3-in-1 Approach Helps Women in Rural Areas Get Cancer Screenings

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A new study has found an effective way to help women in rural towns get screened for cancer. But the study didn't zero in on just one kind of cancer screening. Instead, the researchers tried simultaneously boosting all of the cancer screenings women need—breast, cervical, and colorectal. And a randomized clinical trial of the approach showed that it worked.

Cancer screening tests like mammography and colonoscopy can help save lives. But rural residents face multiple challenges when it comes to screening. Many live hours away from places that offer screening tests, lack transportation to get to the appointment, or don't have insurance.

As a result, screening rates tend to be lower in rural communities than in urban settings. Yet, the need for screening in rural towns is also greater in some ways. For example, people in rural areas have higher rates of smoking and obesity, putting them at greater risk for many cancers.

In the trial, providing rural women with an interactive video of tailored messages about cancer screening plus a phone call with a patient navigator was the most effective way of getting them up to date on all three cancer screenings.

Results of the study, which included nearly 1,000 women living in rural parts of Indiana and Ohio, were published April 28 in JAMA Network Open.

"The basic message is: Health care providers can, and probably should, address all screenings needed at the same time," said study co-leader Victoria Champion, Ph.D., R.N., of Indiana University Melvin and Bren Simon Comprehensive Cancer Center.

"The idea of a one-stop-shop approach is really innovative," said Erica Breslau, Ph.D., M.P.H., of NCI's Healthcare Delivery Research Program. Dr. Breslau, who oversaw the study's funding but wasn't involved in the research, also said the study is the first clinical trial to try a 3-in-1 approach for cancer screening.

Tailored messaging and patient navigation

The idea for the trial grew out of a collaboration between Dr. Champion and study co-leader Electra Paskett, Ph.D., of the Ohio State University Comprehensive Cancer Center. Both scientists have worked in the fields of cancer prevention and community outreach for many years.

Dr. Paskett "had been using patient navigators for a long time. And I had been using tailored messaging delivered via various technologies," Dr. Champion said.

"Many of the barriers for one screening are similar to the ones for another [type of screening]. So, I said [to Dr. Paskett], 'hey, how about looking at every screening that women need?'" she recalled.

The study included 963 women, ages 50 to 74 , who were not up to date on at least one recommended screening. Each study participant was randomly assigned to one of three groups.

In one group, the women received the usual contact from their health care providers about missed cancer screenings—typically an automated email, text, or phone call reminder, Dr. Champion said.

The second group received an interactive video by mail. The video was provided as a DVD because in 2016, when the study started, many rural residents had limited internet access. The DVD prompts users to enter responses about their family history of cancer, knowledge of cancer and screening, and barriers to screening they have experienced. Based on those answers, the video provides tailored information about cancer screening.

For example, a message about embarrassment during colon cancer screening was delivered if the user responded that she put the screening off because she was self-conscious about the test.

The third group received the same interactive video followed by a phone call(s) with a patient navigator—a social worker who also lived in a rural area. The patient navigator asked about what was keeping the participants from getting screened and offered potential solutions.

Getting up to date on screening

A year after the study started, the researchers checked to see how many women in each group were up to date with screening.

Being up to date on screening was defined as having:

- a mammogram every other year (breast cancer screening)
- a Pap test every 3 years or a Pap test plus an HPV test every 5 years for women aged 21 to 65

years (cervical cancer screening)

- a FOBT or FIT test once a year or a colonoscopy every 10 years (colorectal cancer screening)

Compared with the usual care, the video alone and video plus patient navigator approaches increased the percentages of women who were up to date for all screenings or for any one of the screenings. But the video plus patient navigator approach was the most effective way of getting women up to date on screening, the researchers found.

Adding a patient navigator to the interactive video made it "a very powerful" approach, Dr. Breslau said. "Navigators are trained to guide individuals through the complex health care system, which is a major barrier for many [people]," she added.

"We think that giving women all of the information about the screenings they needed with an interactive DVD primed them to ask questions of the navigator," Dr. Champion said.

For example, the video contained information about FIT tests—an inexpensive, at-home colon cancer screening test. The patient navigators then answered follow-up questions about FIT and mailed a test to those who opted for it. Perhaps as a result, more women in the video plus patient navigator group than the other groups chose FIT over colonoscopy, Dr. Champion said.

Patient navigators are "really personalizing health care" and have "helped close the health equity gap on some marginalized communities," Dr. Breslau said. The downside is the time to train them and the cost of having them on staff at health care facilities, she added.

Although there may be substantial costs for patient navigators and tailored DVDs, Dr. Champion said, the results are worth it.

"I would love to see our health care system giving importance to this type of [cancer prevention], the same way they do to finding [new cancer treatments]," she emphasized.

Thinking about new technologies

A caveat of the study is that most of the participants were White, had a college or higher degree, and had health insurance. So, it's unclear whether interactive video and phone-based navigation would also work for non-White, less educated, and uninsured women, the researchers noted.

Dr. Breslau considered another potential barrier: Will primary care physicians use this video and patient navigation approach? "That's the big question for me. Screening recommendations come from primary care physicians," she said.

An additional limitation, Dr. Champion noted, is that the interactive video will be outdated as screening recommendations and options change. "We have to think creatively about what [technologies] could pivot quickly depending on how screening guidelines change," she said, such

as posting the video online or on a smartphone app.

DVD players are also quickly becoming obsolete, Dr. Breslau noted. “The fact that the last Netflix red envelope will be shipped later this year says where we are with technology,” she said.

In addition to new technologies, Dr. Champion and her colleagues are further exploring the use of at-home cancer screening tests. In a new NCI-funded study, the researchers are using mailed FIT tests and patient navigation to try to improve colon cancer screening in rural Indiana.

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