

Acute Coronary Syndrome

An educational service of CME Resource

Ask Your Patients ...

"Are you aware of the warning signs of a heart attack?"

If Your Patient Asks ...

"How do I know if I'm having a heart attack?"

UNDERSTAND the problem

Atherosclerosis, the underlying condition of coronary artery disease, is **progressive**, with periods of stable and nonstable disease. Periods of instability can cause the occurrence of **acute coronary syndrome (ACS)**, a spectrum of life-threatening disorders that includes unstable angina and **myocardial infarction** with or without ST-segment elevation (STEMI or NSTEMI). An estimated **35% of all deaths** among individuals 65 years of age or older are attributable to ACS.^{1, 2}

The data have demonstrated a **clear benefit** in survival and outcomes when **guideline recommendations** are followed. Highlighting the different needs of different populations of patients and the **disparities in care**, as well as emphasizing the appropriate use of treatment guidelines, can help to **reduce the gap** between evidence-based care and actual care delivered.

WHO is at highest risk

The risk factors for ACS are the same as those established for coronary artery disease. Traditional risk factors include:⁸

- Increasing age (especially older than 65 years)
- Male gender
- Family history
- Cigarette smoking
- Hyperlipidemia
- Hypertension
- Obesity and overweight
- Sedentary lifestyle
- Diabetes

There are also several emerging risk factors associated with an increased incidence of ACS, such as systemic lupus erythematosus, rheumatoid arthritis, and HIV infection.

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WHAT are the early signs

In most cases, the primary symptom of ACS is chest pain. In particular, ACS should be considered when a patient presents with nontraumatic chest or severe epigastric pain with components typical of myocardial ischemia or infarction:

- Central/substernal compression or crushing chest pain
- Pressure, tightness, heaviness, cramping, burning, aching sensation
- Unexplained indigestion, belching, epigastric pain
- Radiating pain in neck, jaw, shoulders, back, or one or both arms

In addition, shortness of breath, excessive sweating, and nausea and/or vomiting may be present.

Many individuals still believe that the onset of an MI will be “dramatic,” with chest pain that is severe and crushing.^{3; 4; 5} However, it is important to note that some populations have higher incidences of atypical presentations of ACS, particularly women and older adults.

HOW can outcomes be improved

Optimizing patient outcomes in ACS depends on several factors, including timely access to care, appropriate follow-up care, and adherence to secondary prevention measures.

On average, individuals wait 2 hours before seeking medical care for ACS-related symptoms, and this delay has not changed despite many national public campaigns emphasizing the importance of timely care.³ Furthermore, up to 50% of individuals with ACS-related symptoms are transported to the hospital by means other than emergency medical services.^{4; 6} Individuals and their families or caregivers should be told that immediate action is needed for ACS-related symptoms, including calling emergency medical services, taking nitroglycerin for ischemic pain, and taking aspirin.

Surveys have shown that nearly one-half of individuals are not knowledgeable about ACS-related symptoms or their level of risk, even after having an ACS event.⁷ Patient education should focus on the importance of recognition of symptoms and risk factors, timeliness of care, and compliance with secondary prevention strategies.

WHERE to find resources

American Heart Association

1-800-AHA-USA-1 (242-8721)

<http://www.americanheart.org>

Centers for Disease Control and Prevention

<http://www.cdc.gov>

National Heart, Lung, and Blood Institute

<http://www.nhlbi.nih.gov>

American College of Cardiology

<http://www.acc.org>

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- 1 Rosamond W, et al. Heart disease and stroke statistics—2008 update: a report from the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. *Circulation*. 2008;117:e25-e146.
- 2 Alexander KP, et al. Acute coronary care in the elderly, part I: non-ST-segment-elevation acute coronary syndromes: a scientific statement for healthcare professionals from the American Heart Association Council on Clinical Cardiology: in collaboration with the Society of Geriatric Cardiology. *Circulation*. 2007;115(19):2549-2569.
- 3 Anderson J, et al. ACC/AHA 2007 guidelines for the management of patients with unstable angina/non-ST-elevation myocardial infarction: executive summary. *Circulation*. 2007;116:803-877.
- 4 Antman EM, et al. ACC/AHA guidelines for the management of patients with ST-elevation myocardial infarction. *Circulation*. 2004;110:e82-e293.
- 5 Finnegan JJ, et al. Patient delay in seeking care for heart attack symptoms: findings from focus groups conducted in five U.S. regions. *Prev Med*. 2000;31:205-213.
- 6 Thuresson M, et al. Factors that influence the use of ambulance in acute coronary syndrome. *Am Heart J*. 2008;156:170-176.
- 7 Dracup K, et al. Acute coronary syndrome: what do patients know? *Arch Intern Med*. 2008;168(10):1049-1054.
- 8 Pearson TA, et al. AHA guidelines for primary prevention of cardiovascular disease and stroke: 2002 update. Consensus panel guide to comprehensive risk reduction for adult patients without coronary or other atherosclerotic vascular diseases. *Circulation*. 2002;106:388-391.

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