PROJECT INFORMATION

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Using Numbers in a Decision Aid to Describe Risks and Benefits of Colorectal Cancer Screening Options

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Organization

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What was the research about?

Decision aids help people choose between two or more healthcare options based on what is most important to them. Decision aids may include numbers to help show benefits and risks. Researchers don't know if using numbers makes decision aids more useful or more confusing.

In this study, the research team compared two decision aids that showed risks and benefits of two ways to screen for colorectal cancer, or CRC: colonoscopy or a test for blood in the stool. The team assigned patients by chance to use either a

- **Decision aid with numbers** to describe the risks and benefits of CRC screening. For example, "Four out of 1,000 people who have a colonoscopy will have to go to the hospital due to heavy bleeding."
- **Decision aid with words** instead of numbers to describe risks and benefits. For example, "Very rarely, people having a colonoscopy need to go to the hospital due to heavy bleeding."

What were the results?

Similar numbers of patients from each group, about 29 percent, got CRC screenings in the six months after they used the decision aids.

Compared with patients who viewed the decision aid that used words, more patients who viewed the decision aid with numbers

- Planned to get a stool blood test
- Felt they were at risk for getting CRC in their lifetimes
- Answered knowledge questions about CRC and screening correctly

The groups didn't differ in intent to get a colonoscopy, ratings of CRC screening benefits, worry about problems getting CRC screening, or conflict about their screening decisions. Patients' ability to use numbers didn't affect the results.

Comparing before and after viewing the decision aids, both groups said they were

- More likely to get some type of CRC screening
- More likely to get a stool blood test
- More convinced of the benefits of CRC screening
- Less worried about problems getting CRC screening
- Less conflicted about their decisions about whether to get screening

In both groups, patients' knowledge about CRC and screening increased.

Who was in the study?

The study included 688 patients ages 50–75 who were past due for CRC screening. Of these, 61 percent were white, 28 percent were black, 1 percent were Asian, and 10 percent were either multiple races, other races, or did not answer the question. The average age was 59, and 60 percent were women. Patients received care at clinics in two healthcare systems in the Indianapolis area.

What did the research team do?

The research team created the decision aids, which patients could view on a computer. The decision aids had slides with text, pictures, and audio. Patients used either the decision aid that used numbers or the one with words. Patients filled out a survey before and after viewing the decision aid. The team looked at

health records six months later to see how many patients had received CRC screening.

What were the limits of the study?

Patients lived in one midwestern state. Results may differ for patients in other areas.

Future research could compare decision aids that do and don't use numbers for other types of health problems and in other areas.

How can people use the results?

Decision aid designers can use the results of the study to help decide whether to use numbers when presenting information to patients.

To learn more about this project, visit www.pcori.org/Schwartz242.