

Primary Stroke Center
Acute Stroke Transfer Guidelines
When to Consider a Transfer:

Hemorrhagic Stroke	Ischemic Stroke
<ul style="list-style-type: none"> • Large volume intracerebral hematoma greater than 5cm on CT • Concern for expanding hematoma • Rapidly declining mental status, especially requiring intubation • Patient with subarachnoid hemorrhage should be transferred to a comprehensive stroke center 	<ul style="list-style-type: none"> • NIHSS ≥ 4 • Signs & symptoms consistent with large vessel occlusion (“Drip and Ship”) • Stroke in the young (<55 years of age)

To Transfer a stroke patient:

If the patient is not admitted to your hospital then call the Alabama Trauma Communications Center (ATCC) at 1-800-359-0123 to arrange transfer for the potential stroke or stroke patient. Community hospitals in region 5 that are not a stroke hospital of any level can also utilize the ATCC to transfer patients to Level 2 or Level 3 hospitals.

If the patient is admitted to your hospital, then this will be a hospital to hospital transfer. Call Baptist Medical Center South at 334-288-2100 and have the admitting physician ask for the on-call neurologist to discuss the patient’s case.

<http://baptistfirst.org/Services/Stroke-Center/Default.aspx>

“The Golden Hour”





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When preparing to transfer an acute stroke patient to Baptist Medical Center South's Primary Stroke Center, please make every attempt to include the following information while awaiting EMS.

***However, do not delay transfer.**

- Results of all diagnostic testing performed including lab results and imaging exams (See attached Radiology Images from Outside Facilities form)
- NIH Stroke Scale documentation to assess improvement or decline
- Time of symptom onset or last known well and source of this information
- Contact information of family members (Cell phone if available)
- Pertinent elements of patient's past medical history, especially atrial fibrillation, warfarin therapy, congestive heart failure, diabetes, prior strokes, prior intracerebral hemorrhage, recent surgeries or instrumentation, and trauma
- Patient's current medication list
- Brief documentation of ALL therapies initiated at your hospital
- If IV Activase is excluded, please document rationale

In no circumstances should acquisition of these items delay the transfer of the patient. Urgent transfer maximizing treatment within the "golden hour" is an absolute priority.

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1. Patient Name: _____ Date: _____

2. Information/ history from: () Patient () Family member (authorized to give consent)
Name: _____ Phone: _____

3. Last Known time patient was at baseline or deficit free and awake:

Time: _____ Date: _____

TIME OF SYMPTOM ONSET: _____ **AM PM**

STROKE TEAM ACTIVATION CRITERIA	YES	UNKNOWN	NO
4. Symptom duration less than 4.5 hours	()	()	()
5. Blood glucose between 60 and 400	()	()	()

If "Yes" is answered to # 4&5, begin transfer process then complete remaining while awaiting EMS arrival

6. OBVIOUS ASYMMETRY

	Normal	Right	Left
Facial: smile/grimace	()	() Absent/Lax	() Absent/Lax
Grip	()	() Weak () No grip	() Weak () No grip
Arm drift	()	() Drifts down () Falls rapidly	() Drifts down () Falls rapidly

Based on exam, patient has **only unilateral** (not bilateral) weakness: Yes () No ()

7. Language	Appropriate	Inappropriate
Able to repeat sentence	()	()
Able to name objects (pen, watch)	()	()
Speech clarity (evaluate for slurring)	()	()

