

**EMERGENCY DEPARTMENT
SUSPECT ACUTE CORONARY SYNDROME (ACS) CARE MAP
PHYSICIAN ORDERS FOR
ST ELEVATION MYOCARDIAL INFARCTION (STEMI)**

These orders are to be used as a guideline and do not replace sound clinical judgement and professional practice standards. Patient allergy and contraindications must be considered when completing these orders.

- Automatically Activate, if not in agreement, cross out and initial** **Activated by Checking Box**

Allergies: Unknown No Yes _____ **Weight estimated** _____ **kg**

ALL MEDICATION and INTRAVENOUS ORDERS				GENERAL ORDERS																			
ORDER #	DATE	TIME		ORDER #	DATE	TIME																	
			<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Oxygen therapy to maintain saturation > 95% <input checked="" type="checkbox"/> Establish IV or lock with normal saline <input checked="" type="checkbox"/> Establish second IV with Normal Saline for fibrinolytic patients' <input checked="" type="checkbox"/> ASA 160 mg po, chew and swallow x1 <input checked="" type="checkbox"/> Nitroglycerin 0.4 mg spray OR 0.3 mg tablet sublingual x3 doses for chest pain if systolic pressure > 90 mmHg <input checked="" type="checkbox"/> Morphine 2.5 mg IV prn for continued unrelieved chest pain if systolic pressure BP > 90mmHg 																				
Candidate for Tenecteplase (TNK) Non PCI Candidates				<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Draw CBC, electrolytes, urea, creatinine, Glucose, troponin, CO₂, INR/PT/PTT STAT 12/15 lead ECG <input checked="" type="checkbox"/> Vital signs (including oxygen saturation) q15 minutes x 4, then q30 minutes for 1 hour, then q1h until discharge or admission. Continue q15 minutes with ongoing chest pain and unstable vital signs <input checked="" type="checkbox"/> Mount initial rhythm strip and prn with rhythm changes <input checked="" type="checkbox"/> Cardiac Monitor with ST segment monitoring 																			
UNDER 75	<input type="checkbox"/> UNDER 75 YEARS OF AGE -NORMAL RENAL FUNCTION Anticoagulation Step 1: <input checked="" type="checkbox"/> Enoxaparin 30 mg IV bolus immediately before TNK			Diet <input type="checkbox"/> NPO <input type="checkbox"/> Sodium 100mmol/Modified Fat <input type="checkbox"/> _____																			
	Fibrinolytic Agent: _____ Time Ordered: _____ <input checked="" type="checkbox"/> Tenecteplase (TNK) according to patient weight _____ mg of TNK IV over 5 second (see reference sheet) Maximum Dose = 50 mg			Activity <input type="checkbox"/> Bedrest <input type="checkbox"/> Bedrest with Bathroom privileges																			
75 OR GREATER	Anticoagulation Step 2: <input checked="" type="checkbox"/> Enoxaparin 1mg/kg subcut q12h for first 24 hours.			<input checked="" type="checkbox"/> Repeat Troponin (6 hrs from symptom onset and as indicated) @ _____ @ _____ @ _____																			
	<table border="0" style="width:100%;"> <tr> <td>Weight</td> <td>Dose</td> <td>Weight</td> <td>Dose</td> </tr> <tr> <td><input type="checkbox"/> 40 - 49 kg</td> <td>40 mg</td> <td><input type="checkbox"/> 90 - 149 kg</td> <td>100 mg (Maximum dose)</td> </tr> <tr> <td><input type="checkbox"/> 50 - 69 kg</td> <td>60 mg</td> <td><input type="checkbox"/> >149 kg</td> <td>Use unfractionated Heparin</td> </tr> <tr> <td><input type="checkbox"/> 70 - 89 kg</td> <td>80 mg</td> <td></td> <td></td> </tr> </table>	Weight	Dose	Weight	Dose	<input type="checkbox"/> 40 - 49 kg	40 mg	<input type="checkbox"/> 90 - 149 kg	100 mg (Maximum dose)	<input type="checkbox"/> 50 - 69 kg	60 mg	<input type="checkbox"/> >149 kg	Use unfractionated Heparin	<input type="checkbox"/> 70 - 89 kg	80 mg			Antiplatelet: <input checked="" type="checkbox"/> Clopidogrel 300 mg po x1			Pre TNK <input checked="" type="checkbox"/> Neuro Assessment (Baseline)		
Weight	Dose	Weight	Dose																				
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75 OR GREATER	<input type="checkbox"/> 75 YEARS OF AGE OR GREATER-NORMAL RENAL FUNCTION Fibrinolytic Agent: _____ Time Ordered: _____ <input checked="" type="checkbox"/> Tenecteplase (TNK) according to patient weight _____ mg of TNK IV over 5 second (see reference sheet) Maximum Dose = 50 mg			Post TNK <input checked="" type="checkbox"/> Neuro Assessment q1h x 2 from bolus, then q4h x 24 hours <input checked="" type="checkbox"/> 12-lead ECG - 1 and 8 hours post-fibrinolytic bolus @ _____ @ _____																			
	Anticoagulation: <input checked="" type="checkbox"/> Enoxaparin 0.75mg/kg subcutaneous q12h for first 24 hours.			<input checked="" type="checkbox"/> Monitor for signs of reperfusion																			
75 OR GREATER	<table border="0" style="width:100%;"> <tr> <td>Weight</td> <td>Dose</td> <td>Weight</td> <td>Dose</td> </tr> <tr> <td><input type="checkbox"/> 40 - 49 kg</td> <td>30 mg</td> <td><input type="checkbox"/> 70 - 94 kg</td> <td>60 mg</td> </tr> <tr> <td><input type="checkbox"/> 50 - 69 kg</td> <td>40 mg</td> <td><input type="checkbox"/> 95 - 149 kg</td> <td>80 mg</td> </tr> <tr> <td></td> <td></td> <td><input type="checkbox"/> >149 kg</td> <td>Use unfractionated Heparin</td> </tr> </table>	Weight	Dose	Weight	Dose	<input type="checkbox"/> 40 - 49 kg	30 mg	<input type="checkbox"/> 70 - 94 kg	60 mg	<input type="checkbox"/> 50 - 69 kg	40 mg	<input type="checkbox"/> 95 - 149 kg	80 mg			<input type="checkbox"/> >149 kg	Use unfractionated Heparin	Antiplatelet: <input checked="" type="checkbox"/> Clopidogrel 75 mg po x1			Additional Orders:		
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RENAL DYSFUNCTION (Regardless of age)	<input type="checkbox"/> KNOWN RENAL DYSFUNCTION REGARDLESS OF AGE Fibrinolytic Agent: _____ Time Ordered: _____ <input checked="" type="checkbox"/> Tenecteplase (TNK) according to patient weight _____ mg of TNK IV over 5 second (see reference sheet) Maximum Dose = 50 mg																						
	Anticoagulation: <input checked="" type="checkbox"/> Heparin IV bolus 60 units/kg (maximum dose 4000 units) _____ units IV bolus. Followed by Heparin infusion 12 units/kg/hr (initial infusion not to exceed 1000 units/hour) IV _____ units/hour. <input checked="" type="checkbox"/> Adjust Heparin according to ACS nomogram																						
ADJUNCTIVE THERAPY	Antiplatelet: <input type="checkbox"/> Clopidogrel 300 mg po x1 for <75 years of age <input checked="" type="checkbox"/> ELDER ALERT <input type="checkbox"/> Clopidogrel 75 mg po x1 for 75 years of age or greater																						
	Adjunctive Therapies <input type="checkbox"/> Metoprolol 5 mg IV q5 minutes, for 3 doses (if systolic BP ≥ 90mmHg and pulse >60 and no signs of CHF) <input type="checkbox"/> Nitropatch _____ mg/hr (usual 0.4 mg/hr) x 24 hour (if systolic BP ≥ 90 mmHg) x 1																						
<input type="checkbox"/> Candidate for Primary PCI																							
PCI	Anticoagulation: <input type="checkbox"/> Heparin IV bolus 70 units/kg (maximum dose 10,000 units) _____ units <input type="checkbox"/> Clopidogrel 600 mg po x1 regardless of age																						

