



# Section 5: Adult Medical Emergencies Protocol

## ADULT MEDICAL EMERGENCIES: STROKE / CVA WITHOUT MSTU ACCESS

E	EMT	E
A	AEMT	A
P	PARAMEDIC	P
M	MED CONTROL	M

For possible TPA admin at receiving facility

UNIVERSAL PATIENT CARE PROTOCOL
AIRWAY PROTOCOL
OXYGEN
CAPNOGRAPHY PROCEDURE
<b>IV PROCEDURE- 2 Large Bore in AC if Possible</b>
Check Blood Glucose Level
Prehospital Stroke Assessment
12 Lead EKG Procedure 1 <sup>ST</sup> Contact to EKG and Transmission < 10 Min

**S & S of Stroke / CVA Less Than 12 Hours in Duration?**

**Positive Cincinnati Pre-Hospital Stroke Screen?**

**Negative Cincinnati Pre-Hospital Stroke Screen?**

OR

**Negative Cincinnati Pre-Hospital Stroke Screen with continued suspicion of Stroke?**  
**Perform MEND and if POSITIVE Consider Transport to Comprehensive Stroke Center (CSC)**

Refer to appropriate protocol and continue patient treatment and transport to appropriate facility

Is Blood Pressure Systolic > 220 or Diastolic > 120?

Do not delay transport to appropriate facility to conduct MEND  
 Do not reduce BP by more than 20% or 185/110

Supportive Care Reassess

**Yes**  
**LABETALOL (TRANDATE)**  
 10 mg IVP SLOW over 2 min  
 ⚠️ Bradycardia, CHF, Asthma  
 ⚠️ DO NOT GIVE IF HR < 60  
 ⚠️ Consult with destination MD prior to administration

10 – 15 Min Post Administration Recheck BP – Is Systolic Still > 220 or Diastolic > 120

**Yes**  
**LABETALOL (TRANDATE)**  
 20 mg IVP SLOW over 2 min  
 ⚠️ Bradycardia, CHF, Asthma  
 ⚠️ DO NOT GIVE IF HR < 60  
 ⚠️ Consult with destination MD prior to admin

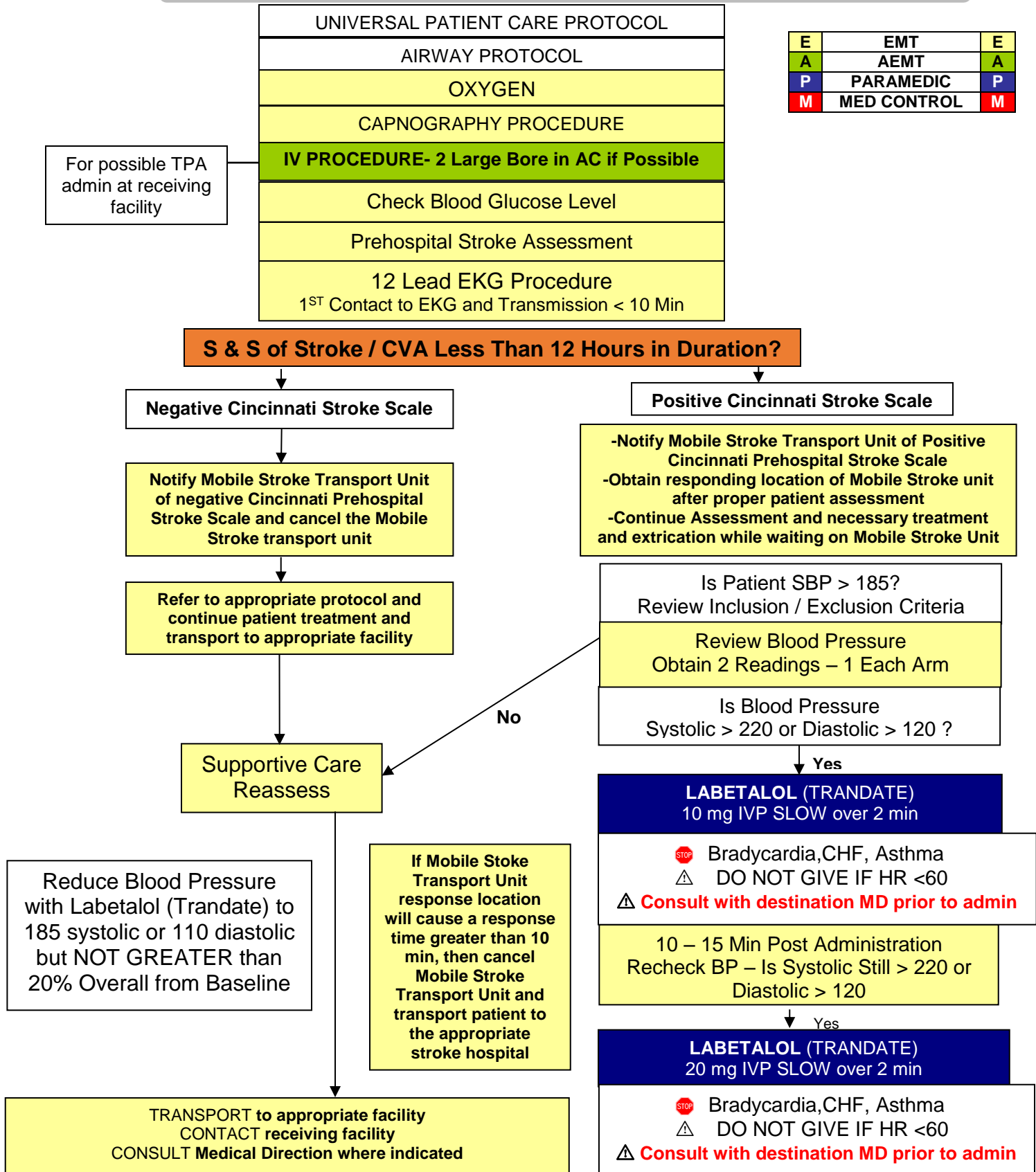
**TRANSPORT to appropriate facility**  
**CONTACT receiving facility**  
**CONSULT Medical Direction where**



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## ADULT MEDICAL EMERGENCIES: STROKE / CVA-Cont.

