

## Follow-up Mailings Increase Rates of Recommended Colonoscopy

Denberg TD, Coombes JM, Byers TE, et al. Effect of a mailed brochure on appointment-keeping for screening colonoscopy: a randomized trial. *Ann Intern Med* 2006;145:895–900.

### Study Overview

**Objective.** To assess the ability of a follow-up mailed brochure to increase rates of screening colonoscopy following initial referral by a primary care physician.

**Design.** Randomized controlled trial.

**Setting and participants.** 781 patients aged  $\geq 50$  years referred for a screening colonoscopy from 2 general internal medicine practices associated with a university hospital.

**Intervention.** A 2-sided color brochure that included the patient's primary care physician's name was sent to patients within 10 days of referral for screening colonoscopy. The brochure informed patients of the risk of colorectal cancer and the benefits of screening as well as the risks associated with undergoing colonoscopy (ie, perforation) and alternative methods of screening, including fecal occult blood testing and flexible sigmoidoscopy. Patients were randomly assigned to usual care or usual care plus the mailed brochure.

**Main outcome measure.** Rate of adherence to screening colonoscopy.

**Main results.** Patients who received a brochure completed screening colonoscopy at a higher rate compared with patients who received usual care (70.7% versus 59%;  $P = 0.001$ ). After adjusting for patient sociodemographic characteristics, multivariate analyses indicated that patients aged  $\geq 65$  years were more likely than younger patients to complete colonoscopy (odds ratio [OR], 1.18 [95% confidence interval {CI}, 1.04–1.34]), and patients with Medicaid or other low-income insurance coverage were less likely than those with Medicare coverage to complete colonoscopy regardless of having received the brochure (OR, 0.40 [95% CI, 0.21–0.75]).

**Conclusion.** A mailed brochure significantly increased the rate of screening colonoscopy in these primary care practices.

### Commentary

Colorectal cancer is currently the second leading cause of

cancer death, resulting in more than 50,000 deaths each year [1]. For adults aged 50 years and older who are at average risk for colorectal cancer, current national guidelines recommend routine screening with a variety of tests, including fecal occult blood testing, flexible sigmoidoscopy, or colonoscopy [2]. Despite the demonstrated effectiveness of these strategies, the rate of colorectal screening is only 57% nationwide [3].

Many recent interventions designed to increase rates of colorectal cancer screening have exhibited limited effectiveness. Denberg and colleagues provide a relatively straightforward solution to increasing rates of screening colonoscopy among referred patients. Patients in the intervention arm were 20% more likely than those in the usual care arm to complete a recommended colonoscopy. The success of the intervention was likely due in part to the timely delivery of the follow-up brochure and to the careful attention paid to the design of the brochure, including its personalized nature. An additional benefit of this intervention was that it was inexpensive. The authors estimated the cost of each mailing at \$1, translating into a cost of only approximately \$10 for each additional completed colonoscopy.

While this study provides important clues as to how to improve colonoscopy rates, it is subject to some limitations. Patients referred for colonoscopy represent only a subset of age-eligible patients who should receive colorectal screening, and therefore this intervention represents only 1 piece of an overall strategy to increase screening rates. Indeed, the fact that patients were referred for colonoscopy suggests that a significant barrier to screening was already overcome, specifically, the lack of a provider's recommendation [4]. Out-of-pocket expense was another potential barrier to completion of colonoscopy, as those with insurance coverage with potentially higher copays were less likely to adhere to the recommended procedure. Solutions to barriers to screening will likely be more complex than the follow-up mailing described in this study.

### Applications for Clinical Practice

Follow-up mailings increase the rate of adherence to recommended screening colonoscopy. This strategy could be integrated into the routine workflow of many primary care clinics at a reasonable expense. However, health systems

should recognize that several additional barriers will need to be addressed in order to increase colorectal cancer screening among the entire eligible population.

—Review by Thomas D. Sequist, MD, MPH

### References

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