IF YOU RECEIVED THIS FAX IN ERROR, PLEASE CALL 604 –XXX_XXXX IMMEDIATELY

Vancouver CoastalHealth | Providence HEALTH CARE

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 must be selected to be ordered)

Date: _____ Time: _____

ADMISSION INSTRUCTIONS: Admit: ☐ Yes ☐ No

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:
https://v2.printsys.net/References/VCHealth/VCHGroup/Static-Forms/VCH.0379.pdf

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 ☐ 4 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 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; **DO NOT GIVE if pulmonary congestion present**

☐ 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[1]

- 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

CLINICAL CRITERIA	**+ ECG CRITERIA**
(Must have both clinical and ECG criteria to be diagnostic of STEMI)	
▪ Symptoms of ischemia persisting 20 minutes or longer	**ST elevation of 1 mm or more** in any of the following: 2 or more anterior leads 2 or more inferior leads 2 or more posterior leads (V7-V9)

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

CHOOSE MANAGEMENT STRATEGY

Onset of Ischemic Symptoms <u>within 12 hours</u>	Possible delay in delivering Primary PCI (more than 90 mins from 1st medical contact)	Not eligible for or declines Primary PCI/fibrinolysis
Primary PCI Strategy Activate CODE HOT STEMI by calling XXXX Complete STEMI Primary PCI Orders	**Fibrinolysis Strategy** Complete STEMI Fibrinolytic Therapy Orders After successful reperfusion, refer for angiogram ASAP, to be performed within 36 hours if possible	**Medical Management Strategy** Complete STEMI Medical Management Orders

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

Consider enrolment in STEMI Research Study as applicable.

[1]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

RISK CATEGORY	CLINICAL	BIOCHEMICAL	ECG
VERY HIGH	• Medically refractory or recurrent angina despite intense medical therapy ✱**AND**✱ ○ New ST depression 2 mm in 2 or more leads ✱**OR**✱ New deep negative T waves in 2 or more leads • Clinical symptoms of cardiogenic shock or advanced heart failure • Life-threatening arrhythmias (ventricular fibrillation or tachycardia)		
HIGH (GRACE RISK SCORE above 140)	• N/A	• At least 1 elevated troponin	• New ST depression 2 mm in 2 or more contiguous leads or T wave changes as above ✱**OR**✱ • New T wave inversion 2 mm in 2 or more contiguous leads
INTERMEDIATE (GRACE RISK SCORE 109 to 140)	• Presence of diabetes or renal insufficiency (GFR below 60 mL/min) ✱**OR**✱ • Known EF below 40% ✱**OR**✱ • PCI, ACS or CABG in past 6 months	• 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
VERY HIGH	Urgent Invasive	Consult Interventional Cardiologist urgently; angiography to be performed as soon as possible and within 24 hours.
HIGH	Early Invasive	Consult local cardiac specialist; angiography to be performed by end of next business day
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
Invasive	ticagrelor 180 mg PO once then 90mg BID (preferred; administer post-angiogram) ****OR****		heparin IV (preferred) ✱**OR**✱ enoxaparin (may be used in patients requiring inter-facility transfer ✱**AND**✱ if eGFR above 30 mL/min)
	clopidogrel~~: PCI planned within 6 hours~~	600 mg once; 75mg daily (administer post-angiogram)	
	~~clopidogrel: PCI planned beyond 6 hours~~	~~300 mg once; 75mg daily~~	
	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✱**OR**✱ heparin IV **If eGFR is 30 mL/min or below:**
	If has been on clopidogrel for past 7 consecutive days✱AND✱ low likelihood	NO load; 75 mg daily	

	of urgent cardiac surgery in the next 5 days		heparin IV
Cautions	*Avoid clopidogrel and ticagrelor in patients at high risk for bleeding; avoid ticagrelor where HR is below 50 bpm; clopidogrel is preferred in those requiring long-term oral anti-coagulation.* *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.		