

Saint Vincent Hospital
at Worcester Medical Center
NEUROLOGY DEPARTMENT

Cerebrovascular Disease Assessment
Flow Sheet

TIME (use military time)

- _____ Onset of symptoms or "last seen well" time (less than 3 hours in duration). _____ Physician performs a rapid, complete history and physical exam: NIH Stroke Scale score: _____
- _____ Patient arrives in ED with (or admitted patient develops) signs/symptoms of suspected CVA. _____ Order stat un-enhanced head CT scan, stat portable CXR (if indicated) and stat EKG.
- _____ Lab phlebotomist will obtain and deliver to the lab: CBC, PT, aPTT, INR, CP7, HCG, Type & Screen. _____ Physician assesses patient for inclusion and exclusion criteria.
- _____ Acute stroke team beeper is activated. (Goal: Beeper activation within 15 minutes of patient arrival or start of symptoms **and** stroke team response by phone or in person within 15 minutes of being paged.)

INCLUSION CRITERIA (These statements must all be true in order to consider t-PA administration. Check box if statement is true.)

- Ischemic stroke onset within 3 hours of drug administration. Patient's head CT scan does not show hemorrhage or nonstroke cause of deficit.
- Measurable deficit on NIH Stroke Scale examination (see back of this form). Patient's age is greater than 18 years.
- Clearly defined time of stroke onset (within 180 minutes).

EXCLUSION CRITERIA (A YES to any of the following conditions or findings may exclude the patient from receiving t-PA. The risk/benefit must be weighed by the physician. Check box if statement is true.)

HISTORY

- Patient's symptoms are minor or rapidly improving (examples of mild neurological symptoms include ataxia alone, sensory loss alone, dysarthria alone or minimal weakness).
- Patient has had arterial puncture at noncompressible site or lumbar puncture within past 7 days.
- Patient had a seizure at onset of stroke. Patient has had gastrointestinal or urinary tract hemorrhage within the past 21 days.
- Patient has had another stroke or serious head trauma within the past 3 months. Patient has had a myocardial infarction within past 21 days.
- Patient had major surgery or other serious trauma within past 14 days. Patient has a history of a bleeding disorder (e.g., hemophilia).
- Patient has known history of intracranial hemorrhage. Patient has a history of diagnosed brain tumor, cerebral aneurysm or AVM.
- Patient has symptoms suggestive of subarachnoid hemorrhage. Pregnancy

PHYSICAL EXAM

- Patient has sustained systolic blood pressure greater than 185 mmHg or diastolic greater than 110 mmHg (on 2 readings 15 minutes apart and refractory to IV labetalol).
- Aggressive treatment is necessary to lower the patient's blood pressure. Patient has an active bleeding site.
- Positive hemoccult on rectal exam.

LAB

- Patient has received heparin within the past 48 hours and has an elevated aPTT (greater than 35 seconds).
- Patient's prothrombin time (PT) is greater than 15 seconds or INR greater than 1.5. Patient's serum glucose is less than 50 mg/dL or greater than 400 mg/dL.
- Patient's platelet count is less than 100,000/mm³. Positive HCG.

RELATIVE CONTRAINDICATIONS (If any of the following statements is true, use t-PA with caution. Check box if statement is true.)

- Patient's head CT scan shows evidence of a large middle cerebral artery (MCA) territory infarction (sulcal effacement or blurring of gray-white junction in greater than one-third of the MCA territory).
- Patient has a large stroke with NIH Stroke Scale score greater than 22. Age greater than 85 years.

- All of the inclusion and exclusion criteria have been reviewed and the patient is a candidate to receive t-PA. If NO, proceed to disposition section. Yes No
- Neurologist (name: _____) calls back and discusses case with physician caring for patient (Goal: within 15 minutes of being called). Yes No
- Patient has head CT scan performed (Goal: within 25 minutes of order being written). Yes No
 - Physician obtains results of head CT scan from radiologist (Goal: within 20 minutes of completion of scan). Yes No
 - Physician obtains results of CXR, if CXR was indicated (Goal: within 45 minutes of being ordered). Yes No
 - Physician obtains results of necessary lab studies (Goal: within 45 minutes of being ordered). Yes No
- If all criteria for t-PA administration are met, explain risks/benefits to patient and family. Risks include death; stroke; permanent neurologic injury; worsening of stroke symptoms from swelling or bleeding in the brain; bleeding other parts of the body; need for blood transfusions to replace blood or clotting factors; other unexpected complications.
- Obtain written informed consent, if possible.
- Pharmacy is called to order t-PA (Pharmacy staff will need patient's name, weight and medical record number).
- Patient's estimated/stated weight: _____. Calculated dose for tPA: _____ mg. t-PA arrives in the Emergency Department.
- If onset of stroke is still less than 3 hours, start tPA at 0.9mg/kg (but not exceeding 90mg) with 10% as bolus dose & the remainder given over the following hour.
- t-PA administration is started (Goal: within 60 minutes of patient arrival).
- Monitor for unexpected bleeding: (see Stroke Management Policy) Intracranial Hemorrhage Algorithm if patient develops signs/symptoms of bleeding.
- Maintain blood pressure less than 180/110.
- Patient receiving t-PA must not receive antithrombotic or antiplatelet agents for 24 hours (e.g., aspirin).

