

Worksheet 1. IMPLEMENTATION STRATEGY
Guideline: Management of Ischemic Heart Disease

Overall Implementation Strategy/Focus:

<p align="center">Key Guideline Element Core Module</p>	<p align="center">Gaps in Current Practices (Planning Step 1)</p>	<p align="center">Action Strategy (Planning Step 3)</p>
<p>INITIAL EVALUATION</p> <ul style="list-style-type: none"> • Triage patients with possible acute myocardial infarction (MI) or unstable angina for evaluation and treatment • Initiate O2, intravenous access and continuous electrocardiogram (ECG) monitoring • Obtain 12-lead ECG • Institute advanced cardiac life support, if indicated • Perform expedited history & physical to: <ol style="list-style-type: none"> 1. R/O alternative catastrophic diagnoses (pericarditis, pericardial tamponade, thoracic aortic dissection, pneumothorax, pancreatitis, & pulmonary embolus) 2. Elicit characteristics of MI 3. Determine contraindications to reperfusion therapy • Administer the following: <ul style="list-style-type: none"> - Non-coated aspirin (160 to 325 mg) - Nitroglycerin (spray or tablet, followed by IV , if symptoms persist) - Beta-blockers in the absence of contraindications • Determine if patient meets criteria for emergent reperfusion therapy: <ul style="list-style-type: none"> - History of discomfort consistent with ischemia or infarction <p>AND</p> <ul style="list-style-type: none"> - ECG finding of ongoing ST-segment elevation in 2 or more leads or left bundle branch block • Ensure adequate analgesia (morphine, if needed) • Obtain serum cardiac markers (troponin or CK-MB) • Identify and treat other conditions that may exacerbate symptoms 		

<p align="center">Key Guideline Element Core Module</p>	<p align="center">Gaps in Current Practices (Planning Step 1)</p>	<p align="center">Action Strategy (Planning Step 3)</p>
<p>RISK STRATIFICATION: NON-INVASIVE EVALUATION (CARDIAC STRESS TEST) Indications for Non-Invasive Evaluation:</p> <ul style="list-style-type: none"> • Establish or confirm a diagnosis of ischemic heart disease • Estimate prognosis in patients with known or suspected IHD • Assess the effects of therapy <p><i>Patients with contraindications to exercise testing should undergo pharmacologic stress testing with an imaging modality</i></p> <p>Establishing diagnoses:</p> <ul style="list-style-type: none"> • Is most useful if the pre-test probability of coronary artery disease (CAD) is intermediate (10% to 90%) • Should generally not be done in patients with very high or very low probabilities of CAD <p>Variables useful in estimating prognosis include:</p> <ul style="list-style-type: none"> • Maximum workload achieved • Heart rate and blood pressure responses to exercise • Occurrence, and degree of ST-segment deviation • Occurrence and duration of ischemic symptoms • Size and number of stress-induced myocardial perfusion or wall motion abnormalities 		

<p align="center">Key Guideline Element Module A</p>	<p align="center">Gaps in Current Practices (Planning Step 1)</p>	<p align="center">Action Strategy (Planning Step 3)</p>
<p>ACUTE MYOCARDIAL INFARCTION (ST-SEGMENT ELEVATION MI) For patients who meet criteria for emergent reperfusion therapy</p> <ul style="list-style-type: none"> • Admit to an intensive care unit or transfer to facility with interventional cardiology for emergent reperfusion as indicated • Initiate heparin, low-molecular weight heparin, or coumadin, if indicated • Initiate IV beta-blocker followed by oral • Initiate ACE inhibitor therapy in the absence of contraindications <p><i>If less than 12 hours from onset of symptoms:</i></p> <ul style="list-style-type: none"> ◊ Refer to PCI if intervention can be performed within 90 minutes of presentation ◊ Initiate thrombolytic therapy if not contraindicated and not referred for direct PCI ◊ Refer to PCI if thrombolytic therapy is contraindicated or response to thrombolysis is unsatisfactory <ul style="list-style-type: none"> • Consider non-invasive evaluation (cardiac stress test) • Refer to cardiology if at high-risk for death or recurrent MI and/or LV dysfunction • Ensure pharmacological therapy for ischemia, angina, and CHF • Discharge patient to home with appropriate follow-up 		

