Des Moines STEMI Protocol
Interfacility Transfer

Date:_____

Transferring Hospital: _____
City: _____
ED phone #: _____
ED Provider: _____

Patient Name

STEMI (ST Elevation Myocardial Infarction) Diagnosis CRITERIA

- ST elevation at the J point in:
  - MEN: at least 2 contiguous leads of ≥ 2mm
  - WOMEN: ≥ 1.5 mm in leads V2-V3 and/or of ≥ 1mm in other contiguous chest leads or the limb leads
- New, or presumably new, LBBB presentation occurs infrequently and may interfere with ST-elevation analysis, and should not be considered diagnostic of 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 EKG is not diagnostic but suspicion is high for STEMI, obtain serial 12 Lead ECGs at 5-10 minute intervals

Alert STEMI Receiving Hospital

Unity Point:
(800) 806-1787
FAX: 844-206-0062

DO NOT DELAY

Mercy Medical Center:
(877) 886-3729
FAX: (515) 643-5874

Activate Transport

Consider availability and ETA of Air or Ground ALS EMS for transfer to PCI Center

- Estimated Air Transport: _____
- Estimated Ground Transport: _____

Choose STEMI Pathway:

Primary PCI vs Fibrinolysis *considerations*

- Contraindications to Lytics (see back) : Yes No
- Symptom Onset: _____
- First Medical Contact (FMC): _____
- ETA at PCI Hospital: _____
- Estimated FMC to potential PCI _____

Standing Orders – Patient Care

Top Priorities

- Vital signs and assess Pain on scale of 1 -10
- Apply Cardiac Monitor
- Establish Saline Lock (left arm preferred)
- 0xygen PRN to keep SPo2 >92%
- Assess Allergies (note IV contrast on back)

When time allows

- Establish 2nd IV with Normal Saline TKO
- Cardiac Lab Panel *Fax when available*
- Evaluate Erectile Dysfunction or Pulmonary Hypertension medications taken in the past 24 hours. If yes, hold nitrates for 48 hours
  - Yes No

TRANSPORT ASAP ***Do not delay waiting on LABS***

Estimated FMC to PCI ≤ 120 minutes or

FMC to PCI > 120 and one of the following: Fibrinolytic ineligible, Cardiogenic Shock or Acute Severe HF, or resuscitated out-of hospital cardiac arrest- initial ECG shows STEMI

PRIMARY PCI

- Aspirin 324 mg (81mg x4) chewed
- Antiplatelet:
- Brilinta 180 mg or Plavix 600 mg PO
- Heparin IV Bolus (60 units/kg, max 4000 units)
  - No IV heparin drip
- Transport patient directly to Cath Lab for PCI

Estimated FMC to PCI > 120 minutes and Fibrinolytic appropriate (see list on back)

Goal: Door to Needle < 30 minutes

FIBRINOLYSIS

- Aspirin 324 mg (81mg x4) chewed
- Tenecteplase IV (TNKase) per protocol(see back)
  - **Age 75 or older GIVE ½ DOSE**
- Plavix 300 mg PO
  - **Age 75 or older GIVE 75 mg**
- Heparin IV Bolus (60 units/kg, max 4000 units)
- Heparin IV Drip (12 Units/kg/hr, max 1,000 Units/hr)

Approved 4-1-2015

Tenecteplase (TNKase) Dosing

Patient Weight	**FULL Dose**	**HALF-DOSE** Age 75 or older
59 kg or less	30 mg = 6 mL	15 mg = 3mL
60 - 69 kg	35 mg =7 mL	18 = 3.5 mL
70 -79 kg	40 mg = 8 mL	20 mg = 4 mL
80 - 90 kg	45 mg =9 mL	23 mg = 4.5 mL
90 kg or more	50 mg = 10mL	25 mg = 5 mL

Absolute Contraindications for Fibrinolysis (TNK) in STEMI

1. **Chest Pain / Symptom Onset ≥ 12 hours**
2. **Any prior intracranial hemorrhage**
3. **Known structural cerebral vascular lesion**
4. **Known malignant intracranial neoplasm**
5. **Ischemic Stroke within 3 months except acute ischemic stroke within 3 hrs.**
6. **Suspected Aortic dissection**
7. **Active bleeding or bleeding diathesis (excluding menses)**
8. **Significant closed head or facial trauma within three months**

Relative contraindications for Fibrinolysis (TNK) in STEMI

1. **Symptoms Onset > 6 hrs. prior to presentation (Consult Cardiology)**
2. **Current Use of oral anticoagulants (Coumadin, Pradaxa, Xarelto, Eliquis)**
3. **History of chronic, severe or poorly controlled HTN**
4. **Uncontrolled HTN on presentation (SBP>180, DBP>110)**
5. **History of prior ischemic stroke >3 months, dementia, or known intracranial pathology not covered in** contraindications
6. **Traumatic or prolonged CPR >10minutes**
7. **Major Surgery (within last 3 weeks)**
8. **Recent internal bleeding (within last 2-4 weeks)**
9. **Non compressible vascular punctures**
10. **Pregnancy**
11. **Active peptic ulcer**

PRN Medications

- Nitroglycerin 0.4 mg SL every 5 min (hold for BP < 90; or erectile dysfunction or pulmonary hypertension meds given within 48 hours)
- Morphine 1-5 mg IV or Fentanyl 50 mcg IV for pain
- Ondansetron 4mg oral or IV
- Metoprolol 25mg PO or 5 mg IV

Document Times

_____ Chest Pain -Symptom Onset

_____ Pre-Hospital ECG

_____ Hospital Arrival (Door)

_____ Hospital 1st ECG

_____ STEMI ECG (if 1st ECG is negative)

_____ STEMI Protocol Activation

_____ Transport Departure

Air Ground

Weight:	Height:	Age:

Allergies: _____

Known allergy to shellfish, iodine, or IV contrast? Yes No

Medication	Dose	Time	RN (Initials)
Aspirin (81 mg chew x 4)	324 mg		
Clopidogrel (Plavix) oral	mg		
Ticagrelor (Brilinta)	180 mg		
Heparin IV Bolus 60 U/kg, max 4000 Units	Units		
Heparin IV Infusion 12 U/kg/hr,max 1000 Units/hour	Units/hr		
Tenecteplase (TNKase) IV	mg (mL)		
Nitroglycerine IV Infusion	mcg/min		
Nitroglycerine Sublingual	0.4mg		
Morphine Sulfate IV	mg		
Fentanyl IV	50mcg		
Ondansetron (Zofran) IV	4mg		
Metoprolol IV	5mg		
Metoprolol 25mg PO	25mg		

Notes:

RN Name (Print): _____

RN Signature: _____

RN Initials: _____ Date: _____ Time: _____

AHA Mission Lifeline STEMI Recommendations:

- **FMC (First Medical Contact) - to - First ECG time ≤ 10 minutes unless pre-hospital ECG obtained**
- **All eligible STEMI patients receive Reperfusion Therapy (Primary PCI vs Fibrinolysis)**
- **Fibrinolytic eligible STEMI patients receiving Door - to- Needle time ≤ 30 minutes**
- **Primary PCI eligible patients Door in - Door out (Length of Stay) time of ≤ 45 minutes**
- **Referring Center ED or First Medical Contact- to PCI time ≤ 120 minutes (includes transportation time)**
- **All STEMI patients without contraindications receive Aspirin prior to referring center ED discharge**