Short training course significantly improves detection of precancerous polyps

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Just two extra hours of focused training significantly increased the ability of physicians to find potentially precancerous polyps, known as adenomas, in the colon, according to researchers at Mayo Clinic in Florida. These findings suggest that new methods to educate endoscopists, the physicians who examine the colon, could increase colorectal cancer detection rates and potentially reduce cancer deaths. Results of the study were presented at the annual meeting of the American College of Gastroenterology in Washington, D.C.

"Colorectal cancer screening, which has been proven to save many lives, is steadily improving due to better detection of precancerous polyps, but this study shows us that more can be done," says first author Susan Coe, M.D., who is in her third year of training as an endoscopist.

The prototype training course was developed by physicians at Mayo Clinic in Florida and evaluated in a randomized clinical study at the institution. Endoscopists at Mayo Clinic in Florida already have an adenoma detection rate that is higher than the national average. But the extra training examined in this study significantly increased that rate. National guidelines suggest that, on average, physicians should be detecting precancerous polyps in 25 percent of men and women who are examined. The detection rate at Mayo Clinic before training was 36 percent, and after training increased to 47 percent.

"Like other screening tests, there is always room for improvement, and that is particularly true in colonoscopy in the detection of very small or hard-to-see polyps," says the study's senior investigator, Michael Wallace, M.D., M.P.H., chief of the Division of Gastroenterology and Hepatology at Mayo Clinic in Florida. "In this study we were able to develop new educational methods based on the latest information on characteristics of challenging polyps that are often difficult to see."

The researchers established a clinical trial, the Endoscopic Quality Improve Program (EQUIP), to test the two one-hour training sessions they developed. To create that program, the researchers surveyed the medical literature, as well as videos and detection techniques, to find certain techniques that appear to improve polyp detection rates. Those techniques included cleaning the colon adequately, and looking behind the folds in the colon to find hard-to-detect polyps, such as those that are flat or serrated.

The study was conducted in two phases. In the first phase, 15 Mayo Clinic endoscopists completed 1,200 colonoscopies, and their adenoma detection rate was calculated. Then a group of endoscopists were randomly selected to undergo the training, and the second phase measured the effect of this training. Those who did not receive the training sessions had a detection rate of 35 percent in the second phase of the study, compared to 47 percent in physicians who attended the courses. That new rate was "one of the highest ever reported for a large group of endoscopists," Dr. Wallace says.

"It isn't that endoscopists aren't being continually trained. They are, through continuing medical education courses and quality improvement initiatives," Dr. Coe says. "The issue is that these training methods may not be focusing enough attention on the best methods to find adenomas."

The researchers plan to validate their findings in a widespread clinical trial that includes the community physicians who perform the majority of colonoscopies. "The most rigorous way to prove that something works is a randomized controlled trial comparing the current standard of care with the extra educational efforts, as was done in this trial," says Dr. Wallace. "While we all speculated that the education would help, now we know that it does, and we can use that information to make even further improvements and apply this more broadly."

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