<p align="center">Key Guideline Element Module B</p>	<p align="center">Gaps in Current Practices (Planning Step 1)</p>	<p align="center">Action Strategy (Planning Step 3)</p>
<p>Definite/Probable Non-ST-Segment Elevation Acute Coronary Syndrome (ACS) (Unstable Angina/Non-ST-Segment Elevation MI [NSTEMI])</p> <p>Patients with ACS (UA/NSTEMI) are at high risk for MI or death and are candidates for further aggressive diagnostic and therapeutic interventions that should include:</p> <ul style="list-style-type: none"> • Ensure emergency intervention • Admission to an intensive- or intermediate-care unit • Immediate cardiac rhythm monitoring • Therapy directed at stabilizing ischemia (beta-blocker, NTG) • Risk-stratification to determine prognosis and guide treatment. Assessment for risk of death or MI based on symptoms, level of biomarker (troponin, CK) and ECG • Antithrombotic therapy tailored to individual risk that should include: <ul style="list-style-type: none"> -ASA -Heparin (UFH) or low molecular weight heparin (LMWH) -Clopidogrel if intervention is not planned <p>* UA/NSTEMI patients should <i>not</i> receive reperfusion fibrinolytic therapy</p>		

<p align="center">Key Guideline Element Module B</p>	<p align="center">Gaps in Current Practices (Planning Step 1)</p>	<p align="center">Action Strategy (Planning Step 3)</p>
<p>High-risk patients are candidates for further aggressive diagnostic and therapeutic interventions including:</p> <ul style="list-style-type: none"> • Early (i.e., <48 hour) coronary angiography with subsequent revascularization if indicated • GP IIb/IIIa antagonist in addition to aspirin, heparin and clopidogrel in patients with continuing ischemia or with other high-risk features • GP IIb/IIIa antagonist may also be used in patients in whom an early invasive strategy is planned. GP IIb/IIIa can be administered just prior to PCI. <p>In patients not undergoing angiography: Perform non-invasive evaluation (cardiac stress test and left ventricular [LV] function), and: If LV function is compromised: -Ensure pharmacologic therapy for ischemia, angina, and congestive heart failure -Initiate ACE inhibitor therapy -Consider referral to cardiology</p> <p>All patients with suspected, but unproven, unstable angina should have further diagnostic testing to determine the accuracy of the diagnosis. Discharge patient to home with appropriate follow-up.</p>		

<p align="center">Key Guideline Element Module G</p>	<p align="center">Gaps in Current Practices (Planning Step 1)</p>	<p align="center">Action Strategy (Planning Step 3)</p>
<p>MANAGEMENT OF MEDICAL FOLLOW-UP</p> <ul style="list-style-type: none"> • Identify and triage IHD patients with a possible acute coronary syndrome (i.e., ST-elevation MI [STEMI], non-ST-elevation MI [NSTEMI], or unstable angina) • Assess if stable symptoms are due to noncardiac conditions • Identify and treat other medical conditions that may exacerbate IHD symptoms • Ensure all patients receive aspirin (or other antiplatelet therapy, as appropriate) • Titrate pharmacological therapy for ischemia, angina, and congestive heart failure (CHF) to physiologic endpoints, therapeutic doses, or patient tolerance • Administer a cardiac stress test to assess the risk of future cardiac events, if not previously performed, or if there has been worsening of ischemic symptoms • Initiate angiotension-converting-enzyme (ACE) inhibitor therapy for patients with significant DM and/or left ventricular (LV) dysfunction (ejection fraction [EF] <0.40) <p>Consider in patients without LV dysfunction</p> <ul style="list-style-type: none"> • Identify and provide therapy for patients with heart failure • Identify patients at high risk for sudden cardiac death or complications for whom cardiology referral is appropriate 		

