**Systems of Care for ST-Elevation Myocardial Infarction:**

* A Report from the American Heart Association’s Mission: Lifeline®

The American Heart Association's program, Mission: Lifeline®, is an initiative to improve the quality of care and outcomes for STEMI patients and to improve the healthcare system readiness and response to STEMI. An important focus of Mission: Lifeline is to increase the number of patients with timely access to primary percutaneous coronary intervention (PCI). In the 2009 update of the ACC/AHA STEMI Guidelines a new Class I recommendation was added that "each community should develop a STEMI system of care."

This survey was April 2008 through January 2010, had 381 unique systems involving 899 PCI hospitals from 47 states, and describes the organizational characteristics of collaborative efforts by hospitals and EMS to provide timely reperfusion in the United States. "These Systems are setting the example for a national model," says Dr. Jamie Jollis, Professor of Medicine and Radiology, Duke University and practicing cardiologist who has organized regional emergency cardiac care systems at the regional and state level.

Respondents identified interventions likely to improve treatment times including direct activation of the catheterization laboratory by paramedics and emergency physicians, destination or hospital bypass protocols, inter-hospital transfer protocols, data collection using national data and timely feedback to healthcare providers involved in STEMI care.

More than ½ of systems reported the availability of 12-lead electrocardiograms (ECG) in their vehicles with 35% having the ability to transmit the ECG. The most common method of interpretation was transmission to a hospital 68%, paramedic interpretation 63% and computer interpretation 34%. As the incoming Vice Chair of the Advisory Working Group for Mission: Lifeline, Co-Chair of the ACTION Registry®-GWTG™ Registry, and Governor of the North Carolina Chapter of the American College of Cardiology, Dr. Jollis makes this important point, "decisions on treating STEMI occur well before they reach the hospital. We rely on nurses and paramedics to diagnose patients with STEMI and activate the healthcare team."

When the pre-hospital ECG findings were positive for STEMI 15% enabled EMTs to directly activate the cardiac catheterization laboratory. The study also identified common barriers to regional STEMI care with competition, EMS finances, and data collection being the predominant challenges. "Mission: Lifeline is uniquely positioned to bridge these gaps in care," states Jollis.
