# IF YOU RECEIVED THIS FAX IN ERROR, PLEASE CALL 604 -XXX\_XXXX IMMEDIATELY





### REGIONAL ORDERS TEMPLATE

Site specific allergy/intolerance documentation information/instructions

# Approved Regional P&T April 26, 2021

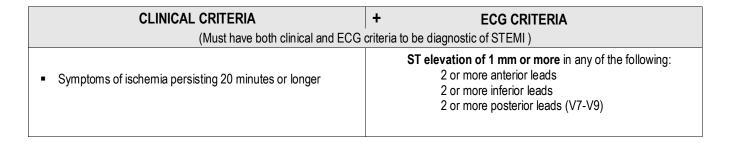
NOTE: Locally-modifiable elements are indicated in grey text

ISCHEMIC PAIN SUSPECTED INITIAL MANAGEMENT ORDERS (Regional)			
	(items with check boxes mu	ust be selected to be ordered)	(Page 1 of 1)
Date: ADMISSION INSTRUCTIONS:	Time: Admit:		Time Processed RN/LPN Initials Comments

	Notify: Family Physician Dr.	
	Consultant: Dr(s):	
CODE STATUS:	Please see the current MOST form. The MOST form is located at: <a href="https://v2.printsys.net/References/VCHealth/VCHGroup/Static-Forms/VCH.0379.pdf">https://v2.printsys.net/References/VCHealth/VCHGroup/Static-Forms/VCH.0379.pdf</a>	
LABORATORY:	Admission bloodwork: CBC, INR, PTT	
	Electrolytes, Glucose, Creatinine, Urea, AST/ALT, hsTroponin I/T  Repeat hs-Troponin I/T 3 hours after initial hs-Troponin I/T  Repeat Troponin 2 hr 3 hr 8 hr after symptom onset	
DIAGNOSTICS:	12-lead ECG STAT within 10 minutes of ER arrival. If initial ECG non-diagnostic, repeat serial ECGs Q5 to 10 minutes until declaration of MI or resolution of symptoms	
	Portable chest X-ray (do NOT delay reperfusion therapy to perform this)	
MONITORING:	Continuous ECG monitoring for arrhythmias for minimum 24 hours  Determine if ST-segment deviation monitoring is available on the unit  Continuous ST-segment deviation monitoring  Vital signs Q1H x 4, then Q4H x 24 hours, then Q8H	
INTRAVENOUS 1	THERAPY AND HYDRATION:	
	Establish IV access (2 IVs if possible, same arm preferred), 20 gauge. Infuse NS TKVO in one IV, saline lock in the other if not needed for infusion.	
MEDICATIONS:	If SpO $_2$ is less than 94%, initiate O $_2$ via suitable delivery system until 94% achieved. Oxygen therapy is not indicated for SpO $_2$ greater than 94%, and may cause harm	
	ASA 160 mg chewed and swallowed STAT (ensure patient has received a total dose of 160 mg in past 12 hours)	
	morphine 1 to 5 mg IV Q5 to 15 minutes PRN for ongoing ischemia	
	Determine if nitroglycerin infusion can be administered on the unit  AVOID nitroglycerin if any of the following are present:  SBP below 90 mmHg or if SBP drops more than 30 mmHg below baseline ★OR★  right ventricular infarction ★OR★  HR below 50 ★OR★  recent use of phosphodiesterase inhibitors; within 24H for sildenafil (VIAGRA) and vardenafil (LEVITRA) within 48H for tadalafil (CIALIS)	
	nitroglycerin spray 0.4 mg sublingual Q5MIN PRN for ischemic symptoms (if unresolved after 3 doses, contact MD)	
	☐ nitroglycerin IV infusion: initiate at 10 mcg/min; titrate by 10 mcg/min Q5MIN PRN (up to maximum rate of 200 mcg/min) for symptoms of ischemia; maintain systolic BP above 90 mmHg or mmHg	
	Consider metoprolol for patients with evidence of ongoing ischemia with SBP over 120 mmHg to target HR range of 70 to 80 beats/minute; <b>DO NOT GIVE if pulmonary congestion present</b>	
	metoprolol 5 mg IV Q5MIN PRN up to 3 doses to target HR range of 70 to 80 beats/minute.	
MANAGEMENT:	See ST-Elevation MI pre-printed orders for selected strategy (primary PCI PHC-PHXXX, fibrinolysis PHC-PHXXX or medical management PHC-PHXXX)	
	See Non ST Elevation MI and Unstable Angina pre-printed orders (PHC-PHXXX)	
Signature	Printed Name College ID Pager	