PHYSICIAN'S SIGNATURE (GENERIC EQUIVALENT AUTHORIZED) _____

FAX SENT DATE _____ TIME _____ M.D. _____

Primary Percutaneous Coronary Intervention and Fibrinolytic Therapy Indications

INDICATIONS for Primary Percutaneous Coronary Intervention

- Contraindication to lytics, OR
- Cardiogenic shock, OR
- Pulmonary edema OR
- Recurrent VF/VT, OR
- Medical contact to balloon <60 minutes, OR
- Diagnosis of STEMI in doubt (example: LVH with strain, pericarditis)

****If there is no response from the cath lab within 10 minutes, thrombolytic therapy should be administered if the patient has presented within 3 hours of the onset of symptoms.**

INDICATIONS for Tenecteplase Administration

- Chest pain consistent with myocardial ischemia
- ECG changes consistent with ST elevation MI, either: ST elevation of at least 0.1mV in 2 adjacent leads OR New LBBB OR ST segment depression with prominent R waves in leads V1 - V3 consistent with posterior infarction
- Time from onset of chest pain less than 12 hours

ABSOLUTE CONTRAINDICATIONS for Fibrinolytic Therapy Administration

- Any prior intracranial hemorrhage
- Known structural cerebral vascular lesion (e.g. arteriovenous malformation)
- Known malignant intracranial neoplasm (primary or metastatic)
- Ischemic stroke within 3 months (except acute ischemic stroke within 3 hours)
- Suspected aortic dissection
- Active bleeding or bleeding diathesis (excluding menses)
- Significant closed head or facial trauma within 3 months

RELATIVE CONTRAINDICATIONS for Fibrinolytic Therapy Administration

- SBP >180 or DBP >110 mmHg (irrespective of whether BP lowers after presentation)
- History of chronic severe, poorly controlled hypertension
- History of prior ischemic stroke greater than 3 months, dementia or known intracranial pathology not covered in contraindications
- Traumatic or prolonged (greater than 10 minutes) CPR or major surgery (less than 3 weeks)
- Recent (within 2 - 4 weeks) internal bleeding
- Pregnancy
- Active peptic ulcer
- Current use of anticoagulants: the higher the INR, the higher the risk of bleeding
- Non-compressible vascular punctures

Tenecteplase Dosing Table

Pt. Weight (kg)	TNK (MG)	Volume TNK to be given
<60	30 mg	6 mL
60 to <70	35 mg	7 mL
70 to <80	40 mg	8 mL
80 to <90	45 mg	9 mL
> 90	50 mg	10 mL
(Maximum Dose)		

AMI Stroke Risk with Thrombolytics

Factor	Fractional Risk	Score
Baseline	0.25	
Age>65	0.50	
Age >75	0.50	
Age >80	0.50	
Age >85	0.50	
BP >160 systolic	0.50	
BP >180 systolic	0.50	
Wt <70 kg	0.50	
Lytic Agent	0.50	
Any previous CVA	0.50	
Total		

Risk is calculated in a cumulative fashion and each risk factor is considered separately. For example: an 81 y.o. has a risk of stroke equal to: 0.25 (baseline) + 0.5 (>65) + 0.5 (>75) + 0.5 (>80) = 1.75

Rescue PCI Protocol STEMI (Post-lytics)