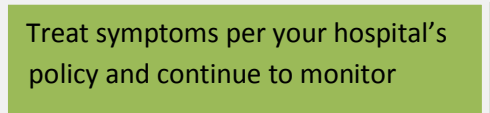
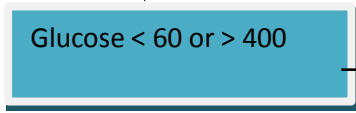
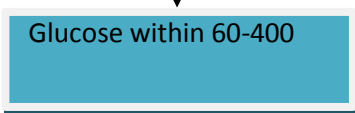
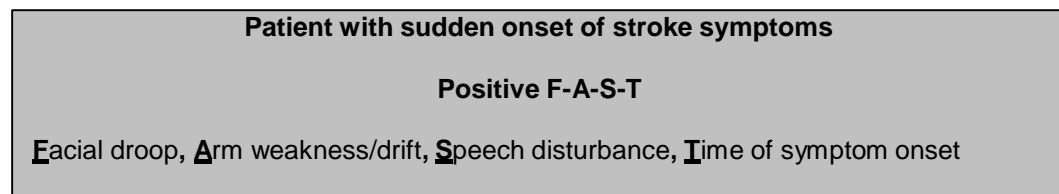
Based on assessment, patient has new onset language/ orientation deficit Yes () No ()

8. Items 4-7 all Yes (or unknown)= Stroke Team Activation criteria met	Yes () No ()
Onset of symptoms plus transport time <4.5 hours	Yes () No ()

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Transfer Algorithm



- Establish time pt. last seen normal/ time of symptom onset
- If symptom onset < 3 hours or if up to 4.5 hours with four additional exclusion criteria and F-A-S-T positive:
 - Prepare for transfer to Baptist Medical Center South
 - *While waiting for EMS, complete the following:**
 - Stat non-contrast Brain CT Start two large bore IVs or verify IVs are patent
 - Obtain PT/INR, PTT, CBC, CMP, troponin Obtain 12 lead EKG
 - Check VS every 15 minutes
 - Administer Labetalol or Cardene
 - Complete NIH Stroke Scale, if able
 - Keep patient NPO

Additional Exclusion Criteria

1. Older than 80 years of age
2. On anticoagulant regardless of INR
3. Severe Stroke deficits (NIHSS >25)
4. Medical history of stroke and diabetes

The ED MD or Admitting MD to discuss patient's case with on-call neurologist at 334-288-2100. Discussion should determine the administration of Activase - will it be administered at patient's current location then transfer ("drip & ship") or transfer patient to have Activase administered or other treatment instituted at Baptist Medical Center South. Refer to Pre/During/Post Activase administration blood pressure frequency and parameters and neuro check frequency.

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Inclusion and exclusion characteristics of patients within 3 hours from stroke symptom onset:

Inclusion criteria

- Diagnosis of ischemic stroke causing measurable neurological deficit
- Onset of symptoms <3 hours before beginning treatment
- Aged \geq 18 years

Exclusion criteria

- Significant head trauma or prior stroke in previous 3 months
- Symptoms suggest subarachnoid hemorrhage
- Arterial puncture at noncompressible site in previous 7 days
- History of previous intracranial hemorrhage
- Intracranial neoplasm, arteriovenous malformation, or aneurysm
- Recent intracranial or intraspinal surgery
- Elevated blood pressure (systolic $>$ 185 mmHg or diastolic $>$ 110 mmHg)
- Active internal bleeding
- Acute bleeding diathesis, including but not limited to Platelet count $<$ 100000/mm³
- Heparin received within 48 hours, resulting in abnormally elevated aPTT greater than the upper limit of normal
- Current use of anticoagulant with INR $>$ 1.7 or PT $>$ 15 seconds
- Current use of direct thrombin inhibitors or direct factor Xa inhibitors with elevated sensitive laboratory test (such as aPTT, INR, platelet count, and ECT; TT; or appropriate factor Xa activity assays)
- Blood glucose concentration $<$ 50 mg/dl (2.7 mmol/L)
- CT demonstrates multilobar infarction (hypodensity $>$ 1/3 cerebral hemisphere)

Relative exclusion criteria

Recent experience suggests that under some circumstances- with careful consideration and weighing of risk to benefit- patients may receive fibrinolytic therapy despite 1 or more relative contraindications. Consider risk to benefit of IV Activase administration carefully if any of these relative contraindications are present:

