

Sample EMS Post-IV thrombolytic Transfer Protocol

NOTE: This is a sample protocol only and should be adapted based on agency policy. This protocol contains the best-practice recommendations from the Minnesota Department of Health. Please follow your Medical Director's guidelines.

* Emergent transport decisions depend on time-sensitive treatment options. Treatment with IV thrombolysis as single treatment modality does not necessitate emergent inter-facility transportation. However, eligibility for mechanical thrombectomy within the 24hour window may require time-sensitive transport. Provider decisions will vary based on individual patient case; please consider local transport times and resources in air vs. ground transport decisions.

1. Document current vital signs
2. Verify and document thrombolytic medication and dose given (Tenecteplase vs Alteplase)
 - a. If alteplase was given:
 - i. Document start and stop times and total dose to be given
 - ii. If tubing must be changed for EMS IV pump
 - iii. Following administration, begin 0.9% NS infusion at current rate to ensure all medications left in tubing is administered
 - iv. No other medications may be administered through alteplase infusion line
3. Oxygen to maintain SpO₂ > 94%
4. Strict NPO, including oral medications
5. If necessary, transport with head of bed elevated no higher than 30°
6. Assess patient's neurological status (e.g., Cincinnati Prehospital Stroke Scale or MDH neurologic tracking form) and vital signs every 15 minutes, and document
 - a. BP Guidelines: If SBP>180 or DBP>105, or BP management medications started at sending facility: (examples)
 - i. Nicardipine drip: may increase dose by 2.5mg/hr every 5 min to max dose of 15mg/hr until SBP<180 and DBP<105, and then decrease maintenance infusion to 3mg/hr. If SBP<140 or DBP<80 or HR<60, discontinue infusion and contact Medical Control for further orders
 - ii. Clevidipine 1-2 mg/h IV, titrate by doubling the dose every 2-5 min until desired BP reached; maximum 21mg/h
 - iii. Labetalol drip: may increase 1-2mg/min every 10 minutes to max dose of 8mg/min, with a maximum total dose of 300mg, until SBP<180 and/or DBP<105. If SBP<140 or DBP<80 or HR<60, discontinue infusion and contact Medical Control for future orders.
 - b. BP Guidelines: If SBP>180 or DBP>105, BP management not started at sending facility: (examples)
 - i. (Preferred)Labetalol 10 mg IV x1 over 2 min, if no response after 10 min, may repeat x1 with 10-20mg (preferred)
 - ii. Hydralazine Bolus: 10mg bolus over 2 min, may repeat in 10 min if no response, max dose 20mg (preferred)
 - iii. Metoprolol Bolus: 5mg IV bolus, repeat q 5 min to max of 20mg. Hold if SBP< 140 or DBP<80 or HR< 60
7. **Potential side effects of thrombolytics:**

- a. **Changes in neurologic condition:** (Develops severe headache, acute hypertension and/or bradycardia, nausea or vomiting, or decrease in LOC)
 - i. If alteplase infusing, stop infusion, maintain NS infusion to keep line open.
 - ii. Contact Medical Control for further orders, adjustment in BP medications, antiemetics, or possible diversion to closest facility
 - iii. Monitor VS and neurological assessments every 15 minutes,
- b. **Oropharyngeal edema:** if signs of angioedema are present:
 - i. If alteplase is infusing, stop infusion, maintain NS infusion to keep line open. Notify Medical Control.
 - ii. Treat according to appropriate protocol for allergic reaction/anaphylaxis
 - iii. Monitor airway, if any airway compromise consider intubation
 - iv. Notify receiving facility of changes

Developed September 2016. Developed in partnership with the Minnesota Stroke Advisory Group

Last Updated: November 2023 For questions please contact the [MDH Stroke Program \(health.stroke@state.mn.us\)](mailto:health.stroke@state.mn.us)

Post-thrombolytic Neurologic Assessment Flowsheet

Pt Name: _____ DOB: _____ Time Last Known Well: _____ (HH:MM) Alteplase Dose: : _____ IV Started: _____ (HH:MM) IV Completed: _____ (HH:MM)	Initial NIHSS: Other Notes:	LOC A-Alert L-Lethargic U-Unresponsive C-Confused CS-Chem. Sedated	Orientation Ox4-Oriented x4 Disoriented to: DP-Person DT-Time DPL-Place DE-Events	Speech C-Clear S-Slurred G-Garbled	Gaze None R- Rightward gaze L- Leftward gaze	Side Effects AE-Angioedema HA-Headache HTN-Hypertension
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Date:	Q 15min x 2hrs														Q 30min x 6hrs										
	Pre TPA	1		2		3		4		5		6		7		8		1		2		3		4	
Time:																									
HR																									
BP																									
RR																									
SpO2 / ETCO2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
LOC / Orientation	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Follows Commands	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
Speech																									
Facial Droop	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L
Gaze																									
Arm Drift	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L
Side Effects																									
RN/EMS Initials																									
	Q 30min x 6hrs												Q 1hr x 16hrs (continue on back)												
	5	6	7	8	9	10	11	12	1	2	3	4	5												
Time:																									
HR																									
BP																									
RR																									
SpO2 / ETCO2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
LOC / Orientation	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Follows Commands	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
Speech																									
Facial Droop	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L
Gaze																									
Arm Drift	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L
Side Effects																									
RN/EMS Initials																									

Post-thrombolytic Neurologic Assessment Flowsheet

LOC	Orientation	Speech	Gaze	Side Effects
A-Alert L-Lethargic U-Unresponsive C-Confused CS-Chem. Sedated	Ox4-Oriented x4 Disoriented to: DP-Person DT-Time DPL-Place DE-Events	C-Clear S-Slurred G-Garbled	None R- Rightward gaze L- Leftward gaze	AE-Angioedema HA-Headache HTN-Hypertension

	Q1hr x 16hrs (Further vitals and neuro checks per physician order)											
	6	7	8	9	10	11	12	13	14	15	16	
Time:												
HR												
BP												
RR												
SpO2 / ETCO2	/	/	/	/	/	/	/	/	/	/	/	
LOC / Orientation	/	/	/	/	/	/	/	/	/	/	/	
Follows Commands	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	
Speech												
Facial Droop	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	
Gaze												
Arm Drift	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	R L	
Side Effects												
RN/EMS Initials												

Additional Notes:

_____ / _____
 _____ / _____
 _____ / _____
 _____ / _____
 RN/EMS Signature Initials
 RN/EMS Signature Initials
 RN/RMS Signature Initials
 RN/EMS Signature Initials

PLEASE LEAVE ORIGINAL WITH RECEIVING FACILITY