Stroke Guideline

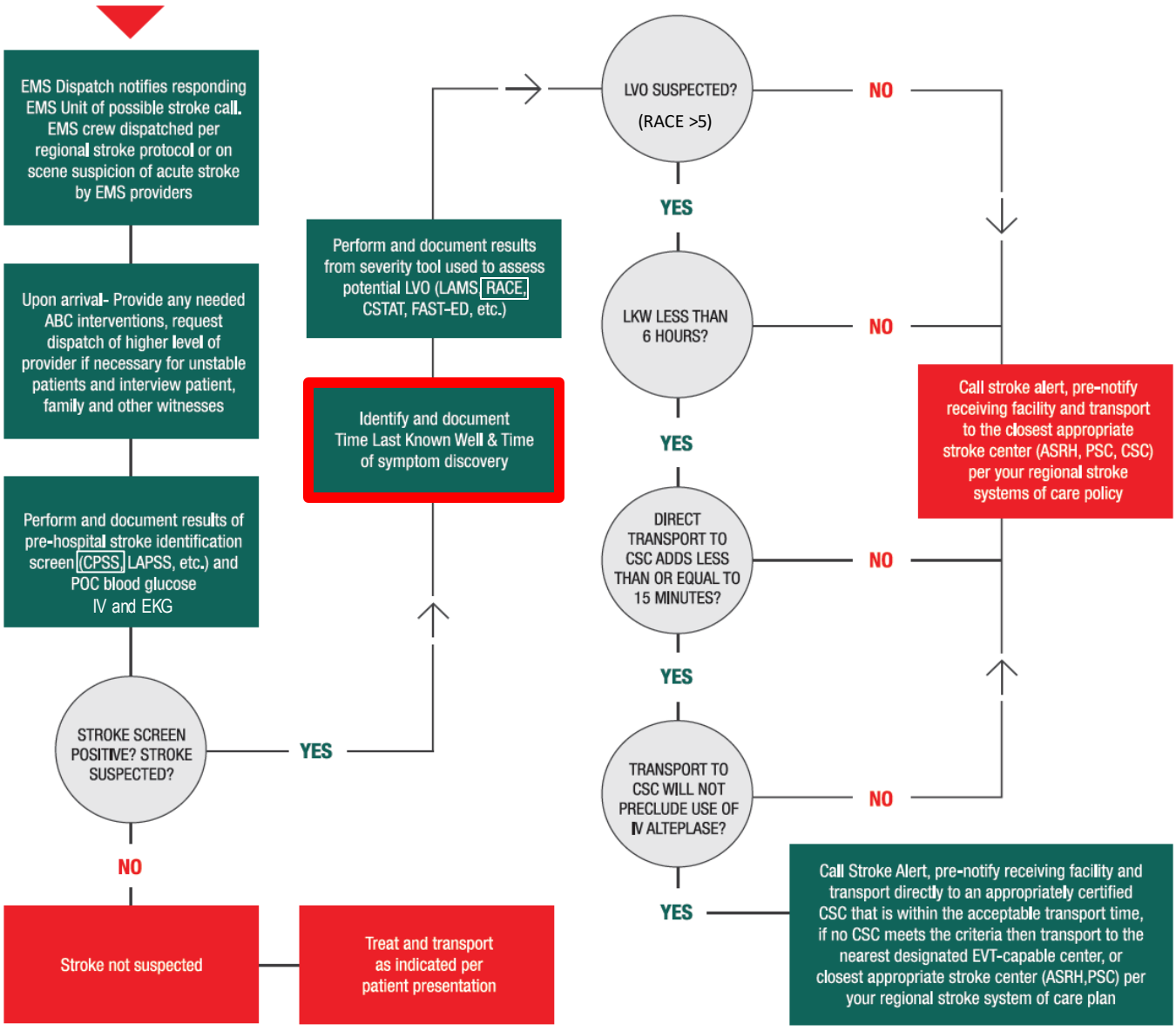
History
- Previous CVA, TIAs
- Previous cardiac / vascular surgery
- Associated diseases: diabetes, hypertension, CAD
- Atrial fibrillation
- Medications (blood thinners)
- History of trauma

Signs and Symptoms
- Altered mental status
- Weakness / Paralysis
- Acute focal neuro deficit
- Blindness or other sensory loss
- Aphasia / Dysarthria
- Syncope
- Vertigo / Dizziness
- Vomiting
- Headache
- Seizures
- Respiratory pattern change
- Hypertension / hypotension

Differential
- See Altered Mental Status
- TIA (Transient ischemic attack)
- Seizure
- Todd's Paralysis
- Hypoglycemia
- Stroke
- Tumor
- Trauma
- Dialysis / Renal Failure

