Nebraska Mission: Lifeline
Statewide STEMI Guideline for Non-PCI Hospitals

STEMI Criteria:

- ST elevation at the J point in
  - Men: at least 2 contiguous leads of ≥2 mm (0.2 mV) in leads V2–V3 and/or ≥ 1 mm (0.1mV) in other contiguous chest leads or the limb leads.
  - 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.

If ECG is transmitted from the field (EMS) and a STEMI is identified, the following should be done prior to patient arrival:

- Alert on-call provider if not in-house
- Notify Receiving PCI Hospital Emergency Dept. Physician
- Activate Transferring agency (Air or Ground)
- If Arrived by EMS, Leave Patient on Ambulance Cot

1st ECG time goal: 10 minutes from patient arrival

PRIMARY PCI Pathway – FMC to PCI less than 120 minutes – ACTIVATE CATH LAB
Goal: Door-in to Door-out in < 30 minutes

FIBRINOLYSIS Pathway - FMC to PCI anticipated to be > 120 min
Goal: Door to Needle < 30 minutes followed by immediate transfer to Closest PCI hospital

Patient Care Priorities Prior to Transport or During Transport

- Titrate oxygen (starting at 2L/min) to maintain SpO₂ between 90%-94%
- 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

ABSOLUTE CONTRAINDICATIONS FOR FIBRINOLYSIS (TNK) IN STEMI

1. Any prior intracranial hemorrhage
2. 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
2. Severe uncontrolled hypertension on presentation (SBP more than 180 mm Hg or DBP more than 110 mm Hg)
3. 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
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:

<table>
<thead>
<tr>
<th>Location</th>
<th>Hospital Name</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bellevue, NE</td>
<td>Bellevue Nebraska Medicine</td>
<td>402-552-3444</td>
</tr>
<tr>
<td>Cheyenne, WY</td>
<td>Cheyenne Regional Medical Center</td>
<td>307-633-2203</td>
</tr>
<tr>
<td>Grand Island, NE</td>
<td>CHI Health St. Francis Medical Center</td>
<td>308-398-5560</td>
</tr>
<tr>
<td>Kearney, NE</td>
<td>CHI Health Good Samaritan</td>
<td>800-474-7911</td>
</tr>
<tr>
<td>Kearney, NE</td>
<td>Kearney Regional Medical Center</td>
<td>844-367-5762</td>
</tr>
<tr>
<td>Lincoln, NE</td>
<td>Bryan Medical Center</td>
<td>402-481-1111</td>
</tr>
<tr>
<td>Lincoln, NE</td>
<td>CHI Health - Nebraska Heart Institute</td>
<td>800-644-9627</td>
</tr>
<tr>
<td>Lincoln, NE</td>
<td>CHI Health St. Elizabeth</td>
<td>800-644-9627</td>
</tr>
<tr>
<td>Loveland, CO</td>
<td>Medical Center of the Rockies (MCR)</td>
<td>888-853-4900</td>
</tr>
<tr>
<td>North Platte, NE</td>
<td>Great Plains Health</td>
<td>308-568-8760</td>
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<tr>
<td>Omaha, NE</td>
<td>CHI Health Alegent Bergan Mercy</td>
<td>844-577-0577</td>
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<td>844-577-0577</td>
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<td>Omaha, NE</td>
<td>CHI Health Alegent Lakeside</td>
<td>844-577-0577</td>
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<tr>
<td>Omaha, NE</td>
<td>CHI Health Immanuel Bergan Mercy</td>
<td>844-577-0577</td>
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<tr>
<td>Omaha, NE</td>
<td>Methodist Hospital</td>
<td>402-354-3444</td>
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<tr>
<td>Omaha, NE</td>
<td>Nebraska Medicine</td>
<td>402-552-3444</td>
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<tr>
<td>Papillion, NE</td>
<td>CHI Health Midlands</td>
<td>844-577-0577</td>
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<tr>
<td>Rapid City, SD</td>
<td>Rapid City Regional Hospital</td>
<td>605-755-8222</td>
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<tr>
<td>Sioux City, IA</td>
<td>Mercy Medical Center</td>
<td>712-560-6529</td>
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<tr>
<td>Sioux City, IA</td>
<td>Unity Point Health St. Luke's</td>
<td>712-635-2022</td>
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Fibrinolytics Pathway - FMC to PCI anticipated to be > 120 min (continued)

Goal: Door to Needle < 30 minutes

<table>
<thead>
<tr>
<th>Patient Weight</th>
<th>TNKase</th>
<th>Reconstituted</th>
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<tbody>
<tr>
<td>kg</td>
<td>lbs</td>
<td>mg</td>
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<tr>
<td>&lt;60</td>
<td>&lt;132</td>
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</tr>
<tr>
<td>60 to &lt;70</td>
<td>132 to &lt;154</td>
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</tr>
<tr>
<td>70 to &lt;80</td>
<td>154 to &lt;176</td>
<td>40</td>
</tr>
<tr>
<td>80 to &lt;90</td>
<td>176 to &lt;198</td>
<td>45</td>
</tr>
<tr>
<td>≥90</td>
<td>≥198</td>
<td>50</td>
</tr>
</tbody>
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- 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)

- Tritrate 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

http://www.heart.org/missionlifelinene