

HEART Pathway protocol improves diagnosis of patients with acute chest pain



New research demonstrates the effectiveness of a new accelerated diagnostic protocol ("HEART Pathway") in identifying emergency department patients with acute chest pain who can be safely sent home without being hospitalised or undergoing comprehensive cardiac testing.

The use of HEART Pathway protocol was associated with a six percent reduction in hospitalisations and significant decreases in the median length of hospital stay and use of stress testing and coronary angiograph compared to usual care, according to the research published online in the American Heart Association journal *Circulation: Cardiovascular Quality and Outcomes*.

Aside from showing the safety and efficacy of HEART Pathway as a diagnostic tool, the findings suggest "the protocol may provide a model for health systems to provide safe and high-value care to emergency room patients with chest pain at lower cost," said study lead author Simon A. Mahler, MD, associate professor of emergency medicine at Wake Forest Baptist Medical Center.

For the study, Dr. Mahler and co-researchers used electronic health record and insurance claims data from three hospital emergency departments in 8,474 adults with acute chest pain. Of these, 3,713 were cared for in a 12-month period before the HEART Pathway was implemented and 4,761 were cared for in a 12-month period after implementation. The study followed participants for 30 days after their initial ED visits.

The HEART Pathway identified 30.7 percent of the patients it was employed on as low-risk. Of these, just 0.4 percent suffered a heart attack or died from any cause within 30 days of the initial ED visit. It is estimated that these tests cost upwards of \$13 billion yearly, yet less than 10 percent of the patients are found to have acute coronary syndrome, an umbrella term for conditions brought on by sudden, reduced blood flow to the heart.

To determine an individual's risk of having a serious cardiac problem, the HEART Pathway protocol produces a numerical score based on four components – the patient's History, Electrocardiogram reading, Age and Risk factors (HEAR) and combines this score with two blood tests measuring the levels of troponin, a protein in blood released when the heart muscle is damaged, with the second test administered three hours after the first one.

"The HEART Pathway is a decision aid, not a substitute for clinical judgment," Dr. Mahler noted. "But we do have evidence that its use can both improve evaluation and reduce unnecessary testing, hospitalisation and expense."

Source: [Wake Forest Baptist Medical Center](#)

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