

# when minutes count

In February, people's thoughts often turn to love. Seemingly, the public is assaulted on all fronts by Valentine cards, chocolate kisses, floral bouquets and tiny candy message hearts appearing everywhere. But did you know that February is also American Heart Month? Heart disease is still the number one killer in the U.S. Goals of the American Heart Association (AHA) include measures to heighten public awareness of various cardiovascular diseases, heart disease prevention and research. Over one million Americans are predicted to have a first or recurrent heart attack this year; about one third of them will die.

The American College of Cardiology (ACC), AHA and the Society for Cardiovascular Angiography and Interventions (SCAI) released a research-based, focused update late last year. The update applies to the management of patients with a particular kind of heart attack, ST-elevation myocardial infarction (STEMI); it is determined by an electrocardiogram test (ECG/EKG). In a STEMI, a major heart attack, the blood supply to part of the heart muscle is completely blocked off by a blood clot. As a result, all of the heart muscle being supplied by the affected blood vessel begins to die.

The update also addressed the management of patients undergoing percutaneous coronary intervention (PCI), commonly known as angioplasty, a set of procedures in which a tiny balloon is inflated in a narrowed coronary artery to increase blood flow. A stent, a small metal tube, may be inserted into the artery to better maintain the flow.

New recommendations are made to ensure patients reach lifesaving therapy as soon as possible. The guidelines are developed to benefit patients and improve outcomes. One recommendation is for each community to develop a STEMI system for triage (a process for sorting injured or ill people according to treatment need) and transfer in accordance with AHA mission lifeline standards for evaluation and transfer. The system should also be based on the ACC Door-to-Balloon (D2B) campaign, which states that hospitals treating STEMI patients with emergency PCI should reliably achieve a door-to-balloon time of ninety minutes or less from hospital arrival to procedure. Minutes count. Time is muscle.

Guidelines call for community-wide plans to include protocols for identifying heart attack patients before they reach the hospital.

Ambulances, then, can be directed to facilities capable of quickly performing PCI to open the blocked coronary artery. Should a heart attack patient arrive at a hospital not equipped to perform a PCI, the plan must include arrangements for rapid transfer to a PCI center, wherever possible. If the patient in the non-PCI hospital setting cannot be transferred quickly, the plan's protocols encompass treatment with clot-busting drugs.

Another important change in the guidelines is the greater acceptance of stent insertion for the treatment of the left main coronary artery, a major branch of the heart's circulation. If the left main is blocked, blood supply to the most of the heart would be cut off. Up until now, coronary artery bypass surgery has been the treatment of choice. Recent studies have shown that in certain patients, stenting is safe and effective. Stenting can be considered as an option for certain patients when risks from the procedure are low or the risks of surgery are greater.



## Heart Attack Warning Signs (AHA)

### Chest discomfort

- Center of chest that lasts more than a few minutes
- Or goes away and comes back
- May feel like uncomfortable pressure
- Squeezing, fullness or pain

### Discomfort in other areas of the upper body

- Can include pain or discomfort in one or both arms, back, neck, jaw or stomach

### Shortness of breath

- May occur with or without chest discomfort

### Other signs may include

- Breaking out in a cold sweat
- Nausea
- Lightheadedness

Other recommendations reference new clot prevention medications or new uses for current drugs, types of drugs to be used to view the coronary arteries during PCI, removal of a coronary artery blood clot by suction prior to stent placement and more.

The ACC is a leader in the formulation of health policy, standards and guidelines and a supporter of cardiovascular research. The AHA funds cutting-edge research and conducts lifesaving public and professional education programs. The SCAI promotes excellence in invasive and interventional cardiovascular medicine. Each of these organizations enhances patient care.

February is a special month no doubt, not only devoted to Valentine's Day, but one in which people's attention turns to literal matters of the heart.

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