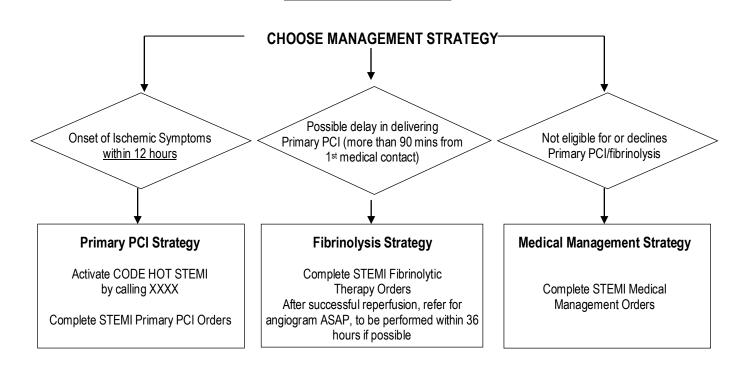
## ST-Elevation Myocardial Infarction Management Algorithm<sup>1</sup>

- Complete "ISCHEMIC PAIN SUSPECTED INITIAL MANAGEMENT" orders (Form No. XXXXX)
- If an ECG was acquired in the field by paramedics and is diagnostic, **DO NOT** repeat upon hospital arrival. If clinical and ECG criteria for ST-elevation MI are met, activate the Cath Lab prior to patient arrival



If initial ECG non-diagnostic of STEMI but patient remains symptomatic and STEMI is suspected, obtain serial ECGs Q 5 to 10 minutes until resolution of symptoms or declaration of MI

## **STEMI Diagnosed**



# If ECG or clinical evidence of ongoing ischemia or instability greater than 12 hours from symptom onset, call Interventional Cardiologist

Consider enrolment in STEMI Research Study as applicable.

<sup>1</sup>Based on the ACC/AHA Guidelines for the Management of Patients with ST-Elevation Myocardial Infarction.

## NON-ST-ELEVATION/UNSTABLE ANGINA MANAGEMENT ALGORITHM

- Complete "ISCHEMIC PAIN SUSPECTED INITIAL MANAGEMENT" orders (Form No. XXXXX)
- Use this algorithm to guide clinical decision making for patients being ADMITTED with NSTEMI/Unstable Angina Complete appropriate orders after reviewing this management algorithm

#### **Step 1:** ESTABLISH PRESENCE OF CLINICAL CRITERIA

Ischemic or presumed ischemic discomfort lasting 20 minutes or more presumed to be NSTEMI or Unstable angina

#### **Step 2:** RISK STRATIFY PATIENT

Calculate GRACE RISK SCORE - online calculator at:

### http://www.outcomes-umassmed.org/grace/acs\_risk/acs\_risk\_content.html

- Grace Score: \_\_\_\_\_ (Use "In-hospital Death/MI" Endpoint) \*OR\* Use elements from table below to assess risk if unable to access online calculator
- Default to highest risk category; need to fulfil only ONE component in Very High Risk Category or ONE of CLINICAL, BIOCHEMICAL or ECG to qualify for any subsequent category

