### PHYSICIAN'S ORDER SHEET

#### ACUTE ISCHEMIC STROKE/TIA

Any order preceded by a box must be checked to enable the order. All other orders will be automatically implemented.

**Admit to 5 West, inpatient status observation status**

<table>
<thead>
<tr>
<th>Attending: Dr.</th>
<th>Intern:</th>
<th>Resident:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Night-time coverage: Call Medicine Night Float</td>
<td>Notify patient’s PCP of admission</td>
<td></td>
</tr>
</tbody>
</table>

**Diagnosis:**
- Ischemic stroke
- TIA

**Condition:**

- Allergies/Adverse Drug Reactions:

**Resuscitation Status:**
- Vital signs: HR, BP, RR, T, O₂ saturation on admission and then every 4 hrs x 24 hours and then every shift and prn.
- Activity: [ ] Out of bed with assist [ ] Bedrest [ ] Other:

**Diet:**
- [ ] NPO until swallow evaluation completed—nursing to adjust when consult completed.
- [ ] Other diet: NPO recommended if any of the following are present: lethargy; dysarthria; gurgling vocal quality; hypophonia; aphasia; severe neglect; obvious weakness of face, tongue or palate; confusion; significant apraxia; difficulty handling secretions; or drooling.

**IV access:**
- [ ] Place 18 gauge intravenous catheter (unless present) – routine flushes
- [ ] IV fluids: Normal saline at ____ ml/hour
- [ ] Other IV fluids:

**Recommended Consults:**

**HOUSE STAFF NEED TO COMPLETE REQUISITIONS**
- Physical Therapy: evaluate and treat ASAP. Assess mobility and limb strength/coordination. Follow patient until problem has resolved.
- Speech and Language Pathology: evaluate and treat ASAP. Assess swallowing function, language, and cognitive deficits. Follow patient until problem has resolved.
- Occupational therapy: evaluate and treat ASAP. Assess ADL function and cognitive deficits. Follow patient until problem has resolved.
- Dietary consult: determine appropriate diet, assess and provide education ASAP.

**Nursing-MD to RN:**
- Give patient/family standard educational materials
- Pneumatic compression boots to both legs, discontinue when patient is ambulating
- May straight cath patient if unable to void within 6 hours
- Bladder ultrasound PRN if patient not voiding every 6 hours
- May straight cath patient every 4 hours PRN post void bladder volume ≥ 400 ml and every 6 hours if < 400 ml
- Oxygen therapy: prn—titrate FiO₂ to maintain O₂ sat greater than 90%
- Notify physician for any of the following adverse reactions: HR greater than 120 or less than 40 bpm, SBP less than 90 or greater than 200, RR greater than 35, Temp greater than 38° centigrade, or change in mental status or neurologic function.

**Diagnostics (recommended for all patients if not previously done)**

**HOUSE STAFF NEED TO COMPLETE REQUISITIONS**
- CT scan head without contrast: Diagnosis is possible stroke
- EKG: Diagnosis is possible stroke
- CXR: Diagnosis is possible stroke
- Labs: CBC, platelet count, electrolytes, BUN, Cr, random glucose, total cholesterol, HDL, LDL, triglycerides, PT/PTT.
- HbA1C (if patient is diabetic or if hyperglycemic on admission)
- Carotid Artery Duplex (vascular lab): Diagnosis is possible stroke – perform ASAP

**Signature:**

**MD Date & Time:**

**PRINT Name:**

**Pager/Phone #:**

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A generic equivalent may be administered when a drug has been prescribed by brand name unless the order states to the contrary.

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**Original:** To the Medical Record | **Yellow Copy:** Pharmacy

Approved by: P&T: 8/10/04 (P-193) | Medical Records: _______________
Any order preceded by a box must be checked to enable the order. All other orders will be automatically implemented.

**Diagnostics for selected patients (HOUSE STAFF NEED TO COMPLETE REQUISITIONS):**

- **MRI: Brain without Gadolinium** – Indications: Patient with stroke – do ASAP. Recommended when conditions other than stroke being considered, etiology of stroke not evident or if lesion not adequately defined by admission CT scan.
- **MRA of Brain** – Indication: Patient with stroke – do ASAP. Recommended when etiology of stroke not evident and intracranial disease is suspected.
- **MRA of Neck** – Indication: Patient with stroke – do ASAP. Recommended for suspected arterial dissection and other disease of extracranial vessels or if extracranial ultrasound inconclusive or not available. *Note MRA of brain and neck are separate studies and so need to be ordered separately. If dissection is suspected, indicate on requisition.
- **CT Angiography of Head** – Indication: Patient with stroke – do ASAP. Recommended for suspected intracranial disease and when MRA not tolerable or is equivocal.
- **Transesophageal Echocardiogram (TEE)** – Indication: Stroke, ? source – do ASAP.
- **Transcranial Doppler (Vascular Lab)** – Indication: Stroke, ? intracranial disease – do ASAP. Consider if MRA not possible or is equivocal.
- **Telemetry x 24 Hours** Recommended if arrhythmia or possible cardiac ischemia present on admission.
- **Holter monitor x 24 Hours** Recommended if history, cardiac exam or ECG suggest increased risk of arrhythmia.
- **Urine Drug Screen**
- **Thrombosis Screen (if venous thrombosis is suspected, contact laboratory)**

**Medications: Antiplatelet agents**

Aspirin started early after cerebral infarction modestly lowers the risk of death and recurrent stroke. There is no consensus on the best dose of aspirin or the best antiplatelet agent for long term stroke prevention. **Antiplatelet agents are contraindicated for 24 hours after IV Alteplase is used.**

- Aspirin non enteric coated chewable 81 mg po daily (recommended)
- Aspirin non enteric coated 325 mg po, pr or per g tube daily
- Clopidogrel (Plavix®) 75 mg p.o./ per g-tube daily Consider for patients who cannot tolerate aspirin.

