Ischemic Stroke / TIA Standing Orders

Anticipated LOS 5 days / TIA 3 days

Ischemic Stroke / TIA Standing Orders item # 3748

<table>
<thead>
<tr>
<th>HYPERACUTE THERAPY</th>
<th>RECURRENCE PREVENTION</th>
<th>POST-STROKE RECOVERY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal:</strong> Limit ischemic cerebral injury</td>
<td><strong>Goal:</strong> Prevent early &amp; late stroke recurrence</td>
<td><strong>Goal:</strong> Facilitate recovery &amp; prevent complication</td>
</tr>
<tr>
<td>- Establish reperfusion (thrombolysis)</td>
<td>- Use specific prevention treatments based on actual stroke mechanism</td>
<td>- Rehabilitation</td>
</tr>
<tr>
<td>- Neuro-protection.</td>
<td>- Identify and modify any treatable risk factors</td>
<td>- Education</td>
</tr>
</tbody>
</table>

**Standards of Care:**
- Thrombolysis-IV tPA for appropriate cases and consult Stroke Team (590-6760*3) for cases <3hr symptom onset.
- Establish pre-stroke BP baseline and allow elevation for 48 hrs/ may hold BP meds (unless tPA given then BP<185/110).
- Maximize cerebral perfusion and treat BP elevations only if symptomatic (i.e. AMI or CHF).
- Treat hypoxemia, hyperthermia, and hyper/hypoglycemia.
- Consider heparin for progressive stroke.

**Standards of Care:**
- Determine specific stroke mechanism:
- See Stroke Mechanism & Treatment Flow Diagram (on back) and mechanism definitions (below).
- ASA 81mg X 1 emergently unless contraindicated:
- If starting anticoagulation, use heparin drip, avoid bolus, titrate drip to PTT, avoid warfarin bolus
- Risk factor modification in all cases.
- Long-term stroke prevention medication in all cases:
- Antiplalet: Aspirin, ASA-ER Dipryramide, Clopidogrel, or Ticlopidine
- Anticoagulants: LMW Heparin, Warfarin, or Heparin

**Stroke Mechanism:**

**Definition:**
- **Large Artery Atherosclerosis**
  Infarction of major brain artery (ICA, MCA, ACA, PCA, vertebrobasilar) or cortical branch with >50% stenosis
- **Cardioembolism**
  Large artery pattern infarct with high risk cardiac source (a fib, recent MI, LV thrombus, dilated/akineti, cardio-myopathy, SSS, mech. Valve, endocarditis OR Medium risk (mitral annular calcification, PFO with shunt, CHF, LV hypokinesis, remote MI)
- **Small Vessel Occlusion**
  Small penetrating artery infarct (<1.5mm, non-cortical) and clinical Lacunar syndrome (see Flow for syndromes)
- **Other Determined Cause**
  Examples: dissection, antiphospholipid syndrome, vasculitis, migraine-stroke
- **Undetermined**
  When full evaluation negative or multiple causes

**Ischemic Stroke/TIA Standing Orders**

*Cross out and initial standard protocol orders that do not apply*

1. **Admit/Transfer To:**
   - Neurology-4NW
   - MICU
   - Other

2. **Service**
   - Attending
   - Resident/Intern

3. **Diagnosis:**
   - Ischemic stroke
   - TIA (Symptoms resolved <1 hr from onset)

4. **Location of suspected infarct:**
   - Side:

5. **Complicating illness or diagnosis:**

6. **Baseline B/P** (prior to ED – per patient or medical records):

7. **Stroke Symptom Onset** – Estimated Date:
   - Time:

8. **Thrombolytic Exclusion:**
   - Resolving symptoms
   - Time
   - Other:

9. **Allergies:**

10. **Activity**
    - Advance as tolerated
    - ICU: Bedrest

11. **DVT Prophylaxis**
    - Enoxaparin: (Lovenox )30mg BID SQ
    - Pneumatic Compression Device
    - Heparin 5000 units SQ BID (unless otherwise contraindicated)
    - None (patient is ambulatory)