### PEARLS and KEY POINTS

HISTORY	SIGNS AND SYMPTOMS	DIFFERENTIAL DIAGNOSIS
<ul style="list-style-type: none"> <li>• Previous CVA, TIA's</li> <li>• Previous cardiac / vascular surgery</li> <li>• Associated diseases: diabetes, hypertension, CAD</li> <li>• Atrial fibrillation</li> <li>• Medications (blood thinners)</li> <li>• History of trauma</li> </ul>	<ul style="list-style-type: none"> <li>• Altered mental status</li> <li>• Weakness / paralysis</li> <li>• Blindness or other sensory loss</li> <li>• Aphasia</li> <li>• Syncope</li> <li>• Vertigo / dizziness</li> <li>• Vomiting</li> <li>• Headache</li> <li>• Seizures</li> <li>• Respiratory pattern change</li> <li>• Hyper / hypotension</li> </ul>	<ul style="list-style-type: none"> <li>• <u>See Altered Mental Status</u></li> <li>• TIA (transient ischemic attack)</li> <li>• Seizure</li> <li>• Hypoglycemia</li> <li>• Stroke</li> <li>• Thrombotic</li> <li>• Embolic</li> <li>• Hemorrhagic</li> <li>• Tumor</li> <li>• Trauma</li> </ul>

**DOCUMENT THE LAST KNOWN WELL TIME & TIME FOUND WITH SYMPTOMS  
OBTAIN A POINT OF CONTACT FOR RECEIVING HOSPITAL IF PATIENT CANNOT COMMUNICATE**

Tale 3. Cincinnati Prehospital Stroke Scale	
<b>Facial Droop</b>	Normal: Both sides of face move equally Abnormal: One side of face does not move at all
<b>Arm Drift</b>	Normal: Both arms move equally or not at all Abnormal: One arm drifts compared to the other
<b>Speech</b>	Normal: Patient uses correct words with no slurring Abnormal: Slurred or inappropriate words or mute

MEND EXAM—PERFORM EN ROUTE IF TIME ALLOWS		✓ IF ABNORMAL	
MENTAL STATUS	Level of Consciousness (AVPU)		
	Speech (repeat "You can't teach an old dog new tricks")		
	Questions (age, month)		
	Commands (close, open eyes)		
CRANIAL NERVES	Facial Droop (show teeth or smile)	R	L
	Visual Fields (four quadrants)	R	L
	Horizontal Gaze (side to side)	R	L
LIMBS	Motor—Arm Drift (close eyes and hold out both arms)	R	L
	Motor—Leg Drift (open eyes and lift each leg separately)	R	L
	Sensory—Arm and Leg (close eyes and touch, pinch)	R	L
	Coordination—Arm and Leg (finger to nose, heel to shin)	R	L



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### ADULT MEDICAL EMERGENCIES: STROKE / CVA-Cont.

- Onset of symptoms is defined as the last witnessed time the patient was symptom free. (i.e. awakening with stroke symptoms would be defined as an onset time of the previous night when patient was symptom free)
- The differential diagnosis listed on the Altered Mental Status Protocol should also be considered.
- Elevated blood pressure is commonly present with stroke. Treat only if systolic is > 220 and / or diastolic is > 120 mmHg and signs **and** symptoms of stroke are present.
- Treat chest pain / discomfort per ACS protocol.
- Treat pulmonary edema per CHF / Pulmonary Edema protocol.
- Be alert for airway problems (swallowing difficulty, vomiting, diminished or absent gag reflex).
- Hypoglycemia can present as a localized neurological deficit, especially in the elderly.
- Patients who experience transient ischemic attack (TIA) develop most of the same signs and symptoms as those who are experiencing a stroke. The signs and symptoms of TIA's can last from minutes up to one day. Thus the patient may initially present with typical signs and symptoms of a stroke, but those findings may progressively resolve. The patient needs to be transported, without delay, to the most appropriate hospital. Document the time of onset for the symptoms, or the last time the patient was seen "normal" for them.
- Reassess neurological deficit every 10 minutes and document the findings. Evidence of neurological deficit includes; confusion, slurred speech, facial asymmetry and focal weakness, coma, lethargy, and seizure activity.
- Hypertensive emergencies are life threatening emergencies characterized by an acute elevation in blood pressure AND end-organ damage to the cardiac, CNS or renal systems. These crisis situations may occur when patients have poorly controlled chronic hypertension or stroke.
- Blood pressures MUST be taken bilaterally and be similar, contact Medical Control if they vary more than 20 mmHg.
- Accurate BP's are key to this protocol. Verify automated BP readings with manual cuff.
- Document pts GCS score.
- Check patient's pupils and rule out head trauma.
- All symptomatic patients with hypertension should be transported with their head elevated.
- If the patient becomes hypotensive from Labetalol (Trandate) administration, place the patient in the trendelenburg position and administer a normal saline bolus.
- Toxic ingestion such as cocaine, may present as a hypertensive emergency.
- Hypertension can be a neuroprotective reflex in patients with increased intracranial pressure.