

Basic RACE description:

RACE is an acronym for Reperfusion of Acute Myocardial Infarction in Carolina Emergency Departments. RACE is a grass roots quality assurance project that employs a multidisciplinary, collaborative healthcare approach to increase the rate and speed of coronary reperfusion for heart attack patients through systemic changes in emergency care. RACE focuses on a problematic public health issue faced in North Carolina (NC), timely access to definitive treatment for heart attack or more specifically, timely reperfusion therapy for all patients experiencing ST elevation myocardial infarction (STEMI).

There are integrated systems in place to care for trauma, where ever it occurs in the United States. Unfortunately, the same does not exist across the state for a life-threatening STEMI. In NC, a citizen is 3 times more likely to die from myocardial infarction than a motor vehicle accident. Evidenced based guidelines detail the best care for STEMI patients is rapidly administered reperfusion therapy. The best and safest reperfusion therapy is opening the blocked coronary artery up through an interventional procedure called primary percutaneous intervention (PCI) as soon as it is diagnosed. Only 14 of the 100 (101 with Cherokee Nation) NC counties have interventional capability. There are 20 primary PCI programs out of the 100 acute care hospitals in NC. There are also a few non-PCI centers that do cardiac catheterizations and elective PCI, but do not intervene on STEMI cases.

The recommendations of the RACE project are based upon established guidelines, published data, and the knowledge and experience of numerous individuals specializing acute myocardial infarction care. Unfortunately, the translation of guidelines to practice can be fraught with barriers. Reperfusion therapy is not offered as frequently or as speedily as it should be from NC non-interventional hospitals or Emergency Medical Services (EMS) agencies in counties without interventional hospitals. In fact, it takes minimally twice as long for non-interventional hospital STEMI patients to receive intervention as in hospitals with interventional capabilities. Thus, these patients have greater chance for death or larger heart muscle damage. This problem exists across the United States. North Carolina, through the RACE project, hopes to demonstrate a state model, emphasizing system changes in STEMI care – that will improve STEMI patient outcomes and may be modified to be adopted nationally.

Phase 1 or the pilot of RACE was conducted in Duke's referral system. Evidence of reductions in time to treatment and improved system integration was documented. With these results, Blue Cross Blue Shield of North Carolina Foundation granted Duke University 1 million dollars for RACE Phase 2. In Phase 2, five regions were formed with 68 participating hospitals. Great strides have been made in these regions to improve the system of care for the STEMI patient. The results will be made public in Washington, DC at a national meeting for Building STEMI Systems co-sponsored by the ACC, SAEM, and Duke University, June 1-2, 2007. Later this year, Phase 3 of RACE will introduce Phase 2 successes to the rest of the state of NC.