**Identify / Confirm STEMI**
- Signs & Symptoms suspect for AMI (Acute Myocardial Infarction) – Duration > 15 minutes < 12 hours
- ST Elevation as defined by diagnostic criteria on pg. 2
- Pre-Hospital STEMI confirmed by 12 L ECG trained ALS EMS

**ACTIVATE TRANSPORT**
- Establish availability and ETA of Air or Ground ALS
- EMS for Interfacility Transfer to PCI Hospital

**ACTIVATE YOUR INTERNAL STEMI ALERT**
- Alert appropriate provider(s) and team members

**Establish STEMI Guideline**
- Estimate FMC (first medical contact) to Potential PCI: (Allow approx. 20 min after arrival to PCI capable hospital)

**Estimated FMC to PCI ≤ 120 minutes**
- Or FMC > 120 minutes, and one of the following:
  - Fibrinolytic Ineligible
  - Resuscitated out-of-hospital cardiac arrest patients whose initial ECG shows STEMI
  - Evidence of either Cardiogenic Shock or Acute Severe CHF

  **Do NOT give Lytic/TNK!**

**All:**
- Aspirin 81 mg x4 chewed (*Dose to achieve 324 mg)
- Heparin IV Bolus 60 Units/kg, max 4,000 Units (No IV Heparin Drip)
- Ticagrelor 180 mg PO (If Ticagrelor not available, then give Clopidogrel 600 mg PO)

**Estimated FMC to PCI 120-180 minutes**
- Establish if Fibrinolytic appropriate (See page 2 for contraindications)
- Goal: Door to Needle < 30 minutes

1. **For all ages transferring not utilizing** Pharmacologic-invasive strategy proceed to Full Dose Fibrinolytic Strategy

2. **For patients transferring to Abbott** NW/MHI utilizing Pharmacologic-invasive strategy, administer HALF-Dose TNK IV and transfer for PCI (Dosing table pg. 2)

**All:**
- Aspirin 81 mg x4 chewed (*Dose to achieve 324 mg)
- Heparin IV Bolus 60 Units/kg, max 4,000 Units (No IV Heparin Drip)
- Ticagrelor 600 mg PO
- TNK “HALF–Dose” IV

**Estimated FMC to PCI >120 minutes**
- Establish if Fibrinolytic appropriate (See page 2 for contraindications)
- Goal: Door to Needle < 30 minutes

**All:**
- Aspirin 81 mg x 4 chewed (*Dose to achieve 324 mg)
- Heparin IV Bolus 60 Units/kg, max 4,000 Units
- Heparin IV Drip 12 Units/kg/hr, max 1,000 Units/hr

**For AGE ≤ 75 years old:**
- Clopidogrel 300 mg PO
- TNK “FULL-Dose” IV

**For AGE > 75 years old:**
- Clopidogrel 75 mg PO
- TNK “HALF–Dose” IV

**Transport Patient as Soon as Possible!**
- Fax or Transmit ECG and other pertinent records (EMS reports, allergies, past medical history, etc.)

**Top Patient Care Priorities:**
- Establish DNR / Resuscitation Status
- Obtain vital signs and assess pain level on scale of 1-10
- Cardiac Monitor & attach hands-free defibrillator pads
- Establish Saline Lock - large bore needle (left arm preferred)
- Oxygen PRN at 2 L/min and titrate to SpO2 > 90%
- Assess Allergies (Note if reaction to IV Contrast?)

**Patient Care When Time Allows:**
- Establish 2nd large bore IV with Normal Saline @TKO (Left arm preferred)
- Obtain Appropriate Labs: Troponin, CBC, Potassium, Creatinine, PT/INR, aPTT
- Nitroglycerin 0.4 mg SL every 5 min or Nitropaste PRN for chest pain (hold for SBP < 90)
- Evaluate if erectile dysfunction or pulmonary hypertension medications taken in the past 48 hours including: Sildenafil (Viagra, Revatio), Vardenafil (Levitra, Staxyn), Avanafil (Stendra), or Tadalafil (Cialis, Adcirca), and if so, hold nitrates for 48 hours
**STEMI (ST Elevation Myocardial Infarction) Diagnostic Criteria:**
- ST elevation at the J point in at least 2 contiguous leads of \( \geq 2 \text{ mm} \) (0.2 mV) in men or \( \geq 1.5 \text{ mm} \) (0.15 mV) in women in leads V2–V3 and/or \( \geq 1 \text{ mm} \) (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 \( > 15 \text{ minutes} < 12 \text{ hours} \)
- 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 consultation with PCI receiving center is recommended
- ECG demonstrates evidence of ST depression suspect of a Posterior MI...consult with PCI receiving center
- If initial ECG is not diagnostic but suspicion is high for STEMI, obtain serial 12 Lead ECG’s at 5-10 minute intervals

