**Mission: Lifeline Montana STEMI**

**Inter-Hospital Transfer Guideline**

**Benefis – Great Falls**

Phone: 1-800-972-4000 or 406-455-4320 Fax: 406-455-4584

**Billings Clinic - Billings**

Phone: 1-800-325-1774 Fax: 406-657-3834

**Bozeman Deaconess - Bozeman**

Phone: 406-414-1000 Fax: 406-414-5001

**Community Medical Center - Missoula**

Phone: 406-327-4171 Fax: 406-327-4504

**Kalispell Regional Medical Center - Kalispell**

Phone: 406-752-1733 Fax: 406-756-4717

**St. James Healthcare - Butte**

Phone: 1-844-202-2495 Fax: 406-723-2517

**St. Patrick’s Hospital - Missoula**

Phone: 1-888-878-7287 Fax: 406-329-5639

**St. Peter’s Hospital - Helena**

Phone: 406-444-2150 Fax: 406-447-2695

**St. Vincent’s Hospital - Billings**

Phone: 1-800-331-0222 Fax: 406-237-4125

 ***AHA Mission: Lifeline Ideal STEMI Treatment Goals*** *(*for all eligible patients receiving any reperfusion (PCI or fibrinolysis) therapy)***:***

* **First Medical Contact-to-First ECG** time ≤10 minutes
* Fibrinolytic–eligible patients with **Door-to-Needle** time ≤ 30 minutes
* Patients transferred for Primary PCI to a Receiving Center with referring center **Door in- Door out** time *(Length of Stay)* ≤ 45 minutes (guideline recommendation is ≤ 30 minutes)
* Patients transferred for Primary PCI to a Receiving Center with referring center ED **Door-to- PCI device time** ≤ 120 minutes *(includes transport time)*
* All STEMI patients without a contraindication receiving **aspirin** before ED discharge

***For those patients with a contraindication to transfer for PCI, ensure the following are completed during their hospitalization:***

* Aspirin within 24 hours of hospital arrival, and aspirin at discharge
* Beta blocker at discharge
* LDL >100 who receive statins or lipid lowering drugs
* STEMI patients with left ventricular systolic dysfunction on ACEI/ARB at discharge
* STEMI patients who smoke receive smoking cessation counseling at discharge

**Mission: Lifeline MT STEMI (ST-Segment Elevation Myocardial Infarction) Guideline**

**STEMI Inter-Hospital Transfer**

 **PHYSICIAN ORDERS** (Page 1 of 2)

**Diagnostic Criteria for STEMI**

* ST elevation at the J point in at least 2 contiguous leads of ≥2 mm (0.2 mV) in men or ≥1.5 mm (0.15 mV) in women in leads V2–V3 and/or of ≥ 1 mm (0.1mV) in other contiguous chest leads or the limb leads.
* New or presumably new LBBB at presentation occurs infrequently, may interfere with ST-elevation analysis, and should not be considered diagnostic of acute myocardial infarction (MI) in isolation. If doubt persists, immediate referral for invasive angiography may be necessary. Consult with PCI receiving center.
* 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 ECG at 5-10 minute intervals*)

Page 1: **MD** Orders

Page 2: **RN** Document



**Code Status**: □Full Code □ DNR \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*If DNR, consult with accepting physician prior to transfer*

**Choose** a STEMI treatment strategy of P**RIMARY PCI** or **FIBRINOLYSIS** pathway, considering:

- Estimated transport time from First Medical Contact to PCI facility minutes by:

Air: \_\_\_\_\_\_\_\_\_\_\_\_\_ or Ground: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

- Persistent Symptom onset to Presentation Time: \_\_\_\_\_\_\_ hours ago

- Contraindications or Precautions to Lytics:

 □ Y □ N (*see next page for contraindications*)

**Choose One Pathway**

**STANDARD ORDERS & LABS**

**□** Apply Continuous Cardiac Monitor

**□** Vitals q 5 min x3, then q 10 min (with automatic BP and pulse oximetry)

**□** Insert (2) peripheral large bore IVs (0.9% NaCl @100mL/hr or Saline lock)

**□** Portable CXR STAT

**□** Labs: BMP,CBC, Troponin, Lipid profile, PT/INR,aPTT, all labs STAT, do not delay transfer for results – fax when available

