

Acute Coronary Syndrome 10

An educational service of NetCE

Ask Your Patients...

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

If Your Patient Asks...

"How do I know if I am 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 43.8% of all deaths are attributable to heart disease.¹

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:²

- 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.

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} 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.^{3,4} 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.⁵ 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)
<https://www.heart.org>

Centers for Disease Control and Prevention

<https://www.cdc.gov>

National Heart, Lung, and Blood Institute

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

American College of Cardiology

<https://www.acc.org>

- 1 Benjamin EJ, Virani SS, Callaway CW, et al. Heart disease and stroke statistics—2018 update. A report from the American Heart Association. *Circulation*. 2018;137(20):e146-e603.
- 2 Goff DC Jr, Lloyd-Jones DM, Bennett G, et al. 2013 ACC/AHA guideline on the assessment of cardiovascular risk: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *Circulation*. 2014;129(25 Suppl 2):S49-S73.
- 3 O’Gara PT, Kushner FG, Ascheim DD, et al. 2013 ACCF/AHA guideline for the management of ST-elevation myocardial infarction: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. *Circulation*. 2013;127(4):e362-e425.
- 4 Thuresson M, Jarlöv MB, Lindahl B, Svensson L, Zedigh C, Herlitz J. Factors that influence the use of ambulance in acute coronary syndrome. *Am Heart J*. 2008;156(1):170-176.
- 5 Albarqouni L, Smenes K, Meinertz T, et al. Patients’ knowledge about symptoms and adequate behaviour during acute myocardial infarction and its impact on delay time: Findings from the multicentre MEDEA Study. *Patient Educ Couns*. 2016; (Epub ahead of print).

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