

# **EMS Inter-facility Transfer Protocol**

## **Inter-facility Transfer Guideline for Stroke Patient Receiving IV tPA**

All patients need to be sent by ALS Ambulance Service ONLY

**Sending facility must be able to maintain systolic blood pressure below 180 mmHg and diastolic blood pressure below 105 mmHg prior to transport**



### **Prior to transport sending facility to:**

- Ensure peripheral IV access is patent  
*(Two large-bore IV's - one in right antecubital space in case endovascular procedure is required)*
- Prepare document for EMS and receiving facility
  - Imaging- hard copy must be sent with EMS
  - Copy of visit record- faxed to receiving facility and/or hard copy with EMS
    - *Onset information, assessment including exam and NIH Stroke Scale Results, orders, test results, vital signs, etc.*
    - *tPA information including exact dose, bolus start time and infusion end time if applicable*
- If tPA will be infusing during transportation assure IV pump can go with the patient. Pump education and return demonstration is required
- Document patient status, including vital signs and NIH Stroke Scale just prior to transport



### **tPA considerations**

- When mixing IV tPA waste excess where only the calculated dose remains in the bottle
- Standard dosing is as follows: 0.9 mg/kg, with 10% given as a one minute IV push bolus, and the remainder is infused over one hour. The maximum dose is 90 mg.
- Label the bottle with the exact dose that the patient is to receive/what is in the bottle
- 50 ml of normal saline must be infused at the same rate as the tPA infusion, after the tPA ends, clear the IV tubing of remaining tPA. *(If IV tubing must be changed, ensure that volume of medication in tubing is included in calculations...)*
- Watch for angioedema. If observed, follow local guidelines. Treatment may include epinephrine, antihistamine, and steroids.



### **Handoff Communication**

*Sending facility to provide the following to EMS and receiving facility:*

- Family/caregiver contact information, including phone number
- Contact number of sending and receiving physicians
- Time patient last known normal
- Time patient arrived at sending facility for treatment
- Time the EMS was called for transport
- All information about tPA dose and administration times
- Last assessment results, including vital signs and NIH Stroke Scale



### **During Transport:**

- Keep patient strictly NPO, including medications
- Provide continuous pulse oximetry monitoring, keeping SPO2 > 94%, and ETCO2 between 35-40mmHg
- Provide continuous cardiac monitoring
- If patient condition deteriorates notify receiving facility MD of condition change immediately
- If blood pressure > 180/105 or hypotension develops notify receiving facility MD immediately
- Perform and document vital signs and neurological assessment every 15 minutes on EMS-Inter-facility transfer flow sheet
- Contact receiving facility at least 10 minutes prior to arrival



### **Upon Arrival at Receiving facility:**

- Handoff all documentation provided by sending facility
- Handoff all transportation documentation including inter-facility transfer flow sheet
- Report any changes in condition status
- Report status of tPA infusion: amount of remaining infusion or completion time, amount of normal saline infusion after tPA if applicable
- Report all care provided during transport

# EMS - INTER-FACILITY TRANSFER PROTOCOL: Stroke Patient During or After IV t-PA

ALS Transport Required

\*\*\*Sending facility must be able to maintain systolic blood pressure below 180 mmHg and diastolic blood pressure below 105 mm Hg prior to transport and if t-PA still infusing IV pump must go with the patient\*\*\*

Transferring Hospital: \_\_\_\_\_

Family/Caregiver or Emergency contact number: \_\_\_\_\_

Contact number for receiving physician: \_\_\_\_\_

**10% of IV t-PA dose is administered via a one minute IV push, then the rest drips in over one hour. This must be followed by 50 ml normal saline - infused at the same rate to clear the t-PA from the IV tubing and ensure maximum dose infused.  
No other medications through t-PA infusion line.  
\*\*\*It is important to note the start and end time of IV t-PA\*\*\***

