



Immediate Management (in village, en route, or upon arrival)

- Consider ASA 81 mg (PO or PR) if no headache or vomiting.
- Blood glucose.
- EKG, if possible.
- Place two large-bore IVs.
- Notify radiology tech and radiologist.
- Have appropriate staff on standby.
- Have tenecteplase ready.
- Transport directly to CT, if stable.
- COVID screen/BINAX.
- Calculate [NIHSS](#).

General Care for Strokes

- Supportive care for airway, breathing, circulation
- VS including weight
- Telemetry
- Appropriate neurologic status documentation and repeat checks
- Glucose goal 140-180; repeat glucose checks if NPO.
- Maintain normothermia (eg acetaminophen PR as needed)
- NPO until swallow study
- BP control (see box)

Disabling Symptoms

- Field cut
- Aphasia
- Neglect

Patient arrives in ED with symptoms concerning for stroke.

Patient unstable

Provide care per ACLS.

Patient stable

Perform noncontrast CT head STAT.

Evidence of hemorrhage

- If beneficiary, consult ANMC Neurology and Neurosurgery.
- If non-beneficiary, consult PAMC Neurology and Neurosurgery.
- Prepare to transfer.
- Initiate BP control. (See box.)

No evidence of hemorrhage

Perform CTA head and neck.

NIHSS ≥6

OR
Disabling symptoms

NIHSS <6

AND
No disabling symptoms

Has it been ≤ 24 hours since onset of symptoms?

- If beneficiary, consult ANMC Neurology.
- If non-beneficiary, consult PAMC Neurology.
- Determine disposition of care.

Yes

Is there a lesion on CTA that could be accounting for symptoms (see box)?

- If beneficiary, contact ANMC to request transfer to PAMC.
- Call PAMC Transfer Center to arrange transfer for thrombectomy.

No

<4.5 hours since symptom onset

≥4.5 hours since symptom onset

- Prepare to give thrombolytics, in consultation with accepting team.
- Complete [thrombolytic checklist](#) with patient, family, and neurologist.

Consult neurology.

Thrombolytics at YKHC

- Tenecteplase is the only thrombolytic stocked in the ED at YKHC. Dose for CVA is 0.25 mg/kg IV once (max 25 mg).
- Alteplase must come from the pharmacy, if desired.

If giving thrombolytics

- Goal time from door to drug: <60 minutes.
- Attempt to place all lines and tubes (ETT, Foley, NG) prior to administering drug.
- Monitor until transfer: frequent VS and neuro checks.
- BP control per box.
- If any neurologic worsening, repeat head CT.

Criteria for Possible Thrombectomy

- <24h since last well
- NIHSS ≥ 6 or disabling symptoms such as aphasia, neglect, field cut
- Good previous function
- **ASPECTS** >6
- Lesion in carotid, M1, M2, basilar, P1, or A1 arteries

Note about Disposition

- Most patients with stroke should be transferred, either for intervention at PAMC or for work-up and therapy.
- Consider NOT transferring:
 - Patients who decline transfer.
 - Patients with resolved symptoms. (Calculate [Canadian TIA](#) or [ABCD²](#) score).
- **You may need to advocate for your patients to receive the standard of care.**

BP Control

BP Goals

- Acute ischemic stroke or TIA: <220/120 mm Hg
- Acute ischemic stroke s/p thrombolytics: <185/110 mm Hg
- Intracerebral hemorrhage: <180/90 mm Hg
- Subarachnoid hemorrhage: <140-160/90 mm Hg

Patient eligible for reperfusion therapy except if BP > 185/110; lower BP by below regimen, then proceed:

- Nicardipine 5 mg/hour IV, titrate up by 2.5 mg/hour every 5 to 15 minutes, max 15 mg/hour; adjust to maintain proper BP (nicardipine is preferred)

OR

- Labetalol 10 to 20 mg IV over 1 to 2 minutes, may repeat x1
- OR
- Hydralazine or enalaprilat may also be considered.

If blood pressure is not maintained at or below 185/110 mmHg, do **not** administer tenecteplase.

During and after reperfusion therapy to maintain BP <180/105:

- Labetalol 10 mg IV then continuous infusion 2 to 8 mg/min
- Nicardipine 5 mg/hour IV, titrate to desired effect by 2.5 mg/hour every 5 to 15 minutes, max 15 mg/hour

Phone Numbers

- Providence Transfer Center: (907) 212-7363, press 1 for STEMI/stroke
- ANMC Transfer Center: (907) 729-BEDS or Tiger Connect the Transfer Center
- ANMC Neurology: Tiger Connect

This guideline is designed for the general use of most patients but may need to be adapted to meet the special needs of a specific patient as determined by the medical practitioner.
Approved by MSEC 2/1/22. Click [here](#) to see the supplemental resources for this guideline.