**Date/Time**

**Please Use Ball Point Pen- Press Firmly**
## Vital Signs

12a. Stroke Unit (neurology unit or non-ICU): Q2 hours x2 then Q4 hours X4 then Q8 hours and prn
12b. ICU: Q1 hour x6 then Q2 hours and prn
12c. Other

## Neuro Exam

13a. Stroke Scale Flow Sheet Protocol:
- Complete NIHSS with pupil exam admission, at 24 hours, transfer/discharge
- and if Neuro Status declines. Modified NIHSS (items 1,4,5,6) with vital signs. If NIHSS item 1a (LOC) > 2, add GCS on neuroscience flow sheet

13b. Other

## Nursing

14a. I & O QS
14b. Admission weight
14c. Daily Weight for patients receiving alternative nutrition.
14c. Fingerstick QID if patient has diabetes or admission BS >200, Diabetes Survival Skills Education Materials item number 6230931, 6230932

## Respiratory

15a. Check POX on RA upon admit. Apply 02 at 2L NC if 02 sat < 92%. Wean per RT 02 protocol.

## Diet

16a. NPO NAS Low Cholesterol General ADA-calories:
16b. If patient at risk for aspiration, make NPO, Check Speech Therapy and Dietary Consults under number 22.
16c. Use TPN or Tube Feeding order form to initiate alternative nutrition

## IV Therapy

17a. Cap IV per protocol QS IV FLUIDS/RATE /hr
17b. D/C IV by day 2 if patient is tolerating PO, off telemetry and not taking IV meds.

## Diagnostic Test(s) & Indication(s)

18a. MRI of Head Neck Symptoms:
- Indication: Localize infarction Small vessel disease.
- (MD to page on-call MRI staff on weekends)

18b. MRA of Head Neck Symptoms:
- Indication: Assess intracranial circulation (MD to page on-call MRA staff on weekends)

18c. TEE: with bubble study
- Indication: Stroke Embolism/thrombosis in thoracic cavity A-Fib Cardiomegaly Transient Cerebral ischemia Atrial septal defect Ventricular septal defect Other:

18d. CAROTID DOPPLER
- Indication: Embolism/thrombosis in carotid arteries Other:

18e. CT without contrast
- Indication: Localize infarction Other:

18f. Other diagnostic test:
- Indication:

MD Signature: ________________________________ DATE/TIME ________________________________

---

Ischemic Stroke / TIA Standing Orders item # 3748
**19. Medications:**

19a. **STAT Medication(s):** ECASA 81mg X 1 NOW PO/PR (MD to order if not given in ED, not treated with tPA and CT neg. for hemorrhage, or otherwise not contraindicated)

19b. **Daily Stroke Prevention Medication(s):**

   - Warfarin Dose: Keep INR range ______ to _______
   - Heparin at _______ U/hr. Keep PTT _______ to _______
   - PTT Q 6 hrs until in range x2 after each rate change, then QD. RN to notify communicator of lab draw time.

19c. **Anticoagulant Medication(s):**

   - Aspirin 81mg PO/PR QD
   - Clopidogrel (Plavix) 75 mg PO QD
   - Aspirin/ERDipyridamole (Aggrenox) 25mg ASA/200mg ER Dipyridamole BID PO
   - Other

19d. **Unscheduled Medication(s):**

   - Docusate Sodium 100mg PO BID prn (if no BM in last 48 hours)
   - Acetaminophen 650 mg PO/PR Q 4 hours prn (fever/pain)
   - Milk of Magnesia 30cc PO QD prn (if no BM in last 48 hours)
   - Fleets enema x1 if both Docusate Sodium and MOM are ineffective

19e. **Additional Medications:**

   - Hold Antihypertensive Medication if SBP<=_____/DBP<=_____

19f.

19g.

19h.

19i.

