Nebraska Mission: Lifeline

Statewide STEMI Guideline for Non-PCI Hospitals





STEMI Criteria:

- ST elevation at the J point in
 - o Men: at least 2 contiguous leads of ≥2 mm (0.2 mV) in leads V2–V3 and/or ≥1 mm (0.1 mV) in other contiguous chest leads or the limb leads.
 - o Women: ≥1.5 mm (0.15 mV) in leads V2–V3 and/or ≥ 1 mm (0.1mV) in other contiguous chest leads or the limb leads.
- Signs & Symptoms of discomfort suspect for AMI (Acute Myocardial Infarction) or STEMI with a duration >15 minutes <12 hours.
- Although new, or presumably new, LBBB at presentation occurs infrequently and may interfere with ST-elevation analysis, care should be exercised in not considering this an acute myocardial infarction (MI) in isolation. If in doubt, immediate consult with PCI receiving center is recommended.
- If initial ECG is not diagnostic but suspicion is high for STEMI, obtain serial ECG at 5-10 minute intervals.

PRIMARY PCI Pathway – FMC to PCI less than	FIBRINOLYSIS Pathway - FMC to PCI anticipated					
1st ECG time goal: 10 minutes from patient arrival						
☐ Activate Transferring agency (Air or Ground)	☐ If Arrived by EMS, Leave Patient on Ambulance Cot					
☐ Alert on-call provider if not in-house	Notify Receiving PCI Hospital Emergency Dept. Physician					
If ECG is transmitted from the field (EMS) and a STEMI is identified, the following should be done prior to patient arrival:						

PRIMARY PCI Pathway – FMC to PCI less than 120 minutes – ACTIVATE CATH LAB

Goal: Door-in to Door-out in < 30 minutes

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	Titrate	oxygen	(starting	at 2L/mi	n) to	maintain	SpO2	between	90%-9	94%
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- Aspirin 324 mg PO chewable
- ☐ Cardiac Monitor & attach hands-free defibrillator pads
- Obtain vital signs and pain scale
- Analgesia (Morphine sulfate or Fentanyl) IV PRN for pain
- Establish Saline Lock #1 large bore needle

Administer one of the following:

Heparin - IV loading dose (70 Units/kg - max 4,000 units)

Optional to Heparin:

Enoxaparin (Lovenox):

Age < 75: 30mg IV plus 1 mg/kg SC (max 100mg)

Age > 75: No bolus. 0.75 mg/kg SC (max 75mg)

Then administer one of the following:

- Clopidogrel (Plavix) 600 mg PO or;
- ☐ Ticagrelor (Brilinta) 180mg PO

FIBRINOLYSIS Pathway - FMC to PCI anticipated to be > 120 min

Goal: Door to Needle < 30 minutes followed by immediate transfer to <u>Closest</u> PCI hospital

ABSOLUTE CONTRAINDICATIONS FOR FIBRINOLYSIS (TNK) IN STEMI

- Any prior intracranial hemorrhage
- Known structural cerebral vascular lesion (e.g., arteriovenous malformation)
- 3. Known malignant intracranial neoplasm (primary or metastatic)
- 4. Ischemic stroke within 3 months EXCEPT acute ischemic stroke within 3 hours
- 5. Suspected aortic dissection
- 6. Active bleeding or bleeding diathesis (excluding menses)
- 7. Significant closed-head or facial trauma within 3 months
- 8. Current use of oral anticoagulants (Warfarin, Dabigatran, Rivaroxaban, Apixaban, etc.)

RELATIVE CONTRAINDICATIONS FOR FIBRINOLYSIS: (TNK) IN STEMI

- 1. History of chronic severe, poorly controlled hypertension
- Severe uncontrolled hypertension on presentation (SBP more than 180 mm Hg or DBP more than 110 mm Hg)
- History of prior ischemic stroke more than 3 months, dementia, or known intracranial pathology not covered in contraindications
- 4. Traumatic or prolonged CPR (over 10 minutes)
- 5. Major surgery (within last 3 weeks)
- 6. Recent internal bleeding (within last 2-4 weeks)
- 7. Noncompressible vascular punctures
- 8. For streptokinase/anistreplase: prior exposure (more than 5 days ago) or prior allergic reaction to these agents
- 9. Pregnancy
- 10. Active peptic ulcer

