

# Intensive Patient Education Improves Colorectal Cancer Screening Rates

Stokamer CL, Tenner CT, Chaudhuri J, et al. Randomized controlled trial of the impact of intensive patient education on compliance with fecal occult blood testing. *J Gen Intern Med* 2005;20:278–82.

## Study Overview

**Objective.** To determine the effect of intensive patient education on rates of colorectal cancer screening using fecal occult blood testing (FOBT).

**Design.** Randomized controlled trial.

**Setting and participants.** Patients were recruited from primary care clinics at a single Veterans Affairs hospital in New York City. Patients were eligible if they were aged 50 years or older, had a FOBT ordered by their health care provider, and had a referral to primary care nursing for patient education and distribution of FOBT kits. Patients were excluded if they were hospitalized at the time of study enrollment or refused to participate.

**Intervention.** Participants were randomized to either an intensive educational intervention or standard patient education. The intensive education group received 10 to 15 minutes of one-on-one counseling on the importance of colorectal cancer screening, a 2-page informational handout on colorectal cancer screening specifically designed for the study, and an FOBT kit. The standard education group received an FOBT kit and the manufacturer's instructions on how to perform the test. Neither group received follow-up reminders.

**Main outcome measures.** The primary outcome was the proportion of FOBT cards returned within 6 months. Secondary outcomes included the amount of time nurses spent on FOBT teaching, number of telephone calls from patients who had additional questions regarding the FOBT kits, median time to return the FOBT cards, cost per FOBT card returned, and frequency of positive FOBT results.

**Main results.** 788 patients were randomly allocated to intensive ( $n = 396$ ) or standard ( $n = 392$ ) education. Baseline characteristics of the groups were similar. Within the 6-month follow-up period, a significantly higher proportion of intensive education group patients returned the FOBT cards compared with the standard education group (65.9% versus 51.3%;  $P < 0.001$ ). On average, nurses spent an additional 4.6 minutes (95% confi-

dence interval, 4.0–5.2) educating intensive education participants compared with the standard education group. Intensive group patients were less likely to call the clinic with additional questions regarding FOBT compared with the standard group (1.5% versus 5.9%;  $P = 0.001$ ). The median time to return FOBT cards was shorter in the intensive group than in the standard group (36 versus 143 days;  $P < 0.001$ ). The mean cost per FOBT card returned was \$5.67, resulting in a slightly higher cost in the intensive education group compared with the standard group (\$23.41 versus \$17.74). There was no difference in the proportion of patients with a positive test between the 2 groups.

**Conclusion.** A simple, one-time intensive patient education session improved compliance with colorectal cancer screening using FOBT cards.

## Commentary

Colorectal cancer is the second most common cause of cancer-related death in the United States [1]. This statistic is made additionally discouraging because effective screening interventions exist that can reduce mortality associated with colorectal cancer [2]. For average-risk individuals, screening for colorectal cancer through home-based FOBT remains a proven and recommended strategy [3]. Unfortunately, screening rates remain low in the United States, with less than half of the target population having ever been screened and less than a fourth being up-to-date with screening [4]. Interventions that can increase colorectal cancer screening rates in a cost-effective manner are urgently needed. A significant barrier to colorectal cancer screening is believed to be related to patient knowledge; thus, educational interventions appear to be a promising approach.

Stokamer and colleagues have conducted a well-designed trial of an intensive educational intervention to increase patient compliance with colorectal cancer screening using FOBT cards. One appealing aspect of this trial is the simplicity of the educational intervention. Nurse educators spent only an additional 4.6 minutes per patient during a single encounter. As the intervention did not involve patient reminders, many logistical hurdles were avoided. The authors do present a very basic cost analysis, which demonstrated that the cost per

FOBT card returned was increased by a little less than \$6 in the intensive education group. This amount could potentially be an overstatement, as it is unclear whether the time spent with follow-up phone conversations was included in the cost analysis (the control group had significantly more follow-up calls).

Of note, the clinics involved in the study had 12 nurse educators who were already established at distributing FOBT cards and who typically spent about 8 minutes with patients at baseline going over FOBT kit instructions. In many practices, FOBT kits are given out during a patient encounter by the patient's primary care provider, and formal instructions may not be provided. Physicians practicing in clinics without access to nurse educators are unlikely to have the time to spend an additional 13 minutes with patients specifically discussing FOBT. As such, the study indirectly argues for a more established role of nurse educators in primary care.

### **Applications for Clinical Practice**

Intensive patient education regarding colorectal cancer

screening improved patient compliance with FOBT. This simple, one-time educational intervention only increased clinic costs by \$5.67 per card returned. These results may be harder to replicate in primary care clinics that do not already utilize nurses for patient education.

*—Review by Harvey J. Murff, MD, MPH*

### **References**

1. American Cancer Society. Cancer facts and figures 2003. Atlanta: American Cancer Society; 2003.
2. Winawer SJ, Zauber AG, Ho MN, et al. Prevention of colorectal cancer by colonoscopic polypectomy. The National Polyp Study Workgroup. *N Engl J Med* 1993;329:1977–81.
3. Winawer S, Fletcher R, Rex D, et al. Colorectal cancer screening and surveillance: clinical guidelines and rationale—update based on new evidence. *Gastroenterology* 2003;124:544–60.
4. Colorectal cancer test use among persons aged > or = 50 years—United States, 2001. *MMWR Morb Mortal Wkly Rep* 2003;52:193–6.

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