Testing a Decision Aid for Patients with Low-Risk Chest Pain in the Emergency Room – The Chest Pain Choice Trial

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What was the research about?
More than 8 million people go to the emergency room (ER) for chest pain every year in the United States. Even though the number of people having heart attacks has gone down in recent years, the number of people getting heart-imaging tests during ER visits after a doctor has said they didn’t have a heart attack is rising. Patients at low risk for having a heart attack in the near future may not need these tests.

The research team created a decision aid that gave patients information on their personal risk of having a heart attack. Decision aids help people choose between two or more healthcare options based on what is most important to them. This decision aid was a single printed page that showed patients their chest-pain diagnosis, their risk of having a heart attack in the near future, and their options for more tests. The patients talked with the doctors treating them in the ER about the information in the decision aid. The aim of the talks was to help patients and ER doctors decide together about whether patients would stay in the hospital for further tests or go home and wait to decide about further tests until they had an outpatient appointment with their doctor.

The research team wanted to see if the decision aid changed patients’ knowledge about their risk for having a heart attack in the near future, patients’ involvement in the decision about further heart testing, and the decisions they made. The team also looked at whether any patients had heart attacks or other severe heart problems during the 45 days after they visited the ER.

What were the results?
Compared with patients who didn’t use the decision aid, patients who used the decision aid
- Had more knowledge about their risk of heart attack
- Were more involved in making decisions in the ER
- Were less likely to decide with their doctors to stay in the ER
- Were less likely to decide to get more heart tests during the ER visit

No patients in the study died because of a heart attack or other severe heart problems.

Who was in the study?
The study included 898 patients at six hospitals in the United States. Patients in the study had gone to the ER for chest pain, but based on test results, had not had a heart attack. The average patient age was 50. About 60 percent of patients were white and 34 percent were black. About 60 percent of patients were female. Most had at least a high school diploma.
What did the research team do?
Doctors in the ER first confirmed that the patients had not had heart attacks and didn't have a history of heart disease. Then, the research team assigned patients by chance to one of two groups. Patients in the first group got the decision aid with their personal risk information included. ER doctors used the decision aid to talk to patients about their options for heart testing and make a decision with them. Patients in the second group didn't get a decision aid. ER doctors talked to these patients the way they usually talk to patients not in the study.

All patients took a survey at the end of their ER visits. The research team also made visual and audio recordings of more than half of the patients when they talked with their ER doctors. Forty-five days after patients left the ER, the research team asked them about the cardiac tests they had after their ER visit and whether they had a heart attack or other major heart problem since their ER visit.

What were the limits of the study?
The study included only patients who had chest pain. The research team didn't design the decision aid for patients at risk for heart problems who come to the ER because of other symptoms.

How can people use the results?
Hospitals can use a decision aid like the one in this study with ER patients who have chest pain but no heart attack diagnosis. The decision aid could help ER patients and doctors work together to make the best decision for each patient.

To learn more about this project, visit pcori.org/Hess048.