

A personalized mailed brochure was cost-effective for promoting colonoscopy in asymptomatic patients referred for screening

Shankaran V, McKoy JM, Dandade N, et al. Costs and cost-effectiveness of a low-intensity patient-directed intervention to promote colorectal cancer screening. *J Clin Oncol.* 2007;25:5248-53.

Clinical impact ratings: GIM/FP/GP ★★★★★☆ Gastroenterology ★★★★★☆☆

QUESTION

In patients at average risk for colorectal cancer (CRC) who are referred for colonoscopy, what is the incremental cost-effectiveness of a personalized mailed brochure to promote CRC screening?

METHODS

Design: Randomized controlled trial with 4-month follow-up and cost-effectiveness analysis.

Setting: 2 general medicine clinics in a university hospital in Denver, Colorado, USA.

Patients: 781 asymptomatic patients \geq 50 years of age (77% were 50 to 64 y and 23% were \geq 65 y; 62% women) who were at average risk for CRC and had been referred by their primary care physician for screening colonoscopy. Follow-up was 100%.

Intervention: Personalized brochure (consisting of simplified drawings of colonoscopy, text at an eighth-grade level describing CRC risk and the benefits and possible harms of colonoscopy screening, and a statement encouraging patients to schedule a colon-

oscopy or contact their physician for further information) mailed to patients within 10 days of referral ($n = 386$) or usual care ($n = 395$).

Outcomes: Colonoscopy screening rates and costs in US dollars (including staff costs to identify appropriate patients and prepare the brochures, costs of the brochures, and postage).

MAIN RESULTS

The colonoscopy screening rate was 71% in the intervention group and 59% in the usual care group (relative benefit increase 20%, 95% CI 8 to 33). The cost of the mailed brochure intervention was \$5.00/patient,

with the cost of usual care considered to be \$0. The incremental cost-effectiveness ratio (cost per additional patient screened) was \$43 (Table).

CONCLUSION

In patients at average risk for colorectal cancer who are referred for colonoscopy, the cost of a personalized mailed brochure to promote screening was \$43 per additional patient screened.

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Cost-effectiveness of a personalized mailed brochure vs usual care to promote colorectal cancer screening by colonoscopy in asymptomatic patients at average risk

Incremental screening rate (95% CI)	Incremental cost/patient (US\$) (\pm 10%)	Incremental cost/patient screened (US\$) (\pm 10%)
12% (5 to 18)	\$5.00 (\$4.50 to \$5.50)	\$43 (\$38 to \$47)

COMMENTARY

Colorectal cancer screening rates lag behind those for breast and cervical cancer, but high rates are possible in ordinary settings when practices make this a priority. Elements of an effective screening program include physician recommendation and such practice changes as reminders for doctors and patients, periodic visits for prevention only, participation of office staff, and separate clinics for prevention (1). Providing information and sharing decision making may be desirable but are not clearly related to screening rates.

Shankaran and colleagues reported a substantial increase in colonoscopy rates, at what seems like a low cost, after mailing patients a personalized reminder plus educational material. But the increase applies to just a small segment of the overall sequence of tasks required for successful screening. Patients had already identified the need, chosen a test, made a verbal commitment to be screened (at least in principle, during an office visit), and been referred for screening. All that remained was for them to schedule the colonoscopy appointment, as promised, and show up.

The usual metric for cost-effectiveness, reflecting the long-term goal of preventing cases of cancer and saving lives, is cost per year of life saved, not cost per additional test. So the \$43 per additional colonoscopy cannot be compared with the usual benchmark (in the United States) of \$50 000 per year of life saved, and it is difficult to know whether \$43 is a reasonable cost. In any case, as the authors pointed out, the financial consequences of the intervention depend on the setting. From society's perspective, money is spent to save lives. But from the practice's perspective, with fee-for-service payment, investment in an effective reminder might be more than repaid in the income from additional colonoscopies.

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Reference

1. Stone EG, Morton SC, Hulscher ME, et al. Interventions that increase use of adult immunization and cancer screening services: a meta-analysis. *Ann Intern Med.* 2002;136:641-51.