STEMI (ST-Segment Elevation Myocardial Infarction) Protocol
D.A.S.H. (Duluth Area STEMI Hospitals) Inter-Hospital Transfer

PHYSICIAN ORDERS (Page 1 of 2)

DEFINITION FOR STEMI
- ECG demonstrates ST elevation greater than 0.1 MV in at least 2 contiguous precordial leads (V1-V6) or at least 2 adjacent limb leads
- ECG demonstrates new LBBB
  (If initial ECG is not diagnostic but suspicion is high for STEMI, obtain serial ECG at 5-10 minute intervals)

AIR TRANSPORT: □ Life Link III HELICOPTER 1-800-328-1377  □ North Air Dispatch 1-800-247-0229

STANDARD ORDERS & LABS
□ Apply Cardiac Monitor.
□ Start (2) peripheral IV’s (0.9% NaCl TKO or Saline lock)
□ CK-MB and Troponin □ Glucose □ INR
□ (Standard) Panel □ Magnesium □ aPTT
□ Other:

STANDARD MEDICATIONS
□ Aspirin 324 mg chewed x 1
□ Heparin IV Bolus
  (60 Units/kg, max 4,000 Units)
□ Heparin IV Drip*
  (12 Units/kg/hr, max 1,000 Units/hr)
  *(If convenient, and does not delay transport)
□ Other:

IF NEEDED MEDICATIONS
□ Nitroglycerin IV or 0.4 mg SL
□ Morphine Sulfate 1 - 5 mg IV
□ Diazepam (Valium) 5 – 10 mg oral or IV
□ Ondansetron (Zofran) 4 mg oral or IV
□ Metoprolol (□ 25 mg or □ 50 mg) oral x 1
□ Metoprolol (□ 2.5 mg or □ 5 mg) IV x 1
□ Eptifibatide (Integrilin) per standard
  (Consult with Cardiologist before starting Integrilin)

AIR TRANSPORT:
ST. MARY’S (STAT DOC) Call: 1-877-786-4944
Request Activation of STEMI Protocol
Fax records to Cath Lab: 1-218-786-4248

ST. LUKE’S Call: 1-800-306-2939
Request Activation of Primary PCI for STEMI
Fax records to: 1-218-249-5180

STANDARD MEDICATIONS
□ Aspirin 324 mg chewed x 1
□ Heparin IV Bolus
  (60 Units/kg, max 4,000 Units)
□ Heparin IV Drip*
  (12 Units/kg/hr, max 1,000 Units/hr)
  *(If convenient, and does not delay transport)
□ Other:

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□ Metoprolol (□ 25 mg or □ 50 mg) oral x 1
□ Metoprolol (□ 2.5 mg or □ 5 mg) IV x 1
□ Eptifibatide (Integrilin) per standard
  (Consult with Cardiologist before starting Integrilin)

ST. LUKE’S Call: 1-800-306-2939
Request Activation of Primary PCI for STEMI
Fax records to: 1-218-249-5180

STANDARD MEDICATIONS
□ Aspirin 324 mg chewed x 1
□ Heparin IV Bolus
  (60 Units/kg, max 4,000 Units)
□ Heparin IV Drip*
  (12 Units/kg/hr, max 1,000 Units/hr)
  *(If convenient, and does not delay transport)
□ Other:

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□ Metoprolol (□ 25 mg or □ 50 mg) oral x 1
□ Metoprolol (□ 2.5 mg or □ 5 mg) IV x 1
□ Eptifibatide (Integrilin) per standard
  (Consult with Cardiologist before starting Integrilin)

Choose One Pathway

□ PRIMARY PCI
  Goal: Medical Contact to Balloon LESS THAN 90 minutes
  □ Give Plavix 600 mg PO
  Transport patient directly to Cath Lab for Percutaneous Coronary Intervention
  Do not give Fibrinolytics (TNKase, rPA, or TPA)

Other Orders:
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

□ FIBRINOLYSIS
  Goal: Medical Contact to Needle LESS THAN 30 minutes
  □ Give Tenecteplase IV (TNKase) per attached protocol
  □ Give Plavix 300 mg PO
  (If patient over 75 years old, consult with cardiologist before giving Plavix)
  Transport patient directly to CCU
  If patient fails to reperfuse, activate Cath Lab for PCI
  Do not give Integrilin

Regional ED Phone: ED Fax:
ED Physician (print name):

MD Signature: ________________________________
Date: ________________________________

PHYSICIAN’S ORDERS
Regional Hospital Name: Regional Hospital City: Draft Current 10.11.11

Patient Name:
STEMI (ST-Segment Elevation Myocardial Infarction) Protocol
D.A.S.H. (Duluth Area STEMI Hospitals) Inter-Hospital Transfer