DISPOSITION

- Admit to: ICU bed Nursing Unit: _____ Home/Other: _____ AMA
- Comments: _____
- Physician's Signature & Credentials: _____ Printed Name: _____ Date: _____ Time: _____

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NIH STROKE SCALE

CATEGORY	DESCRIPTION				INITIAL SCORE	REASSESS. SCORE if indicated
1a. Level of Consciousness	0 = Alert	1 = Drowsy	2 = Stuporous	3 = Coma		
1b. LOC Questions (<i>month, age</i>)	0 = Answers Both Correctly	1 = Answers One Correctly	2 = Both Incorrect			
1c. LOC Commands (<i>open/close eyes, make fist/let go</i>)	0 = Obeys Both Correctly	1 = Obeys One Correctly	2 = Both Incorrect			
2. Best Gaze (<i>eyes open; pt. follows finger or face</i>)	0 = Normal	1 = Partial Gaze Palsy	2 = Forced Deviation			
3. Visual (<i>introduce visual stimulus to pt.'s visual field quadrants</i>)	0 = No Visual Loss	1 = Partial Hemianopia	2 = Complete Hemianopia			
		3 = Bilateral Hemianopia				
4. Facial Palsy (<i>show teeth, raise eyebrows, squeeze eyes shut</i>)	0 = Normal	1 = Minor	2 = Partial	3 = Complete		
5a. Motor Left Arm (<i>elevate extremity to 90° & score drift/movement</i>)	0 = No Drift	1 = Drift	2 = Can't Resist Gravity			
	3 = No Effort Against Gravity	4 = No Movement	9 = Amputation/Joint Fusion			
5b. Motor Right Arm (<i>elevate extremity to 90° & score drift/movement</i>)	0 = No Drift	1 = Drift	2 = Can't Resist Gravity			
	3 = No Effort Against Gravity	4 = No Movement	9 = Amputation/Joint Fusion			
6a. Motor Left Leg (<i>elevate extremity to 30° & score drift/movement</i>)	0 = No Drift	1 = Drift	2 = Can't Resist Gravity			
	3 = No Effort Against Gravity	4 = No Movement	9 = Amputation/Joint Fusion			
6b. Motor Right Leg (<i>elevate extremity to 30° & score drift/movement</i>)	0 = No Drift	1 = Drift	2 = Can't Resist Gravity			
	3 = No Effort Against Gravity	4 = No Movement	9 = Amputation/Joint Fusion			
7. Limb Ataxia (<i>finger to nose, heel to shin</i>)	0 = Absent	1 = Present in One Limb	2 = Present in Two Limbs			
8. Sensory (<i>pinprick to face, arm, trunk & leg; compare side to side</i>)	0 = Normal	1 = Partial Loss	2 = Severe Loss			
9. Best Language (<i>name items, describes a picture, reads sentence</i>)	0 = No Aphasia	1 = Mild to Moderate Aphasia				
	2 = Severe Aphasia	3 = Mute				
10. Dysarthria (<i>evaluate speech clarity by pt. repeating listed words</i>)	0 = Normal Articulation	1 = Mild to Moderate Dysarthria				
	2 = Near to Unintelligible	9 = Intubated or Other Barrier				
11. Extinction and Inattention (<i>use info. from prior testing to identify neglect or double simultaneous stimuli testing</i>)	0 = No Neglect	1 = Partial Neglect	2 = Complete Neglect			

INITIAL SCORE: _____ Practitioner's Signature: _____ Date: _____ Time: _____

REASSESSMENT SCORE: _____ Practitioner's Signature: _____ Date: _____ Time: _____