

Sample EMS Post-IV Thrombolytic Transfer Protocol for Acute Ischemic Stroke

NOTE: This sample protocol only and should be adapted based on agency policy. This protocol contains the best-practice recommendations from the Minnesota Department of Health adapted by national guidelines. 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. Consider use of a standard EMS/RN handoff protocol with sending and receiving facilities. Document current vital signs and neurologic status.
2. Verify and document thrombolytic medication and dose given.
3. Oxygen to maintain SpO₂ > 94%
4. Strict NPO, including oral medications
5. Verify head of bed level for transport; some neurologists/receiving stroke centers are recommending LVO patients remain flat prior to mechanical thrombectomy.
6. Assess patient's neurological status (e.g., Cincinnati Prehospital Stroke Scale, BE FAST scale, or MDH neurologic tracking form) and vital signs every 15 minutes, and document.
7. **Blood Pressure Management per Guidelines:**
 - a. **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. Clevadipine 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. **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
8. **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 **5-15** 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

This document is developed in partnership with the Minnesota Stroke Advisory Group. Last updated: December 2025. For questions, please contact the MDH Stroke Program at health.stroke@state.mn.us

Post-thrombolytic Neurologic Assessment Flowsheet

Pt Name: _____ DOB: _____ Time Last Known Well: _____ (HH:MM)			Initial NIHSS: Other Notes:			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																																		
Thrombolytic: Dose: _____ Time: _____																																																
Date:		Q 15min x 2hrs										Q 30min x 6hrs																																				
	Pre TPA	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
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								
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								
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								
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	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12				
Time:																																																
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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								
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								
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								
Side Effects																																																
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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
Speech												
Facial Droop	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
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