



# Summary of Evidence-Based Recommendations

The practice recommendations in this presentation are from the following source:

**Source:** American College of Cardiology (ACC) and American Heart Association (AHA) 2007 Guidelines for the Management of Patients with Unstable Angina/Non–ST-Elevation Myocardial Infarction. J Am Coll Cardiol 2007;50:e1-e157.

**Website:** <http://content.onlinejacc.org/cgi/content/full/50/7/e1>

**Strength of Evidence:** The strength of evidence is indicated following each recommendation.

## Initial Recommendations #1-3

**Recommendation #1:** Primary care providers should evaluate the presence and status of control of major risk factors for CHD for all patients at regular intervals (approximately every 3 to 5 years). (Class 1, Level of Evidence: C)

**Recommendation #2:** Patients with symptoms of ACS (chest discomfort with or without radiation to the arm[s], back, neck, jaw or epigastrium; shortness of breath; weakness; diaphoresis; nausea; lightheadedness) should be instructed to call 9-1-1 and should be transported to the hospital by ambulance rather than by friends or relatives. (Class 1, Level of Evidence: B)

**Recommendation #3:** Health care providers should actively address the following issues regarding ACS with patients with or at risk for CHD and their families or other responsible caregivers:

- The patient's heart attack risk; (Class 1, Level of Evidence: C)
- How to recognize symptoms of ACS; (Class 1, Level of Evidence: C)
- The advisability of calling 9-1-1 if symptoms are unimproved or worsening after 5 min, despite feelings of uncertainty about the symptoms and fear of potential embarrassment; (Class 1, Level of Evidence: C)
- A plan for appropriate recognition and response to a potential acute cardiac event, including the phone number to access EMS, generally 911; (Class 1, Level of Evidence: C)

## Diagnostic Recommendations #4-6

**Recommendation #4:** A 12-lead ECG should be performed and shown to an experienced emergency physician as soon as possible after ED arrival, with a goal of within 10 min of ED arrival for all patients with chest discomfort (or anginal equivalent) or other symptoms suggestive of ACS. (Class 1, Level of Evidence: B)

**Recommendation #5:** If the initial ECG is not diagnostic but the patient remains symptomatic and there is high clinical suspicion for ACS, serial ECGs, initially at 15- to 30-min intervals, should be performed to detect the potential for development of ST-segment elevation or depression. (Class 1, Level of Evidence: B)



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**Recommendation #6:** A cardiac-specific troponin is the preferred marker, and if available, it should be measured in all patients who present with chest discomfort consistent with ACS. (Class 1, Level of Evidence: B)

### Acute Intervention Recommendations #7-9

**Recommendation #7:** Aspirin should be administered to UA/NSTEMI patients as soon as possible after hospital presentation and continued indefinitely in patients not known to be intolerant of that medication. (Class 1, Level of Evidence: A)

**Recommendation #8:** Clopidogrel (loading dose followed by daily maintenance dose)\* should be administered to UA/NSTEMI patients who are unable to take ASA because of hypersensitivity or major gastrointestinal intolerance. (Class 1, Level of Evidence: A)

**Recommendation #9:** In patients with suspected ACS in whom ischemic heart disease is present or suspected, if the follow-up 12-lead ECG and cardiac biomarkers measurements are normal, a stress test (exercise or pharmacological) to provoke ischemia should be performed in the ED, in a chest pain unit or on an outpatient basis in a timely fashion (within 72 hours) as an alternative to inpatient admission. Low-risk patients with a negative diagnostic test can be managed as outpatients. (Class 1, Level of Evidence: C)

### Post Discharge Recommendations #10-12

**Recommendation #10:** All post-UA/NSTEMI patients should be given sublingual or spray nitroglycerin and instructed in its use. (Class 1, Level of Evidence: C)

**Recommendation #11:** Before hospital discharge, patients with UA/NSTEMI should be informed about symptoms of worsening myocardial ischemia and MI and should be instructed in how and when to seek emergency care and assistance if such symptoms occur. (Class 1, Level of Evidence: C)

**Recommendation #12:** HMG co-A reductase inhibitors (statins), in the absence of contraindications, regardless of baseline LDL-C and diet modification, should be given to post-UA/NSTEMI patients, including post revascularization patients. (Class 1, Level of Evidence: A)