- Only minor or rapidly improving stroke symptoms (clearing spontaneously)
- Pregnancy
- Seizure at onset with postictal residual neurological impairments
- Major surgery or serious trauma within previous 14 days
- Recent gastrointestinal or urinary tract hemorrhage (within previous 21 days)
- Recent acute myocardial infarction (within previous 3 months)



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Pre-Activase Administration

Verify the following prior to administration: measured weight, Activase inclusion/exclusion criteria documented, informed consent has been obtained

Baseline Blood Pressure (pre-Activase bolus):

- Use **manual** BP cuff and check bilateral arm BP
 - Notify neurologist immediately for BP treatment order if any of the following occur:
 - SBP \geq 185mmHg, DBP \geq 110mmHg, > 30mmHg difference in SBP between arms, and/or if unable to use one arm
- Documentation of baseline BP/ Document reason if BP could not be checked in one arm
BP Right Arm ___/___ BP Left Arm ___/___

During Activase administration

Maintain Blood Pressure 160-180/90-105 (administer labetalol or Cardene if needed for BP control

Notify Neurologist immediately if not within this range and change in neurological status

Time of Activase bolus (give over 1 minute): _____ Time Activase infusion started (infuse over 1hr): _____

Document vital signs (BP, HR, and RR) and Neuro Checks Q15 min x 4

1. BP ___/___; HR___; RR___ & Neuro check 2. BP ___/___; HR___; RR___ & Neuro check
3. BP ___/___; HR___; RR___ & Neuro check 4. BP ___/___; HR___; RR___ & Neuro check

Post Activase administration

Maintain Blood Pressure 160-180/90-105 (administer labetalol or Cardene if needed for BP control

Notify Neurologist immediately if not within this range and change in neurological status

Document vital signs (BP, HR, and RR) and Neuro checks

Q 15 minutes x4 then Q 30minutes x 6 hours then Q 1 hour x 16 hours

NIHSS should be completed pre and post Activase administration & then 24 hours from bolus



Verify Non-contrast CT Brain is ordered 24 hours from Activase bolus

**Primary Stroke Center
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Radiology Images From Outside Facilities

Listings of Outside Facilities

These facilities have capabilities to **send and receive** images.

Facilities

Sent Via Computer to:

Alabama Orthopaedic Specialists Andalusia Regional Hospital Auburn Spine & Neurosurgery Baptist Health Systems (Receive Only) Brookwood Medical Center Bullock County Hospital Children's Hospital Crenshaw County Hospital Cullman Regional DCH Regional Medical Center East Alabama Medical Center Flowers Hospital & Breast Health Center Gadsden Regional Medical Center Grove Hill Memorial Hospital Houston County Huntsville Hospital Jackson Hospital	John Paul Jones Hospital Lake Martin Community Hospital Lanier Health Services Maxwell AFB (Prison Only) Medical Center Enterprise Montgomery Open MRI North East AL Regional River Region Health Center Riverview Regional Medical Center TechCare X-Ray (Tutwiler Prison) South East Alabama Medical Center The Hughston Clinic Columbus (Georgia) The Hughston Clinic, P.C. (Auburn) Troy Regional Medical Center UAB Hospital University of South AL Hospitals Vaughan Regional Medical Center
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See My Rad

1. Call 286-5509 to contact the PACS Department to complete the process after sending images to **SeeMyRadiology**.
2. Received images will be viewable in the **exceptions handler** until resolved. Search for the patient by name.

These facilities have capabilities to **send only**.

Facilities	Sent Via Computer to:
Kirklint Clinic UAB Affiliated Physicians UAB Hospital	UAB HOSP

Once this is complete you may let your contact know that the images have been sent to the **PCS PACS** and that if they have any issue locating the images to contact their PACS Admin.

Note: A member of the Baptist Health PACS Department can be contacted anytime for assistance for locating images by calling 286-5509.