If Patient is contraindicated for Fibrinolysis, Follow Transport Guidelines for Primary PCI

PRIMARY PCI Pathway – FMC to PCI less than 120 minutes – ACTIVATE CATH LAB (continued)

Goal: Door-in to Door-out in < 30 minutes

Patient Care when time allows — Do Not Delay Transport

- Establish large bore IV with NS @TKO, left arm preferred
- Heparin IV Drip (15 Units/kg/hr max 1,000 units/hr)
- Obtain Labs: cardiac markers (CKMB, Trop I), CBC, BMP, PT/INR, PTT, and pregnancy serum if childbearing age (do not delay transport waiting for results)
- NTG 0.4mg SL every 5 min or Nitropaste PRN for chest pain (hold for SBP < 90)
- Analgesia (Morphine sulfate or Fentanyl) IV PRN for pain
- Consider Metoprolol (Lopressor) if patient hypertensive (>160/90).
 - -50 mg PO or;
 - -5mg IV x 1

May consider additional doses if clinically indicated. Hold if SBP < 120, Pulse ox < 92%, HR < 60 or active CHF or Asthma

Atorvastatin (Lipitor) 80 mg PO

Goal: Door-in to Door-out in < 30 minutes

Transport to Closest PCI Hospital Immediately

Do not give Fibrinolytics (TNKase, rPA, or TPA) for Primary PCI Patients

List and contact info for Primary PCI Hospitals:

Bellevue, NE	Bellevue Nebraska Medicine	402-552-3444
Cheyenne, WY	Cheyenne Regional Medical Center	307-633-2203
Council Bluffs, IA	CHI Health Alegent Mercy	844-577-0577
Grand Island, NE	CHI Health St. Francis Medical Center	308-398-5560
Kearney, NE	CHI Health Good Samaritan	800-474-7911
Kearney, NE	Kearney Regional Medical Center	844-367-5762
Lincoln, NE	Bryan Medical Center	402-481-1111
Lincoln, NE	CHI Health - Nebraska Heart Institute	800-644-9627
Lincoln, NE	CHI Health St. Elizabeth	800-644-9627
Loveland, CO	Medical Center of the Rockies (MCR)	888-853-4900
Norfolk, NE	Faith Regional Health Services	402-371-4880
North Platte, NE	Great Plains Health	308-568-8760
Omaha, NE	CHI Health Alegent Bergan Mercy	844-577-0577
Omaha, NE	CHI Health Alegent Creighton	844-577-0577
Omaha, NE	CHI Health Alegent Lakeside	844-577-0577
Omaha, NE	CHI Health Immanuel Bergan Mercy	844-577-0577
Omaha, NE	Methodist Hospital	402-354-3444
Omaha, NE	Nebraska Medicine	402-552-3444
Papillion, NE	CHI Health Midlands	844-577-0577
Rapid City, SD	Rapid City Regional Hospital	605-755-8222
Sioux City, IA	Mercy Medical Center	712-560-6529
Sioux City, IA	Unity Point Health St. Luke's	712-635-2022

FIBRINOLYSIS Pathway - FMC to PCI anticipated to be > 120 min (continued)

Goal: Door to Needle < 30 minutes

Tenecteplase (TNKase) IV over 5 seconds:

Patient Weigh	ıt	TNKase Red	Reconstituted		
kg	lbs	mg	Volume		
<60	<132	30	6		
60 to <70	132 to <154	35	7		
70 to <80	154 to <176	40	8		
80 to <90	176 to <198	45	9		
<u>≥</u> 90	<u>></u> 198	50	10		

- ☐Unfractionated Heparin (UFH):
 - Heparin IV Bolus (60 Units/kg, max 4,000 Units)
 - Heparin IV Drip (12 Units/kg/hr, max 1,000 Units/hr)

Optional to Heparin:

Enoxaparin (Lovenox):

Age < 75: 30mg IV plus 1 mg/kg SC (max 100mg)

Age > 75: No bolus. 0.75 mg/kg SC (max 75mg)

- ☐ Titrate oxygen (starting at 2L/min) to maintain SpO2 between 90%-94%
- Aspirin 324 mg PO chewable times 1 dose (if not already given)
- Clopidogrel (Plavix)

age ≤75 300 mg loading dose age >75 only 75 mg total

Repeat EKG 30 minutes after fibrinolytics administration if possible

Transport to Closest PCI Hospital Immediately