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RISK CATEGORY	CLINICAL	BIOCHEMICAL	ECG
VERY HIGH	<ul> <li>Medically refractory or recurrent angina despite intense medical therapy ★AND★         <ul> <li>New ST depression 2 mm in 2 or more leads ★OR★ New deep negative T waves in 2 or more leads</li> </ul> </li> <li>Clinical symptoms of cardiogenic shock or advanced heart failure</li> <li>Life-threatening arrhythmias (ventricular fibrillation or tachycardia)</li> </ul>		
HIGH (GRACE RISK SCORE above 140)	• N/A	At least 1 elevated troponin	<ul> <li>New ST depression 2 mm in 2 or more contiguous leads or T wave changes as above *OR*</li> <li>New T wave inversion 2 mm in 2 or more contiguous leads</li> </ul>
INTERMEDIATE (GRACE RISK SCORE 109 to 140)	<ul> <li>Presence of diabetes or renal insufficiency (GFR below 60 mL/min) *OR*</li> <li>Known EF below 40% *OR*</li> <li>PCI, ACS or CABG in past 6 months</li> </ul>	Troponin negative	New ST depression below 1mm or any ST depression but less than 2 leads ★OR★     New T wave inversion below 1 mm or in less than 2 leads
LOW (GRACE RISK SCORE below 109)	NO heart failure ★AND OR★ NO arrhythmias ★AND OR★ NO recurrent chest pain	Troponin negative	• Normal

Step 3: ASSIGN TO TREATMENT STRATEGY			
RISK CATEGORY STRATEGY OPTIMAL TREATMENT TIMELINES		OPTIMAL TREATMENT TIMELINES	
		Consult Interventional Cardiologist urgently; angiography to be performed as soon as possible and within 24 hours.	
HIGH	HIGH Early Invasive Consult local cardiac specialist; angiography to be performed by end of next busines		
INTERMEDIATE	INTERMEDIATE Invasive Consult local cardiac specialist; non-emergent angiography within 72 hours (pre-discharge		
LOW	Primary Conservative	Refer for angiography only if ischemia recurs prior to discharge or is provocable on follow-up inpatient functional exam	

#### **Step 4:** DETERMINE ANTI-PLATELET AND ANTICOAGULANT THERAPY

• If possible, calculate patient's CRUSADE Bleeding Risk Score using online calculator available at:

http://www.crusadebleedingscore.org Crusade Bleeding Score:

**★OR★** Use anti-platelet guide below to select anti-platelet and anticoagulant agents

NOTE: Routine pre-treatment with a P2Y12 receptor inhibitor in ACS patients, in whom an early invasive management is planned and coronary anatomy is not known, is NOT RECOMMENDED given the lack of established benefit. However for patients with a planned delayed invasive management strategy (greater than 24 hours), P2Y12 receptor inhibitor may be considered based on thrombotic and bleed risk; AND likelihood of requiring urgent cardiac surgery in the next 5 days.

STRATEGY	ASA + ANTIPLATELET AGENT (see below)		INITIAL ANTICOAGULANT
	ticagrelor 180 mg PO once then 90mg BID (preferred; administer post-angiogram) **OR**		hanaria IV (professed)
Invasive	clopidogrel <mark>: PCI planned within 6 hours</mark>	600 mg once; 75mg daily (administer post- angiogram)	heparin IV (preferred)  *OR*
	clopidogrel: PCI planned beyond 6 hours	300 mg once; 75mg daily	enoxaparin (may be used in patients requiring inter-facility transfer <b>*AND*</b> if eGFR above 30 mL/min)
	If has been on clopidogrel for past 7 consecutive days	NO load; 75 mg daily (continue post-angiogram)	
Conservative	clopidogrel-naïve or taking clopidogrel for less than 7 days ★AND★ low likelihood of urgent cardiac surgery in the next 5 days	300 mg once; 75mg daily	If eGFR above 30 mL/min: fondaparinux preferred unless may have PCI in next 7 days *OR* enoxaparin*
	If has been on clopidogrel for past 7 consecutive days★AND★ low likelihood	NO load; 75 mg daily	heparin IV  If eGFR is 30 mL/min or below:

	of urgent cardiac surgery in the next 5 days		heparin IV
	Avoid clopidogrel and ticagrelor in patients at high risk for bleeding; avoid ticagrelor where HR is below 50 bp clopidogrel is preferred in those requiring long-term oral anti-coagulation.		
Cautions	*WHERE UNIT POLICIES PERMIT*: Consider Glycoprotein IIB/IIIA Inhibitor therapy may be considered in very high risk patients awaiting PCI who have ongoing/recurrent ischemia despite dual antiplatelet therapy and anticoagulant. Discuss with interventional or local cardiologist prior to ordering.		