SEVERITY-BASED STROKE TRIAGE ALGORITHM FOR EMS

American Heart Association | American Stroke Association. Together to End Stroke™ — MISSION: LIFELINE®



CPSS=Cincinnati Pre-hospital Stroke Scale, LAPSS=LA Prehospital Stroke Scale LVO=Large Vessel Occlusion, LKW=Last Known Well
EVT=Endovascular therapy, ASRH=Acute Stroke Ready Hospital, PSC=Primary Stroke Center, CSC=Comprehensive Stroke Center

Adult Medical Guidelines

Stroke Guideline

Adult Medical Guidelines

Cincinnati Pre-hospital Stroke Scale

1. FACIAL DROOP: *Have patient show teeth or smile.*

Normal: both sides of the face move equally

Abnormal: one side of face does not move as well as the other side

2. ARM DRIFT: *Patient closes eyes & holds both arms out for 10 sec.*

Normal: both arms move the same or both arms do not move at all

Abnormal: one arm does not move or drifts down compared to the other

3. ABNORMAL SPEECH: *Have the patient say "you can't teach an old dog new tricks."*

Normal: patient uses correct words with no slurring **Abnormal**: patient slurs words, uses the wrong words, or is unable to speak

INTERPRETATION: If any 1 of these 3 signs is abnormal, the probability of a stroke is 72%.

ITEM	Instruction	Result	Score
Facial Palsy	Ask patient to show their teeth (smile)	**Absent** (symmetrical movement) **Mild** (slight asymmetrical) **Moderate to Severe** (completely asymmetrical)	0 1 2
Arm Motor Function	Extending the arm of the patient 90° (if sitting) or 45° (if supine)	**Normal** to **Mild** (limb upheld more than **10** seconds) **Moderate** (limb upheld less than **10** seconds) **Severe** (patient unable to raise arm against gravity)	0 1 2
Leg Motor Function	Extending the leg of the patient 30° (in supine)	**Normal** to **Mild** (limb upheld more than **5** seconds) **Moderate** (limb upheld less than **5** seconds) **Severe** (patient unable to raise leg against gravity)	0 1 2
Head & Gaze Deviation	Observe eyes and head deviation to one side	**Absent** (eye movements to both sides were possible and no head deviation was observed) **Present** (eyes and head deviation to one side was observed)	0 1
Aphasia (R side)	Difficulty understanding spoken or written words. Ask patient to follow two simple commands: 1. Close your eyes. 2. Make a fist.	**Normal** (performs both tasks requested correctly) **Moderate** (performs only 1 of 2 tasks requested correctly) **Severe** (Cannot perform either task requested correctly)	0 1 2
Agnosia (L side)	Inability to recognize familiar objects. Ask patient: 1. "Whose arm is this?" (while showing the affected arm) 2. "Can you move your arm?"	**Normal** (recognizes arm, and attempts to move arm) **Moderate** (does not recognize arm **or** is unaware of arm) **Severe** (does not recognize arm **and** is unaware of arm)	0 1 2
If RACE >5, consider Comprehensive Stroke Center		**RACE SCALE TOTAL**	

Pearls

- **Recommended Exam: Mental Status, HEENT, Heart, Lungs, Abdomen, Extremities, Neuro**
- **Time of Onset or Last Seen Normal: Interview patient, family members, and other witnesses to determine Last Known Well (LKW) time and time of Symptom Discovery.**
- **Be very precise in gathering data to establish the time of onset and report as an actual time (i.e. 13:47 NOT "about 45 minutes ago.") Without this information patient may not be able to receive thrombolytics at facility.**
- **For patients with "Woke up and noticed stroke," Time starts when patient went to sleep or was last awake and was last known normal.**
- **Attempt to identify possible stroke mimics (eg. Seizure, migraine, intoxication) and determine if patient has pre-existing substantial disability (need for nursing homecare or inability to walk without help from others).**
- **Encourage family to go directly to Emergency Department if not transported with patient and obtain mobile number of next of kin and witnesses**
- **Patients who are eligible for IV Alteplase if transported to nearest Acute Stroke Ready Hospital (ASRH) or PSC should not be rerouted to a CSC or Endovascular Treatment-capable Center if doing so would result in delay that would make them ineligible for IV Alteplase**
- **Air Medical: Important for EMS to be aware of role of air medical. May be needed to transfer a stroke patient to a geographically distant hospital that is capable of providing an advanced level of stroke care.**
- **With a duration of symptoms of less than 3.5 HOURS or UNDETERMINED, scene times should be limited to ≤ 15 minutes and the patient should be transported to capable stroke receiving facility. In-field notification of receiving facility should be performed and transport times should be minimized.**
- **Collect a list of current medications (especially anticoagulants) and obtain patient history including co-morbid conditions (eg. Serious kidney or liver disease, recent surgery, procedures or stroke) that may impact treatment decisions. .**