**ABSOLUTE CONTRAINDICATIONS FOR FIBRINOLYSIS**
- Chest Pain / Symptom Onset \( > 12 \text{ hours} \)
- Suspected aortic dissection
- Any prior intracranial hemorrhage
- Structural cerebral vascular lesion or malignant intracranial neoplasm
- Any active bleeding (excluding menses)
- Ischemic stroke within 3 months
- Significant closed-head or facial trauma within 3 months
- Pregnancy

**RELATIVE CONTRAINDICATIONS FOR FIBRINOLYSIS**
- Chest Pain / Symptom Onset \( > 6 \text{ hours} \)
- Current use of oral anticoagulants (Warfarin, Dabigatran, Rivaroxaban, Apixaban, etc.)
- Uncontrolled hypertension on presentation (SBP > 180 or DBP > 90 mmHg)
- History of ischemic stroke more than 3 months, dementia, or known intracranial pathology not covered in contraindications
- Traumatic or prolonged CPR (over 10 minutes)
- Major surgery within last 3 weeks
- Recent internal bleeding (within last 2-4 weeks)

**Tenecteplase (TNKase) Dosing Chart**

<table>
<thead>
<tr>
<th>Patient Weight</th>
<th><strong>FULL-DOSE</strong></th>
<th><strong>HALF-DOSE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>59 kg or less</td>
<td>30 mg = 6 mL</td>
<td>15 mg = 3 mL</td>
</tr>
<tr>
<td>60 - 69 kg</td>
<td>35 mg = 7 mL</td>
<td>18 mg = 3.5 mL</td>
</tr>
<tr>
<td>70 - 79 kg</td>
<td>40 mg = 8 mL</td>
<td>20 mg = 4 mL</td>
</tr>
<tr>
<td>80 - 89 kg</td>
<td>45 mg = 9 mL</td>
<td>23 mg = 4.5 mL</td>
</tr>
<tr>
<td>90 kg or more</td>
<td>50 mg = 10 mL</td>
<td>25 mg = 5 mL</td>
</tr>
</tbody>
</table>

**Destination CITY**

- Bemidji MN: Sanford Health 218-333-2222 218.333.6398
- Coon Rapids MN: Mercy Hospital 1-866-922-0246 763-236-6930
- Duluth MN: St. Luke’s Health 800-306-2939 218-249-5180
- Duluth MN: Essentia St. Mary’s 877-786-4944 218-786-4248
- Edina MN: Fairview Southdale 952-924-8000 952-924-5545
- Fargo ND: Essentia Health 701-364-8401 701-364-8405
- Fargo ND: Sanford Health 701-234-6304 or 1-877-647-1225 701-234-7203
- Eau Claire WI: Mayo Clinic Health 715-838-3333 715-838-3507
- Eau Claire WI: Sacred Heart Hospital 877-717-4565 715-717-4972
- Grand Forks ND: Altru Health System 701-780-5206 or 1-855-425-8781 701-780-1097
- La Crosse WI: Gundersen 1-800-527-1200 608-775-4802
- Mankato MN: Mayo Clinic Hospital 507-385-5777 EMS 507-385-2610 507-385-6318
- Minneapolis MN: Abbott NW / MHI 612-863-3911 888-764-8218
- Minneapolis MN: Hennepin County 800-424-4262 or 612-873-4262 844-904-4200 or 612-904-4200
- Robinsdale MN: North Memorial 763-581-9700 763-581-9771
- Rochester MN: Mayo St. Mary’s 507-255-2910 507-266-6180
- St. Cloud MN: CentraCare Health 877-783-6472 320-255-5845
- St. Louis Park MN: Methodist 952-993-0330 952-993-6580
- St. Paul MN: Regions 651-254-3307 651-254-6973
- St. Paul MN: United Hospital 6512418755 6512415398
- Sioux Falls SD: Avera Heart Hospital 605-977-7000 605-977-7108
- Sioux Falls SD: Avera McKennan 605-322-2000 605-322-2030
- Sioux Falls SD: Sanford Health 605-333-4445 or 800-601-5084 605-333-1578
- Watertown SD: Prairie Lakes Health 605-882-7810 605-882-7979

**Fax # for Records:**

**AHA Mission: Lifeline STEMI Recommendations:**
- FMC (First Medical Contact)-to-First ECG time \( \leq 10 \text{ minutes} \) unless pre-hospital ECG obtained
- All eligible STEMI patients receiving a Reperfusion Therapy (Primary PCI or fibrinolysis)
- Fibrinolytic eligible STEMI patients with Door-to-Needle time \( \leq 30 \text{ minutes} \)
- Primary PCI eligible patients transferred to a PCI receiving center with referring center Door-in-Door out (Length of Stay) \( \leq 45 \text{ min} \)
- Referring Center ED or Pre-Hospital First Medical Contact-to-PCI time \( \leq 120 \text{ minutes} \) (including transport time)
- All STEMI patients without a contraindication receiving Aspirin prior to referring center ED discharge