

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 SpO₂ >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:

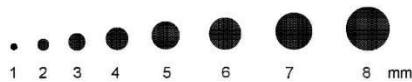
- Documentation and imaging from sending facility
- Completed Transfer Protocol Documentation Form or other form that includes required documentation components listed above
- Verbal report, including changes in condition and/or concerns, and care provided
- Status of IV t-PA infusion and normal saline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