

Patient Preferences for Colon Cancer Screening: The Role of Out-of-Pocket Costs

Michael Pignone, MD, MPH

In this issue of *The American Journal of Managed Care*, Schroy and colleagues¹ present the results of a survey of informed patient preferences for colon cancer screening. After administering an updated version of their previously tested decision aid, they found that 51% of patients preferred screening colonoscopy; the next most frequent first choices were stool DNA testing (28%) and conventional guaiac-based fecal occult blood test (FOBT) (18%). Two newer technologies, computed tomographic colonography and fecal immunochemical testing, were not evaluated.

Among patients who preferred colonoscopy, test accuracy was rated as the most influential test feature; those who preferred stool testing were more likely to rate concerns about discomfort or frequency of testing as most important. Notably, participants were asked to state their preference under the assumption that the different tests were all available without any out-of-pocket costs. When participants were asked if they would change their decision if they had to pay out-of-pocket costs, few changed their preferences, but the magnitude of the out-of-pocket costs was not provided to participants.

Several other studies²⁻⁷ have examined informed patients' preferences for colorectal cancer (CRC) screening (Table) and found that no single form of screening is clearly predominant. In general, the most popular form of screening is the one that is perceived to be the most effective in identifying cancer or polyps and in reducing CRC incidence and mortality.

The issue of whether (and how) information about test costs should be presented in decision aids about CRC screening or in other health decisions is an important one. In 1999, my coworkers and I published the results of an experiment in which informed patients were asked their preferences regarding FOBT, flexible sigmoidoscopy, and the combination of both tests, and we found that patient preferences were significantly different with versus without costs (\$10 for FOBT and \$150 for flexible sigmoidoscopy) included.³ More recently, other colleagues and I performed a laboratory-based experiment using an expanded set of CRC screening options; when we provided information about 2 tests (\$10 for FOBT and \$200 for colonoscopy), we found that

patient preferences differed considerably depending on whether or not out-of-pocket test costs were included (68% chose colonoscopy with no copayment vs 41% with a copayment).⁷ However, when respondents were given 5 testing options (\$50 for adding flexible sigmoidoscopy and \$50 for barium enema, as well as the combination of FOBT and flexible sigmoidoscopy), there was little or no difference in preferences by out-of-pocket costs (46% chose colonoscopy with no copayment vs 42% with a copayment), suggesting that the number of options influences the processing of information such as out-of-pocket costs.

Most of the other studies that have examined patient preferences for CRC screening have not directly addressed the effect of different levels of out-of-pocket costs or copayments. Leard and colleagues² provided 100 patients with an oral scripted presentation of information about 4 testing options plus the option of no screening. Unit costs were 1 of 14 attributes considered (\$5-\$10 for FOBT, \$80-\$135 for flexible sigmoidoscopy, \$285-\$500 for colonoscopy, and \$131-\$200 for barium enema). They found that FOBT (31%) and colonoscopy (38%) were the most frequently preferred options. They noted in the discussion that "cost was not a significant factor in the patients' preferences" but did not present data supporting this assertion, and they did not assess preferences with versus without costs.^{2(p217)}

The magnitude of out-of-pocket costs may also influence preferences or interest in screening. To date, I am aware of no study that has examined the effect of more than 2 levels of out-of-pocket costs or copayments for a single CRC test. This area should be the subject of future research. Another important topic for further research is whether information about costs should be framed as the total cost of the procedure or the amount the patient has to pay out of pocket. Although total costs may be more relevant to societal decisions, I believe that out-of-pocket costs are more salient for the individual patient. Practically, it may be difficult for providers or decision aid developers to determine specific out-of-pocket costs for individual patients, which limits the feasibility

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■ **Table.** Colorectal Cancer Screening Preference Studies*

Source	No. of Subjects	Out-of-Pocket Costs Included	% Choosing						
			FOBT	Flexible Sigmoidoscopy	Barium Enema	Colonoscopy	FOBT Plus Flexible Sigmoidoscopy	No Screening	
Leard et al, ² 1997	100	Yes	31	13	14	38	—	4	
Pignone et al, ³ 1999	146	No	36	12	—	—	47	3	
		Yes	53	8	—	—	31	5	
Ling et al, ⁴ 2001	217	No	43	2	3	40	12	—	
Dolan and Frisina, ⁵ 2002	Intervention	45	No	51	13	2	2	13	18
	Control	43	No	39	5	0	0	18	37
Wolf et al, ⁶ 2006	216	No	90	—	—	6	—	—	
Griffith et al, ⁷ 2006	5 Options	25	No	21	4	4	46	21	4
		Yes	17	8	8	42	21	4	
	2 Options	37	No	32	—	—	68	—	0
		Yes	54	—	—	41	—	5	
Schroy et al, ¹ 2007 [†]	263	No	18	1	0.4	52	28	—	

*FOBT indicates fecal occult blood test.
[†]Found that 28% preferred stool DNA testing.
 Totals may not add to 100% due to rounding or nonresponse.

of providing such information, except perhaps in the traditional Medicare system. Health plans that wish to promote screening should consider reducing the variation in copayment levels across their policies. Payers may also consider reducing copayment levels if they plan to promote screening.⁸

Author Affiliation: From the Department of Internal Medicine and Cecil Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

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Address Correspondence to: Michael Pignone, MD, MPH, Department of Internal Medicine and Cecil Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, 5039 Old Clinic Bldg, UNC Hospital, Chapel Hill, NC 27599-7110. E-mail: pignone@med.unc.edu.

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