

# 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.



### **HAND-OFF 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 SpO<sub>2</sub> > 94%
- 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 mmHg 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 { | 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 2 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, 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	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	Glasgow Coma Scale						CPSS	
	Eye Opening	Verbal Response	Motor Response	Left	Right	-Facial Droop	-Abnormal Speech	-Arm Drift (Specify Side)
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: \_\_\_\_\_

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