<p align="center">Key Guideline Element Module G</p>	<p align="center">Gaps in Current Practices (Planning Step 1)</p>	<p align="center">Action Strategy (Planning Step 3)</p>
<p>SECONDARY PREVENTION</p> <ul style="list-style-type: none"> • Assure appropriate treatment with beta-adrenergic blocking agents (beta-blockers) in patients with prior MI • Identify and treat patients with high low-density-lipoprotein cholesterol (LDL-C) • Assess and treat high blood pressure • Reduce cardiac risk with smoking cessation • Promote cardiac rehabilitation as secondary prevention • Achieve tight glycemic control in diabetics • Screen for depression and initiate therapy or refer • Arrange follow-up 		

Worksheet 2A. ACTION PLAN FOR GUIDELINE INTRODUCTION AND STAFF EDUCATION
Guideline: Management of Ischemic Heart Disease

Identify actions for guideline introduction and education. (IN)	Designate someone to serve as lead for the action and other staff to be involved.		Identify the tools and resources for the action.	Specify the action timeline.
Action #IN. __	Lead:	Other Staff:		Start Complete
Action #IN. __	Lead:	Other Staff:		Start Complete
Action #IN. __	Lead:	Other Staff:		Start Complete
Action #IN. __	Lead:	Other Staff:		Start Complete

Worksheet 2B. PLANNING WORKSHEET FOR PRACTICE CHANGE IMPLEMENTATION

Guideline: Management of Ischemic Heart Disease

Key Guideline Element: _____

Identify actions in the strategy for this guideline element.	Designate someone to serve as lead for the action and other staff to be involved.		Identify the tools and resources for the action.	Specify the action timeline.
Action # __	Lead:	Other Staff:		Start Complete
Action # __	Lead:	Other Staff:		Start Complete
Action # __	Lead:	Other Staff:		Start Complete
Action # __	Lead:	Other Staff:		Start Complete
Action # __	Lead:	Other Staff:		Start Complete

Worksheet 3. GANTT CHART OF TIMELINE FOR GUIDELINE IMPLEMENTATION
Guideline: Management of Ischemic Heart Disease

Actions	MONTH OF WORK											
	1	2	3	4	5	6	7	8	9	10	11	12
<i>Introduction & Education</i>												
#IN. __												
#IN. __												
#IN. __												
#IN. __												
<i>Practice Changes</i>												
# __												
# __												
# __												
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# __												
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# __												

Worksheet 4. METRICS AND MONITORING
Guideline: Management of Ischemic Heart Disease

Key Guideline Element	Metric	Data Sources	Monitoring Schedule
<p>INITIAL EVALUATION : Core Module</p> <ul style="list-style-type: none"> • Triage patients with possible acute myocardial infarction (MI) or unstable angina for evaluation and treatment • Initiate O2, intravenous access and continuous electrocardiogram (ECG) monitoring • Obtain 12-lead ECG • Institute advanced cardiac life support, if indicated • Perform expedited history & physical to: <ol style="list-style-type: none"> 1. R/O alternative catastrophic diagnoses (pericarditis, pericardial tamponade, thoracic aortic dissection, pneumothorax, pancreatitis, & pulmonary embolus) 2. Elicit characteristics of MI 3. Determine contraindications to reperfusion therapy • Administer the following: <ul style="list-style-type: none"> - Non-coated aspirin (160 to 325 mg) - Nitroglycerin (spray or tablet, followed by IV , if symptoms persist) - Beta-blockers in the absence of contraindications • Determine if patient meets criteria for emergent reperfusion therapy: <ul style="list-style-type: none"> - History of discomfort consistent with ischemia or infarction <p>AND</p> <ul style="list-style-type: none"> - ECG finding of ongoing ST-segment elevation in 2 or more leads or left bundle branch block <ul style="list-style-type: none"> • Ensure adequate analgesia (morphine, if needed) • Obtain serum cardiac markers (troponin or CK-MB) • Identify and treat other conditions that may exacerbate symptoms 			

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Key Guideline Element :Core Module cont.	Metric	Data Sources	Monitoring Schedule
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