**Notify STEMI Receiving Hospital and Activate STEMI Alert**

□ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**Hospital**

□ **Call: \_\_\_\_\_\_-\_\_\_\_\_\_-\_\_\_\_\_\_\_\_\_\_\_**

 Request Activation of **STEMI** Alert

□ **Fax** records after transfer

**Allergies:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Known Allergy to Shellfish, Iodine or IV Contrast? □ Yes □ No

Reaction: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ACTIVATE TRANSPORT and Estimate Time to STEMI Receiving Center**

**Optional Medications**

**□ Nitroglycerin IV** or 0.4 mg SL

**□ Morphine Sulfate** 1 - 5 mg IV

**□ Ondansetron** (Zofran)4 mg PO or IV

**□ Metoprolol □** 25 mg PO

CONTRAINDICATION FOR METOPROLOL

Do not give if any of the following: Signs of heart failure or shock, heart rate less than 60 or more than110, systolic blood pressure less than 100, second or third degree heart block, severe asthma or reactive airway disease

**□ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**□ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**□ PRIMARY PCI – Direct to CATH LAB for PCI**

**Goal: First Medical Contact to PCI LESS THAN ≤ 120 minutes**

**□ Aspirin** 324 mg chewed

**□ Ticagrelor (Brilinta) 180 mg PO OR**

**□ Clopidogrel (Plavix) 600 mg PO (\*do not give both Plavix & Brilinta)**

**□** **Anticoagulant:** choose one:

 **□ Heparin**: IV bolus of 70-100 units/kg

 **□ enoxaparin (Lovenox)** **pts < age 75:** 30 mg IV push NOW, then 1 mg/kg SubQ 15 min later and q 12 hrs

 **□ enoxaparin (Lovenox)** **Pts ≥ age 75:** 0.75 mg/kg SubQ q 12 hrs

**□ Transport** patient directly to Cath Lab for PCI

 Do not give Fibrinolytics (**TNKase, rPA, or TPA)**

**□ Administer Oxygen as needed** to keep SpO2 > 94%

**□ FIBRINOLYSIS**

**Goal: When First Medical Contact to PCI anticipated > 120 min, Door to lytic administration goal LESS THAN ≤ 30 minutes**

**□ Aspirin** 324 mg chewed

**□ Tenecteplase IV (TNKase**) per attached protocol

**□ Plavix 300 mg** PO (If patient > 75 yrs, consider reducing dosage to 75 mg PO)

**□ Heparin IV Bolus** (60 Units/kg, max 4,000 Units)

**□ Heparin IV Drip** (12 Units/kg/hr, max 1,000 Units/hr)

**□ Transport** patient directly to PCI capable hospital

**□ Administer Oxygen as needed** to keep SpO2 > 94%

**PHYSICIAN’S ORDERS**

**Regional Hospital: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Regional Hospital City**:\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Regional ED Phone:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**Fax: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ED Physician** (print name):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Revised 03-16-2015

**MD Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Time: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Patient Name:

**Tenecteplase (TNKase) Dosing**

**Mission: Lifeline MT STEMI (ST-Segment Elevation Myocardial Infarction) Guideline**

**STEMI Inter-Hospital Transfer**

**NURSING DOCUMENTATION Tool** (Page 2 of 2)

Weight: lb. kg

Age: yrs

Height: in.

|  |  |  |
| --- | --- | --- |
| Patient weight **(kg)** | **TNK** (mg) | **TNK** (mL) |
| Less than 60 kg | 30 mg | 6 mL |
|  60 or more but less than 70 | 35 mg | 7 mL |
|  70 or more but less than 80 | 40 mg | 8 mL |
|  80 or more but less than 90 | 45 mg | 9 mL |
| 90 or more kg | 50 mg | 10 mL |

**FIBRINOLYSIS CONSIDERATIONS**

**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 mo except acute ischemic stroke within 4.5 hrs

5. Suspected aortic dissection

6. Active bleeding or bleeding diathesis (excluding menses)

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

8. Intracranial or intraspinal surgery within 2 mo

9. Severe uncontrolled hypertension (unresponsive to emergency therapy)

10. For streptokinase, prior treatment within the previous 6 mo

**RELATIVE CONTRAINDICATIONS FOR FIBRINOLYSIS: (TNK) IN STEMI**

1. History of chronic, severe, poorly controlled hypertension

2. Significant hypertension on presentation (SBP > 180 or DBP > 110 mmHg)

3. History of prior ischemic stroke more than 3 months, dementia, or known intracranial pathology not covered in contraindications