**20. PMD Notification:** Faculty/resident to notify PMD of patient admission date

**21. Outcome Management**

21a. RN initiate outcome management tool: Ischemic Stroke/TIA

21b. MD initiate physicians Diagnostic Summary Form: Stroke/TIA

**22. Consults**

22a. **Standard Stroke Consult Protocol** (Includes evaluation and treatment by OT, PT, Speech Therapy, Dietary, Social Services, Case Management, PM&R)

22b. **Standard TIA Consult Protocol** (Includes social services, dietary and case management)

22c. **Diabetes Nurse Consult for pt’s newly diagnosed with Diabetes, new to insulin, having glucose meter problems, difficulty with learning, vision problems or noncompliant**

22d. **None ordered**

---

**Ischemic Stroke / TIA Standing Orders item # 3748**

Please Use Ball Point Pen - Press Firmly
### Ischemic Stroke/TIA Standing Orders - cont’d

#### 23. Labs

- **23a.** Fasting Lipid Panel in AM
- **23b.** *π* if Heparin is ordered - Baseline PTT to be drawn before starting Heparin.
- **23c.**
- **23d.**

#### 24. **π** TELEMETRY INDICATION & CALL ORDERS

Telemetry indications must be documented. For other telemetry indications, see General Telemetry Order Form.

**Scope:** To provide a standard recommendation for telemetry indications and duration for patients admitted to a telemetry unit.

**INDICATIONS:**

<table>
<thead>
<tr>
<th><strong>Check Box for indication</strong></th>
<th><strong>Duration</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>24a.</strong> Automatic Indication if ICU admission</td>
<td>Continuous monitor unless otherwise ordered</td>
</tr>
<tr>
<td><strong>24b.</strong> Arrhythmia surveillance for paroxysmal cardiac arrhythmia in suspected cardiac-source stroke embolism (unless causative arrhythmia identified)</td>
<td>24 hours</td>
</tr>
<tr>
<td><strong>24c.</strong> Rule out (low risk) myocardial infarction</td>
<td>24 hours</td>
</tr>
<tr>
<td><strong>24d.</strong> Syncope a), non arrhythmia, b), arrhythmia, c), unidentified infarction.</td>
<td>24 hours</td>
</tr>
<tr>
<td><strong>24e.</strong> Patient may temporarily remove monitor to shower</td>
<td></td>
</tr>
<tr>
<td><strong>24f.</strong> Staff must accompany patient when going off the unit</td>
<td></td>
</tr>
<tr>
<td><strong>24g.</strong> Notify H.O. if: PVCs /min. Run of V-tach &gt; beats</td>
<td></td>
</tr>
<tr>
<td><strong>24h.</strong> If HR &lt;50 and hemodynamically compromised give Atropine 0.5 mg IV push. Notify H.O. immediately</td>
<td></td>
</tr>
<tr>
<td><strong>24i.</strong> Treat V-tach &gt; beats with Lidocaine IV bolus (1mg/kg-max. 100mg). Notify H.O. immediately</td>
<td></td>
</tr>
</tbody>
</table>

#### 25. **Additional Call Orders - Call H.O if:**

- **25a.** Blood pressure – Check one
  - *π*BP without IV tPA treatment SBP > 220 < 130 (not less than baseline)
  - *π*BP with IV tPA treatment SBP > 185 or DBP > 110 for 48 hours following infusion
- **25b.** Heart Rate > 120 < 50
- **25c.** Respiratory Rate < 10 or > 30
- **25d.** Temperature > 101.5 or < 96.5 oral
- **25e.** U/O < 30 cc/hr or < 240 cc/8 hours
- **25f.** Decline in neurological status
- **25g.** If O2 sat < 92%, place O2 and call H.O.
- **25h.** Blood sugar < 60 or > 200 mg/dl

#### 26. RN Initiate Clinical Outcome Management Tool: Ischemic Stroke/TIA

#### 27. MD initiate physicians Diagnostic Summary Form: Stroke/TIA

#### 28. **Additional Orders**

---

**Ischemic Stroke/TIA Standing Orders tem # 3748**

---