Simple educational initiative dramatically reduces pre-hospital delay for patients with heart attack / angina

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(Medical Xpress)—A new study, recently published in the leading international peer reviewed journal, The *Journal of Emergency Medicine*, has shown how a simple, individualised 40- minute educational session dramatically improved the amount of time it took patients who experienced symptoms of acute coronary syndrome (ACS) to present to the emergency department. Acute coronary syndrome includes heart attack and unstable angina.

The study by academics from the School of Nursing and Midwifery, Trinity College Dublin, took place over three years in five major Dublin hospitals. The study involved patients who were diagnosed with acute coronary syndrome and were then readmitted to an Emergency Department with unresolved ACS symptoms within the study period.

The patients who received the specially designed 40-minute educational session, on later re-admission presented much faster (within 1.7 hours) to a hospital Emergency Department, compared to those who didn't receive the educational intervention (within 7.1 hours).

This represents a 62% improvement among the patients who received the educational intervention, compared to the first time they presented with acute coronary syndrome. Conversely, and interestingly, for those who did not receive the intervention, it took them almost one third longer to get to the hospital Emergency Department, compared to their

first admission time.

Speaking about the significance of the study, which was funded by the Health Research Board, Assistant Professor and lecturer, Mary Mooney from the School of Nursing and Midwifery, Trinity College Dublin, said: "Individuals who survive acute coronary syndrome events are more likely to sustain further events in the future. Early hospitalisation is crucial to optimise diagnosis and management of these events. Patients who are experiencing a heart attack should receive life-saving medical treatment as quickly as possible, and ideally within one hour of symptom onset. An individualised educational intervention, such as the one given in this study, can significantly reduce pre-hospital delay time which can in turn reduce mortality and morbidity".

Speaking about patient delay, Ms Mooney said: "There are many reasons why patients delay going to the Emergency Department when they experience acute coronary syndrome symptoms. Through behavioural change and motivational techniques, the educational session helped the patients to focus on and deal with some of those reasons and develop an action plan for what they would do should they experience symptoms again. The educational intervention is short, focused and cost effective with clear benefits. It could be incorporated into usual care in the future."

This is the first randomised controlled trial to report a significant reduction in pre-hospital delay time among patients diagnosed with acute coronary syndrome and the first of its kind to measure pre-hospital delay times in the same patients prior to and after the intervention.

Common reasons why people may delay going straight to an emergency department when they have acute coronary syndrome symptoms:

- Not recognising the signs and symptoms of a heart attack. Many people assume that the symptoms are always like you see in Hollywood movies – clutching the chest and collapsing. However, sometimes the symptoms are subtle, slow onset, intermittent and atypical. This was demonstrated recently in another JEM article published by the same group of researchers who reported that 'slow-onset' heart attack symptoms directly contribute to delay in accessing emergency treatment and that 65% of patients in the study experienced 'slow-onset' ACS;
- Emotional responses to symptoms such as denial or fear;
- Misconceptions about the ability of a GP to treat a heart attack;
- Lack of knowledge about the importance of using an ambulance.

Things to remember if you have been diagnosed with Acute Coronary Syndrome:

- Acute coronary syndrome includes angina and a heart attack. Angina can be relieved by taking the prescribed medication. However, if it is unresolved after this, it needs attention and may reflect acute coronary syndrome.
- The symptoms of acute coronary syndrome can present in a range of ways and can vary between individuals. The symptoms that you experience on one occasion may differ from those experienced on another occasion. Some, but not all people will have typical symptoms of chest pain, pressure or tightness. There are many other symptoms for example, discomfort or heaviness in one or both arms, indigestion, nausea or pain between the shoulder blades.
- Early presentation at hospital can determine if the unresolved symptoms are indicative of an acute coronary syndrome event. This will facilitate early treatment can save heart muscle and prevent or reduce the complications of a heart attack.

- If you have unresolved acute coronary syndrome [symptoms](#): you should
- Stop and rest;
- Tell someone what is happening;
- Take prescribed nitrates, if available and;
- Phone 999 or 112 for an ambulance to take you to the [emergency department](#);
- Do not wait to phone or visit your GP.
- If in doubt, let the emergency department check it out!!

More information: The full study by Mooney et al. is available online: www.sciencedirect.com/science/ … ii/S0736467913011074

Provided by Trinity College Dublin