NURSING DOCUMENTATION (Page 2 of 2)

### Tenecteplase (TNKase) Dosing

<table>
<thead>
<tr>
<th>Patient weight (kg)</th>
<th>TNK (mg)</th>
<th>TNK (mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 60 kg</td>
<td>30 mg</td>
<td>6 mL</td>
</tr>
<tr>
<td>60 or more but less than 70</td>
<td>35 mg</td>
<td>7 mL</td>
</tr>
<tr>
<td>70 or more but less than 80</td>
<td>40 mg</td>
<td>8 mL</td>
</tr>
<tr>
<td>80 or more but less than 90</td>
<td>45 mg</td>
<td>9 mL</td>
</tr>
<tr>
<td>90 or more kg</td>
<td>50 mg</td>
<td>10 mL</td>
</tr>
</tbody>
</table>

### 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 menes)
7. Significant closed-head or facial trauma within 3 months

### Relative Contraindications for Fibrinolysis: (TNK) in STEMI
1. History of chronic, severe, poorly controlled hypertension
2. Severe uncontrolled hypertension on presentation
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) or major surgery (within last 3 weeks)
5. Recent internal bleeding (within last 4 weeks)
6. Noncompressible vascular punctures
7. For streptokinase/anistreplase: prior exposure (more than 5 days ago) or prior allergic reaction to these agents
8. Pregnancy
9. Active peptic ulcer
10. Current use of anticoagulants: the higher the INR, the higher the risk of bleeding

### Contraindication for Metoprolol
Do not give if any of the following: Signs of heart failure or shock, heart rate less than 60 or more than 110, systolic blood pressure less than 120, second or third degree heart block, asthma, or reactive airway disease.

**Box: ST. MARY’S Hospital**
2. Fax records to Cath Lab: 1-218-786-4248
3. Call: 1-877-776-4944 again, when patient leaves your hospital to update ETA, then have call transferred to CCU to give Nursing report
   (If needed -CCU phone #: 1-218-786-4631)

**Box: ST. LUKE’S Hospital**
1. Call: 1-800-306-2399 Request Activation of Primary PCI for STEMI
2. Fax records to: 1-218-249-5180
3. Call Nursing report to SLH ED: 218-249-5616

### Please Document Times:
1. ___________ Chest Pain Onset
2. ___________ Pre-Hospital ECG time (if available)
3. ___________ Regional Hospital Arrival
4. ___________ Regional Hospital 1st ECG Time
   ___________ 2nd ECG Time (if 1st is negative)
5. ___________ Time Transport Called
6. ___________ STEMI Protocol Activation (STEMI Hospital 1st Called)
7. ___________ Time Transport Arrives
8. ___________ Regional Hospital Departure

**Copy** All paperwork and send with patient
(ECG, Labs, Orders, etc.)

**NURSE DOCUMENTATION**
Regional Hospital Name: ____________________________
Regional Hospital City: ____________________________

**Date:** _________

**Other documentation:**

**Patient Name:**

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**Medication**

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose</th>
<th>Time(s)</th>
<th>Administered By:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspirin (81 mg chew x 4)</td>
<td>324 mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clopidogrel (Plavix) Oral</td>
<td>mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heparin IV Bolus</td>
<td>Units</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 Units/kg, max 4000 Units</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heparin IV Infusion</td>
<td>Units/hr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Units/kg/hr, max 1000 Units/hr</td>
<td></td>
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<td></td>
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<tr>
<td>Tenecteplase (TNKase) IV</td>
<td>mg/mL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitroglycerin Sublingual</td>
<td>0.4 mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitroglycerin IV</td>
<td>mcg/min</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morphine Sulfate IV</td>
<td>mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diazepam (Valium) Oral</td>
<td>mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diazepam (Valium) IV</td>
<td>mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ondansetron (Zofran) Oral</td>
<td>4 mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ondansetron (Zofran) IV</td>
<td>4 mg</td>
<td></td>
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<tr>
<td>Metoprolol 25 mg or 50 mg Oral</td>
<td>mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metoprolol 2.5 mg or 5 mg IV</td>
<td>mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eptifibatide (Integrin) IV Bolus</td>
<td>mL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>180 mcg/kg from 2 mg/mL vial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eptifibatide (Integrin) IV Infusion</td>
<td>mL/hr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 mcg/kg/min using 0.75 mg/mL bottle</td>
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</tbody>
</table>

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**RN to:***
1.) Apply Cardiac Monitor
2.) Start (2) peripheral IV’s (TKO/saline lock)
3.) Verify routine Labs ordered

**Other documentation, labs, allergies, or information:**

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**RN Name(s):**

**Date:** _________

**RN Initials:**

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**Draft Current 10.11.11**