If comments about this guideline, please contact EPeek_Ehlinger@ykhc.org or Jeremy_Wood@ykhc.org.



Thrombolytic Checklist

INDICATIONS *(initial yes or no)*

YES	NO	
		Less than 4.5 hours since onset of symptoms or last known normal.
		NIHSS greater than 5 (or less than 5 with disabling symptoms).
		Symptoms are NOT rapidly improving.
		Symptoms are NOT due to untreated hypoglycemia (BG<50).

ABSOLUTE CONTRAINDICATIONS *(initial yes or no)*

YES	NO	
		CT evidence of hemorrhage OR extensive area of hypodensity (irreversible injury).
		GI/GU bleed in the last 21 days.
		Severe, uncontrolled, hypertension >185/110.
		Current intracranial neoplasm.
		Active internal bleeding or known aortic dissection.
		Any bleeding diathesis.
		Presentation suggestive of SAH or endocarditis (not septic emboli).
		History of intracranial hemorrhage.
		Anticoagulation (warfarin or DOAC in the last 48 hours or therapeutic-dosed heparinoids).
		Any of the following in the last three months: ischemic stroke, intracranial surgery, intraspinal surgery, or serious head trauma.

RELATIVE CONTRAINDICATIONS *(initial yes or no) – If any of the following relative contraindications are present, consider expert consultation prior to giving thrombolytic and/or consider these with consent and shared decision-making.*

YES	NO	
		History of GI or GU hemorrhage.
		Arterial puncture in a non-compressible site in the last seven days.
		Seizure at onset with postictal neurologic impairment.
		Major surgery in the last 14 days.
		Pregnancy.
		Onset 3-4.5 hours with NIHSS >25 (higher bleeding risk) or age >80 (higher bleeding risk).
		Untreated AVM or aneurysm.
		Systemic malignancy.
		History of arterial dissections.
		Blood glucose greater than 400 (associated with worse outcomes).

This checklist is advisory for clinical decision-making and may not be all-inclusive. Risks and benefits will need to be assessed individually.

Physician signature: _____

Printed name: _____ Date and time: _____

Place patient ID sticker here.



PROCEDURE CONSENT	
I hereby authorize _____ and such assistants as he/she may designate, to perform the following operation or procedure:	
TECHNICAL DESCRIPTION	Intravenous thrombolytic therapy for acute ischemic stroke.
LAY DESCRIPTION	Give clot-dissolving medication through an IV to dissolve the clot which is causing a stroke.
_____ has discussed with me the information briefly summarized below:	
BENEFITS	<ul style="list-style-type: none"> • Thrombolytic medication is a treatment that may restore blood flow to the brain. • In studies, if these drugs were given less than three hours after the stroke started, 33% of patients given thrombolytic drugs had a good outcome. In patients who did not get thrombolytic drugs, 23% got better. Ten people would have to get the drug to help one person have a better outcome. • If these drugs were given between three and four and a half hours after the stroke started, 35% of patients given thrombolytic drugs had a good outcome, and 30% of patients who didn't get the drug also got better. Twenty people would have to get the drug to help one person have a better outcome. • Patients who receive this drug within three hours of the stroke starting have a 10% increase in chance of disability-free survival. • Patients who receive this drug between three and four and a half hours from the stroke starting have a 5% increase in chance of disability-free survival.
RISKS <i>(some, but not all)</i>	<ul style="list-style-type: none"> • In a large study of stroke patients, 6.8% of them had bleeding in their brain after receiving thrombolytic drugs for stroke, compared to 1.3% of those stroke patients who did not receive the drug. If we give this drug 18 times, it will probably make one person have bleeding in their brain. • Among all people given this drug, 2% die from a hemorrhage.
RISKS OF NOT HAVING THE PROCEDURE	<ul style="list-style-type: none"> • Higher risk of developing permanent, disabling stroke symptoms.
ALTERNATIVE TREATMENTS	No other treatments available at this facility. Only monitoring symptoms and rehabilitation.

Patient signature: _____

Printed name: _____ Date and time: _____

Witness signature: _____

Printed name: _____ Date and time: _____

Physician signature: _____

Printed name: _____ Date and time: _____

Witness signature: _____

Printed name: _____ Date and time: _____

Place patient ID sticker here.