4. Traumatic or prolonged CPR (> 10 minutes)

5. Major surgery (within last 3 weeks)

6. Recent internal bleeding (within last 2-4 weeks)

7. Noncompressible vascular punctures

8. Pregnancy

9. Active peptic ulcer

10. Current use of anticoagulants

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Medication** | **Dose** | **Time Start** | **Time Stop** | **RN (**Initials) |
| Aspirin (81 mg chew x 4) | 324 mg  |  |  |  |
| Ticegrelor \*(Brilinta) Oral (*PCI therapy arm only*)\* Do not give Brilinta and Plavix together | 180 mg |  |  |  |
| Clopidogrel (Plavix) Oral *PCI therapy dose* | 600 mg |  |  |  |
| Clopidogrel (Plavix) Oral *Lytic therapy dose* | 300 mg |  |  |  |
| Heparin IV Bolus*PCI*: 70-100 units/kg*Lytics*: 60 units/kg, max 4000 units |  units |  |  |  |
| Heparin IV Infusion 12 units/kg/hr, max 1000 units/hr |  units/hr |  |  |  |
| Tenecteplase (TNKase) IV  \* Do not give Ticegrelor with Lytic (TNK) |  mg (= mL)  |  |  |  |
| Nitroglycerin Sublingual\*Erectile Dysfunction Medication within past 24 hrs. □Yes (contraindicated) □ No |  0.4mg 0.4mg 0.4mg | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Nitroglycerin IV Infusion |  mcg/min  |  |  |  |
| Morphine Sulfate IV |  mg |  |  |  |
| Ondansetron (Zofran) Oral |  4 mg |  |  |  |
| Ondansetron (Zofran) IV |  4 mg |  |  |  |
| Metoprolol 25 mg Oral |  mg |  |  |  |
| Age < 75 yrs: Enoxaparin (Lovenox) 30 mg IV Push then 1 mg/kg SubQ 15 min later and then q 12 hours |  30 mg |  |  |  |
| mg |  |  |  |
| Age ≥ 75 yrs: Enoxaparin (Lovenox) 0.75mg/kg SubQ and then q 12 hours |  mg |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**□ Copy ECG, ED physician and Nurses documentation and send with patient – do not delay transport**

**□ Fax** All paperwork to referring Hospital (ECG, Labs, Orders, Vital Signs, Physician Orders, Notes, Medication administration record)

Notes:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

RN Name (Print):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

RN Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

RN Initials: \_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_ Time:\_\_\_\_\_\_\_\_\_\_

**Allergies:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Emergency Contact Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Phone: \_\_\_\_\_\_-\_\_\_\_\_\_-\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Patient Name:

**NURSE DOCUMENTATION** RN phone number \_\_\_\_\_\_-\_\_\_\_\_\_-\_\_\_\_\_\_\_

Hospital: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

City: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Please Document Times:**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_ Initial Chest Pain Onset Pain Scale 0-10 (10 being severe)

2.\_\_\_\_\_\_\_\_\_\_\_\_\_ Pre-Hospital ECG time (if available)

3. \_\_\_\_\_\_\_\_\_\_\_\_\_ Referring Hospital Arrival (Door – In)

4. \_\_\_\_\_\_\_\_\_\_\_\_\_ Referring Hospital 1st ECG Time \_\_\_\_\_\_\_\_\_ 2nd ECG Time \_\_\_\_

5.\_\_\_\_\_\_\_\_\_\_\_\_\_ Time Transport Activated

6. \_\_\_\_\_\_\_\_\_\_\_\_\_ STEMI Alert Activation (STEMI Receiving Hospital contacted)

7.\_\_\_\_\_\_\_\_\_\_\_\_\_ EMS Transport Arrival Time

8. \_\_\_\_\_\_\_\_\_\_\_\_\_ Referring Hospital Departure (Door-Out)

□ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Hospital**

**□ Call: \_\_\_\_\_\_-\_\_\_\_\_\_\_\_-\_\_\_\_\_\_\_\_\_\_**

Request Activation of **STEMI** Protocol

**□** Call Report, when patient leaves your hospital and confirm update ETA

**□ Fax** records to **\_\_\_\_\_\_-\_\_\_\_\_\_-\_\_\_\_\_\_\_\_\_\_**