

# Gap found between patient knowledge and behavior when responding to cardiac symptoms

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(PhysOrg.com) -- Heart patients who receive specific instructions about how to respond to chest pain or heart attack symptoms still don't seek immediate care, according to a new study published in *Circulation: Cardiovascular Quality and Outcomes*.

In the PROMOTION study (Patient Response to Myocardial Infarction following a Teaching Intervention Offered by Nurses), researchers tested whether education about [chest pain](#) or a heart attack could lead patients at high risk for such conditions to summon emergency help more quickly. Patients who received education learned what symptoms to watch for and what to do if the symptoms occurred.

However, patients who later experienced such symptoms did not arrive at the hospital more quickly than patients who didn't receive the education.

"Unfortunately, it's an example once again of how knowledge doesn't translate into behavior change," said Kathleen Dracup, R.N., D.N.Sc., principal investigator of the study and dean of the School of Nursing at the University of California, San Francisco.

About 16.8 million Americans have [coronary heart disease](#). Patients with the condition are vulnerable to chest pain or heart attack caused by blockages preventing proper [blood flow](#) to the heart.

It's vital to call 9-1-1 as soon as cardiac symptoms arise to get immediate emergency care and reach a hospital with a catheterization lab equipped to clear the blockage. According to the American Heart Association, patients fare better when their blockage is cleared within 90 minutes of symptom onset, before the heart sustains significant damage.

The study included 3,522 heart disease patients in six cities in the United States, Australia and New Zealand. Patients in the experimental group received in-person education and a follow-up telephone call from a nurse, who addressed symptoms, actions to take to get care and the emotional and/or social factors that can delay seeking care. The control group received no additional education. Both groups were asked to report coronary events and were called every six months to check whether they had sought emergency cardiovascular care.

Among 3,087 patients followed for two years, 565 patients (305 who received education, 260 who did not) presented to the emergency department, which accounted for 842 hospital admissions for chest pain or heart attack. The study found no significant difference between the two groups in pre-hospital delays. The median time from symptom onset to hospital admission was 2.20 hours in the instructed group vs. 2.25 hours in the control group.

However, patients in the education group were more likely to call EMS if incidents occurred within six months after the initial education session. "The difference in the first six months suggests this is a behavior that is somewhat complex and requires constant reinforcement from the healthcare professionals," Dracup said.

Patients in the experimental group also were more likely to take aspirin when experiencing chest pain or [heart attack](#) symptoms. "Patients were willing to do something as simple and low-risk as taking an aspirin," Dracup said. "Calling 9-1-1 and having the ambulance come is a tougher

call for them.”

Alice Jacobs, M.D., past president of the American Heart Association and professor of medicine at Boston University School of Medicine, said the findings are disappointing because previous public awareness campaigns and community programs have also failed to increase the use of emergency medical services (EMS) or reduce patient delays in seeking medical aid.

Jacobs said patients have various reasons for hesitating to seek care: they may be afraid the incident will be an embarrassing false alarm; they may not want to “bother” care providers; or they may fear insurance won’t cover emergency care.

“This study again underscores the importance of ongoing research in this area targeted at finding what will change the behavior of patients and the public at high risk for coronary events,” Jacobs said.

Provided by American Heart Association ([news](#) : [web](#))

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