1. Perform and document **Vital Signs and Neurological Exam:**  
(EMS Neurological Exam = Cincinnati Pre-Hospital Stroke Scale and Glasgow Coma Scale with pupil exam)
  - From start of IV t-PA:** every 15 minutes x 2 hours, then every 30 minutes x 6 hours, or until arrival at destination hospital

**PRN for SBP >180 or DBP >105 mmHg:**

- Consider IV Labetalol 10 mg IV over minutes
- Recheck in 5 minutes, may repeat one time

**PRN for SBP <120 mmHg:**

- HOB flat
- Discontinue antihypertensive medications

**PRN for SBP <90 mmHg:**

**NO DEXTROSE**

- 1 liter Normal Saline - wide open rate
- Notify receiving hospital

2. Continuous cardiac monitoring
3. Continuous pulse oximetry monitoring
  - Apply oxygen by nasal cannula or mask to maintain SpO<sub>2</sub> >94%
4. Monitor for acute worsening conditions and decline in neurologic status (*new headache or nausea, decline in mental status, vomiting, signs of bleeding, or angioedema*):
  - FIRST stop IV tPA** - then call receiving facility.
5. Strict NPO including medication and ice chips

**Contact receiving facility with cardiac or blood pressure issues or acute worsening conditions or decline in neurological status.  
Tell the operator you need the stroke physician on-call emergently.**

6. Contact receiving facility with an update and ETA at least 10 minutes prior to arrival

**Hand-Off Communication Upon Arrival Must Include:**

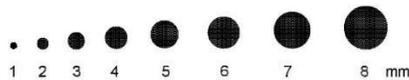
- Documentation and imaging from sending facility
- Completed Transfer Protocol Documentation Form or other form that includes required documentation components listed above
- Verbal report, including changes in condition and/or concerns, and care provided
- Status of IV t-PA infusion and normal saline infusion, including completion time if finished in route

# EMS - INTER-FACILITY TRANSFER PROTOCOL: Stroke Patient During or After IV t-PA

**Vital Signs:** (Goal: SBP < 180 mmHg and DBP < 105 mmHg)

Date/Time from start of tPA	Blood Pressure	Heart Rate	Respiratory Rate
15 MIN			
30 MIN			
45 MIN			
60 MIN			
1 HR 15 MIN			
1 HR 30 MIN			
1 HR 45 MIN			
2 HR			
2 HR 15 MIN			
2 HR 30 MIN			
2 HR 45 MIN			
3 HR			
3 HR 15 MIN			
3 HR 30 MIN			

## Neurological Exam:



GLASGOW COMA SCALE	
EYE OPENING:	
Spontaneous	4
To Speech	3
Only with noxious stimuli	2
No eye opening	1
VERBAL RESPONSE:	
Oriented	5
Disoriented, confused	4
Inappropriate speech	3
Incomprehensible sounds	2
No verbal response	1
MOTOR RESPONSE:	
Obeys verbal commands	6
Response to noxious stimuli	
Localizes	5
Withdraws	4
Flexor posturing	3
Extensor posturing	2
No motor	1

Date/time from start of tPA	Glasgow Coma Scale			Pupils		CPSS -Facial Droop -Abnormal Speech -Arm Drift (Specify Side)
	Eye Opening	Verbal Response	Motor Response	Left	Right	
15 MIN						
30 MIN						
45 MIN						
60 MIN						
1 HR 15 MIN						
1 HR 30 MIN						
1 HR 45 MIN						
2 HR						
2 HR 15 MIN						
2 HR 30 MIN						
2 HR 45 MIN						
3 HR						
3 HR 15 MIN						
3 HR 30 MIN						

**Cincinnati Pre-Hospital Stroke Scale (CPSS):** ≥ 1 positive finding is abnormal  
**\*\*\*Notify receiving physician if changes in assessment identified\*\*\***

EMS Signature: \_\_\_\_\_

Date: \_\_\_\_\_

EMS Signature: \_\_\_\_\_

Date: \_\_\_\_\_

\*Communicate to receiving facility, provide this completed form, and provide electronic ePCR.