Overview
Cardiovascular disease is South Carolina’s leading killer of both men and women in all racial and ethnic groups. During 2005, 12,693 South Carolinians died from cardiovascular disease – more than the total number of people who died from all cancers, pneumonia, influenza, and car accidents combined. Heart disease accounted for 71,503 hospitalizations in South Carolina during 2005, with a total hospitalization cost of more than $2.5 billion\(^1\). ST-segment Elevation Myocardial Infarction (STEMI) is a common and especially severe type of heart attack which carries a substantial risk of death or disability. It is caused by a prolonged period of blocked blood supply that affects a large area of the heart. It is estimated that approximately 28% of all heart attacks are STEMI\(^2\).

Mission: Lifeline is the American Heart Association’s community-based national initiative to improve quality of care and outcomes in heart attack patients by improving the health care system’s readiness and response to STEMI patients. The goal is to reopen the blocked artery as soon as possible. The longer the heart muscle is deprived of blood flow the more it dies.

Our plan in Mission: Lifeline consists of early recognition by patients and bystanders of heart attack symptoms; early activation of 911 and Emergency Medical Services (EMS); training of EMS Personnel; ensuring EMS responders are equipped with 12 Lead ECGs (it takes a 12 Lead to identify a STEMI); identifying hospitals that have services available 24/7 to open the artery (cardiac catherization labs); and routing patients to these hospitals.

South Carolina Mission: Lifeline
South Carolina Mission: Lifeline is a collaborative partnership between the South Carolina Hospital Association, South Carolina Chapter of American College of Cardiology, American Heart Association, South Carolina Chapter of the College of Emergency Physicians, South Carolina Department of Health and Environmental Control Office of Emergency Medical Services, all 17 of the South Carolina hospitals that provide interventional cardiac services, and patient advocates.

The primary strategic aims for the South Carolina Mission: Lifeline program are to:

- Create a regionalized system for STEMI care in the Midlands, Pee Dee, Upstate and Low Country areas of the state
- Establish one call cath lab activation systems in each hospital providing interventional cardiology services

\(^1\) State of the Heart: Cardiovascular Disease in South Carolina; SC DHEC Office of Chronic Disease Epidemiology; October 2007.

\(^2\) Heart and Stroke Facts; American Heart Association, 2008 Update.
- Establish a unified statewide data management system for tracking and analyzing key acute cardiac care indicators
- Establish common clinical performance goals and standards
- Provide a system for active learning and knowledge sharing
- Implement a unified public relations/awareness campaign
- Provide jointly sponsored educational programs

The South Carolina Mission: Lifeline Steering Committee, chaired by Eric Powers, M.D., medical director of the interventional cardiology program at MUSC, meets quarterly to provide direction and oversight for this initiative. Three active work groups are assessing current assets and needs and developing strategies and best practice standards on regionalization, one call activation, and data collection/quality improvement. A stakeholders group, which includes approximately 75 members, meets via conference call every other month to share best practices, receive updates on Steering Committee and Work Group activities, and address questions on implementation of the statewide STEMI system of care.

**Timeline**

**FY 08 – 09**
- Establish Steering Committee and Work Groups
- Complete statewide assessments identifying resources and gaps for emergency medical services and hospitals
- Implement a unified statewide data base and quality improvement process in all 17 hospitals providing primary PCI (interventional cardiology services)
- Statewide training for physicians, nurses, hospital administrators, and emergency medical services providers through second annual educational conference featuring national STEMI experts
- Develop training plan to improve statewide emergency medical services ability to respond to STEMI calls and secure funding for implementation
- Identify and secure funding for regional implementation of the STEMI care system in all four regions of the state
- Develop statewide public awareness/social marketing campaign re: early recognition and timely treatment of heart attacks, including STEMI
- Develop and secure funding for a statewide community by-stander CPR training initiative

**FY 09 – 11**
- Maintain unified statewide data base and quality improvement process in all 17 hospitals providing primary PCI
- Statewide training for physicians, nurses, hospital administrators, and emergency medical services providers through third annual educational conference featuring national STEMI experts
- Implement training plan to improve statewide emergency medical services ability to respond to STEMI calls
- Continue statewide implementation of an integrated STEMI care system in all four regions of the state
- Implement public awareness/social marketing campaign
- Implement statewide community by-stander CPR initiative