

Community education may shorten treatment time for heart attack patients

November 16 2010

Systematic education in rural and suburban communities can significantly shorten onset to hospital arrival times for patients with chest pain, according to study findings to be presented Nov. 16 at the 2010 annual American Heart Association (AHA) Scientific Sessions in Chicago.

Time to treatment is the key determinant of outcome in patients with acute heart attacks, or ST-elevation [myocardial infarction](#) (STEMI). Although the total time to reperfusion ([chest pain](#) onset to balloon) is critical, the major focus has been on decreasing door-to-balloon (D2B) times since the time from chest pain onset to hospital arrival is patient dependent, according to the study authors.

"While we've made tremendous strides in D2B times for [heart attack](#) patients once they arrive in the treating hospital, we have been less successful in reducing the time of chest pain onset to the arrival to the treating hospital," says principal investigator Timothy D. Henry, MD, an interventional cardiologist at the Minneapolis Heart Institute at Abbott Northwestern Hospital in Minneapolis. "Previous data indicate that these delays, which are often patient-related, are approximately two hours."

For the study, the researchers examined the effect of their regional Level 1 MI program, which uses a standardized protocol for percutaneous coronary intervention (PCI) in STEMI patients in 32 rural and community hospitals, to assess the components of total reperfusion time.

During the development of the regional STEMI program, healthcare professionals and physicians involved in [emergency medical services](#), emergency departments and rural and community hospitals received extensive training. Additionally, local community education focused on an increase community awareness of STEMI, as well as the involvement of the local community hospital in a regional STEMI system.

Henry and his colleagues at Minneapolis Heart Institute found that for the 1,193 patients in Zone One (0-60 miles from PCI center), the time of chest pain onset to presentation was 88 minutes; and for the 835 patients in Zone Two (60-210 miles from PCI hospital), the time of chest pain onset to presentation was 90 minutes—which is statistically significantly faster than the average of two hours.

Conversely, those patients who were in the immediate vicinity of the urban PCI center had a time of chest pain onset to presentation of 103 minutes.

The researchers hypothesized that "local community education in rural and community hospitals is the most likely reason for the significantly shorter chest pain onset to hospital arrival times in Zone One and Zone Two hospitals."

"While we can't conclusively assert that education efforts led to these faster treatment times, we can show that these patients in rural and suburban communities that received outreach education came to the hospital significantly faster than those in the city," Henry concludes.

Provided by Minneapolis Heart Institute Foundation

Citation: Community education may shorten treatment time for heart attack patients (2010, November 16) retrieved 2 May 2024 from <https://medicalxpress.com/news/2010-11-shorten->

[treatment-heart-patients.html](#)

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.