**Medications: Anticoagulation**

Despite its widespread use, there is little evidence about the risks and benefits of IV heparin in acute ischemic stroke. Recent large randomized controlled trials using subcutaneous unfractionated heparin suggest that anticoagulation in unselected patients is not helpful and may be harmful. Low molecular weight heparin may be safer and easier to use than IV heparin. Based on these trials and expert opinion, anticoagulation should be considered on admission if crescendo TIAs precede stroke or if clinical data strongly suggest that the patient is at high risk of recurrent embolization or thrombus extension including patients with a high risk cardiac source of embolism or severe stenosis or occlusion of the ICA, MCA, vertebral artery or basilar artery. Caution should be used if anticoagulants are combined with antiplatelet agents.

**Anticoagulation is contraindicated for 24 hours after IV Alteplase has been used.** It is also contraindicated for patients with large cerebral infarcts, small or medium sized infarcts with significant hemorrhagic transformation, uncontrolled severe hypertension, bacterial endocarditis and sepsis. Low molecular weight heparins are not recommended in patients with prosthetic heart valves.

Signature: ___________________________ MD  Date & Time: ____________________

PRINT Name: ___________________________  Pager/Phone#: ____________________

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Original: To the Medical Record  Yellow Copy: Pharmacy

Approved by: P&T: ________(P-193 revised 7/19/04)  Medical Records: ________
### Medications: Intravenous Unfractionated Heparin

- Use DHMC Stroke Heparin Protocol Orders and Stroke Heparin Protocol Flow Sheet (see separate attachments that need to be completed by physician). If this protocol is modified, a complete set of orders including initial bolus, infusion rate and dosing changes needs to be written out.

- Use DHMC Adult Heparin Protocol Orders and flow sheet (see separate attachments that need to be completed by physician). If this protocol is modified, a complete set of orders including initial bolus, infusion rate and dosing changes needs to be written out.

**OR**

- **Low Molecular Weight Heparin (Enoxaparin)**
  
  **Recommendation:** 1mg/kg x 1 dose STAT and then every 12 hours (round to nearest 5 mg, maximum: 150 mg per dose) for full anticoagulation. For patients with renal failure consider adjusting dose.

- Enoxaparin _____ mg SC STAT x 1 dose and then every 12 hours

**Do not give enoxaparin if also receiving another form of heparin**

### Medications: Blood Pressure Management

Elevations of blood pressure should be treated carefully, if at all, during the acute phase of an ischemic stroke. Ideally, management should be individualized, taking into account the patient’s usual blood pressure and presumed stroke mechanism.

For BP management after ALTEPLASE (t-PA) is used, see ALTEPLASE (t-PA) Practice Guideline. If blood pressure needs to be reduced, ideally it should be done gradually in 10-20% decrements in MAP mean arterial pressure (MAP) while observing the patient for clinical change. The following are general guidelines:

- **Labetalol** 10 mg IV over 2 minutes prn SBP greater than 220 mm Hg or DBP greater than 110 mm Hg. Give over 2 minutes, may repeat every 15 minutes, up to 300 mg total dose per day, hold if pulse less than 50 bpm

- **Hydralazine** 20 mg IV every 4 hours prn SBP greater than 220 mm Hg or DBP greater than 110 mm Hg; despite labetalol; hold if pulse greater than 100 bpm

- **Enalaprilat** 1.25 mg IV every 6 hours prn SBP greater than 220 mm Hg or DBP greater than 110 mm Hg despite labetalol and hydralazine

If above measures are unsatisfactory (i.e. 2 hours has passed or if very rapid blood pressure control is desired):

- **Nicardipine continuous IV infusion** (use is restricted to NSCU/Critical Care). Dilute each ampul (25 mg/10 ml) with 240 ml of normal saline to make 250 ml of IV solution (final concentration 0.1 mg/ml). Start at _____ mg/hour (usual dose is 5 mg/hour): Titrate to maintain SBP less than 220 and DBP less than 110 by increasing infusion rate by 2.5 mg/hour every 5 minutes to a maximum of 15 mg/hour.

  **Frequent BP measurements (every 15 minutes) are recommended for 1 hour after initiation of the Nicardipine infusion and after a dose change, then every 30 minutes.**

### Medications: Other

- **RBO’s**
  - Acetaminophen 975 mg p.o./p.r./per g tube every 6 hours prn pain or T greater than 38 degrees C measured po
  - Diazepam 10 mg p.o./per g tube prior to MRI prn claustrophobia

**Other medications and orders (write below):**

**Signature:** ___________________________ MD  **Date & Time:** ___________________________

**PRINT Name:** ___________________________  **Pager/Phone#:** ___________________________

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