atrial fibrillation: Begin anticoagulation as soon as CT rules out hemorrhage.

Other patients: Begin/re-start antiplatelet therapy immediately after CT rules out hemorrhage.

All risk factors for cerebrovascular disease: Aggressively managed through pharmacological and non pharmacological means to achieve optimal control.

www.strokebestpractices.ca/index.php/prevention-of-stroke

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3 Refer to TIA/Stroke Secondary Prevention Services