## SIZE OF TREATMENT EFFECT

ESTIMATE OF CERTAINTY (PRECISION) OF TREATMENT EFFECT

	CLASS I	CLASS IIa	CLASS IIb	CLASS III
	<p><i>Benefit &gt;&gt;&gt; Risk</i> Procedure/Treatment <b>SHOULD</b> be performed/administered</p>	<p><i>Benefit &gt;&gt; Risk</i> <i>Additional studies with focused objectives needed</i> <b>IT IS REASONABLE to perform procedure/ administer treatment</b></p>	<p><i>Benefit ≥ Risk</i> <i>Additional studies with broad objectives needed; additional registry data would be helpful</i> Procedure/Treatment <b>MAY BE CONSIDERED</b></p>	<p><i>Risk ≥ Benefit</i> <i>No additional studies needed</i> Procedure/Treatment should <b>NOT</b> be performed/administered <b>SINCE IT IS NOT HELPFUL AND MAY BE HARMFUL</b></p>
<p><b>LEVEL A</b> Multiple (3-5) population risk strata evaluated* General consistency of direction and magnitude of effect</p>	<ul style="list-style-type: none"> <li>• Recommendation that procedure or treatment is useful/effective</li> <li>• Sufficient evidence from multiple randomized trials or meta-analyses</li> </ul>	<ul style="list-style-type: none"> <li>• Recommendation in favor of treatment or procedure being useful/effective</li> <li>• Some conflicting evidence from multiple randomized trials or meta-analyses</li> </ul>	<ul style="list-style-type: none"> <li>• Recommendation's usefulness/efficacy less well established</li> <li>• Greater conflicting evidence from multiple randomized trials or meta-analyses</li> </ul>	<ul style="list-style-type: none"> <li>• Recommendation that procedure or treatment is not useful/effective and may be harmful</li> <li>• Sufficient evidence from multiple randomized trials or meta-analyses</li> </ul>
<p><b>LEVEL B</b> Limited (2-3) population risk strata evaluated*</p>	<ul style="list-style-type: none"> <li>• Recommendation that procedure or treatment is useful/effective</li> <li>• Limited evidence from single randomized trial or nonrandomized studies</li> </ul>	<ul style="list-style-type: none"> <li>• Recommendation in favor of treatment or procedure being useful/effective</li> <li>• Some conflicting evidence from single randomized trial or nonrandomized studies</li> </ul>	<ul style="list-style-type: none"> <li>• Recommendation's usefulness/efficacy less well established</li> <li>• Greater conflicting evidence from single randomized trial or nonrandomized studies</li> </ul>	<ul style="list-style-type: none"> <li>• Recommendation that procedure or treatment is not useful/effective and may be harmful</li> <li>• Limited evidence from single randomized studies</li> </ul>
<p><b>LEVEL C</b> Very limited (1-2) population risk strata evaluated*</p>	<ul style="list-style-type: none"> <li>• Recommendation that procedure or treatment is useful/effective</li> <li>• Only expert opinion, case studies, or standard-of-care</li> </ul>	<ul style="list-style-type: none"> <li>• Recommendation in favor of treatment or procedure being useful/effective</li> <li>• Only diverging expert opinion, case studies, or standard-of-care</li> </ul>	<ul style="list-style-type: none"> <li>• Recommendation's usefulness/efficacy less well established</li> <li>• Only diverging expert opinion, case studies, or standard-of-care</li> </ul>	<ul style="list-style-type: none"> <li>• Recommendation that procedure or treatment is not useful/effective and may be harmful</li> <li>• Only expert opinion, case studies, or standard-of-care</li> </ul>

Suggested phrases for writing recommendations

should  
is recommended  
is indicated  
is useful/effective/beneficial

is reasonable  
can be useful/effective/  
beneficial  
is probably recommended or  
indicated

may/might be considered  
may/might be reasonable  
usefulness/effectiveness is  
unknown/unclear/uncertain  
or not well established

is not recommended  
is not indicated  
should not  
is not useful/effective/  
beneficial  
may be harmful