New smartphone application improves colonoscopy preparation

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The use of a smartphone application significantly improves patients' preparation for a colonoscopy, according to new research presented today at Digestive Disease Week (DDW). The preparation process, which begins days in advance of the procedure, includes dietary restrictions and requires specific bowel preparation medication to be taken at strict intervals. The better the preparation, the easier it is for doctors to see cancer and precancerous polyps in the colon. The study, which was conducted by the gastroenterologists of Arizona Digestive Health in Phoenix, featured the first doctor-designed app of its kind.

"Getting ready for a colonoscopy is difficult. There are a lot of steps," said Nilay Kavathia, MD, a gastroenterology fellow at Phoenix VA, who is one of the application's developers. "For patients, having an interactive, simplified and personalized app on their phone is like having a doctor at their side throughout the process."

In the study comparing the quality of bowel preparation by patients who used the app and those who did not, Dr. Kavathia found that 84 percent of individuals who used the app received a good score on the nine-point Boston Bowel Preparation Scale. By contrast, only 56 percent of those who didn't use the app received a good score. The results, which correspond with health technology trends, show how advances in smartphones are helping physicians achieve better patient outcomes.

To help increase quality bowel preparation, Dr. Kavathia worked with Dr. Paul Berggreen, the president of Arizona Digestive Health, to develop the "Arizona Digestive Health" app. Patients enter the date and time of the procedure and the bowel preparation medication chosen by their physician. Timed alerts then appear on the phone to remind the individual of the next step in bowel preparation. In addition to the alerts, the app offers information explaining the procedure, tips and pictures of preparation quality.

Dr. Kavathia would like to build upon his findings by studying individual outcomes of patients who use an app to get ready for a colonoscopy. "We know that better prep means a better colonoscopy," he said, "and now we know that this app improves prep. This finding has huge implications for treatment, patient satisfaction and further research in how the use of technology can impact healthy outcomes."

A colonoscopy serves as a screening test for colorectal cancer and allows a doctor to look for polyps, or precancerous growths, in the colon and rectum. When men and women are considered together, colorectal cancer is the second leading cause of cancer-related deaths in the U.S. and the third most common cancer for both sexes. Colonoscopies for average risk patients are recommended beginning at age 50.

The success of a colonoscopy depends greatly on the quality of bowel preparation by the patient. Inadequate preparation can force cancellation of an exam or can result in a compromised exam in which polyps go undetected, an increase in procedure time and more frequent surveillance.

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