Preferences for Colorectal Screening Tests Among a Previously Unscreened Population

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INTRODUCTION

- Early detection of colorectal cancer (CRC) is critical, as 90% of patients diagnosed with localized disease survive five years compared to 13% of patients with metastatic disease.[1]
- CRC screening is endorsed by most authoritative bodies, with the USPSTF currently recommending screening for individuals aged 50-75 who are at average risk of CRC.[2]
- CRC screening rates in the US remain low relative to other cancer screening rates; just 65% of individuals indicated for CRC screening are up-to-date with screening recommendations.[3]
- While multiple tests are available for CRC screening, including noninvasive options, the vast majority of individuals screened undergo a colonoscopy.[3]
- The joint FDA approval and CMS Medicare coverage of a stool DNA test for CRC screening raises the question of screening test preferences and the potential for alternative test options to increase the likelihood that individuals will undergo screening.

OBJECTIVES

- In light of the approval of a new stool-based CRC screening test, this study sought to understand patient preferences for CRC screening tests in a previously unscreened population and the impact of multiple test options on CRC screening rates.

METHODS

- A web-based survey was developed for persons aged 50-75 in the US who were at average risk of CRC, but naïve to screening.
- Online survey data was obtained for 675 patients in May 2015 and analyzed in June 2015.
- The online questionnaire consisted of four main sets of questions:
  1. Eligibility and demographic information;
  2. Respondents' existing perspectives on CRC screening to determine their knowledge of CRC screening tests and baseline intent-to-screen in the next year using a 5-point Likert-type scale (1=definitely not, 3=maybe, 5=definitely);
  3. An educational decision aid introducing five CRC test profiles (colonoscopy, flexible sigmoidoscopy (FS), guaiac-based fecal occult blood testing (gFOBT), fecal immunochemical testing (FIT), and stool DNA testing), and;
  4. Respondents' updated perspectives on CRC screening after viewing the profiles to elicit their preferred screening option and their intent to undergo CRC screening in the next year. Respondents were first asked this series of questions with the availability and recommendation of four test options (colonoscopy, FS, gFOBT, and FIT), then with the availability and recommendation of all five test options.
- Data was compared using GraphPad Prism 6 (GraphPad, La Jolla, CA). The mean (SD) intent-to-screen scores were calculated and compared pairwise through nonparametric rank. The percentage preferring each screening option was compared using a chi-square goodness-of-fit test for equal percentages.

RESULTS

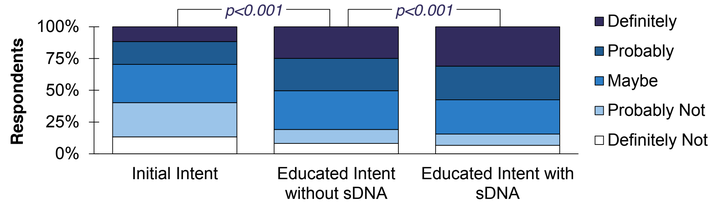
Table 1: Surveyed Respondent Demographics

		No.	%
Age, y	50-59	160	24
	60-69	337	50
	70-74	178	26
Sex	Male	351	52
	Female	324	48
Race/ Ethnicity	White/Caucasian	200	30
	Black/African American	144	21
	Asian/Asian American	191	28
	Hispanic/Latin American	131	19
	Other	9	1
Region	Northeast	94	14
	Midwest	153	23
	South	205	30
	West	223	33
Education	No HS diploma/GED	14	2
	HS diploma/GED	61	9
	Some college	137	20
	Associate's degree	68	10
	Bachelor's degree	229	34
	Graduate degree	166	25
Income	Less than $25,000	89	13
	$25,001-$50,000	139	21
	$50,001-$75,000	144	21
	$75,001-$100,000	129	19
	Greater than $100,000	174	26
Employment	Full time	302	45
	Part time	89	13
	Retired or not employed	284	42

Table 2: Respondent CRC Test Awareness

	No.	%
Colonoscopy	454	67
gFOBT	115	17
sDNA	96	14
FS	81	12
FIT	41	6
Not aware of any test options	199	29

Figure 1: Impact of Education and sDNA on Patient Intent-To-Screen

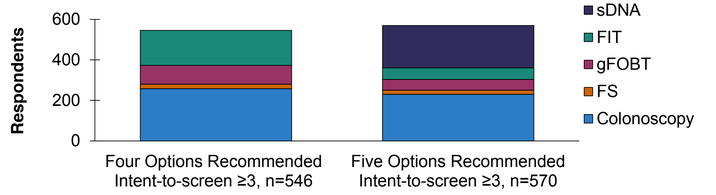


Mean (SD) Score*	2.88 (1.20)	3.48 (1.21)	3.66 (1.19)

* In the survey, options were 1 = Definitely Not, 2 = Probably Not, 3 = Maybe, 4 = Probably, and 5 = Definitely.

- Respondents' average baseline intent-to-screen prior to viewing the test profiles was 2.88 (+/- 1.20) on the 5-point Likert-type scale.
- Lack of education about screening recommendations and limited awareness of alternative test options were identified as the primary factors deterring patients from CRC screening.
  - 43% of patients were aware of only one test prior to viewing the test profiles, 15% were aware of two tests, and 13% were aware of three or more tests while 29% were not aware of any CRC screening tests
- After viewing the test profiles, respondents' updated intent-to-screen in the next year increased from 2.88 (+/- 1.20) to 3.48 (+/- 1.21) (p<0.001) with the availability of four test options (colonoscopy, FS, gFOBT, and FIT). With the choice of all five test options, the average increased from 3.48 to 3.66 (+/-1.19) (p<0.001).
- Among the 84% of respondents that selected 3 ('maybe') or higher, 40% would choose to receive colonoscopy and 36% would choose the new stool DNA test. Few respondents indicated they would choose FIT (10%), gFOBT (9%), or FS (4%).
- The observed differences between colonoscopy and sDNA were not significant (p>0.05); the difference between colonoscopy and sDNA compared to the other three tests was significant (p<0.001).

Figure 2: Patient CRC Screening Test Preferences



CONCLUSIONS

- Given that many patients are non-compliant with screening recommendations, this study sought to understand the impact of sDNA on screening compliance.
- Non-invasive, stool-based CRC screening test options are preferred by more than 50% of previously unscreened individuals.
- Introducing sDNA as a test option and eliciting patient preferences about screening test features can potentially increase the likelihood that patients currently non-compliant with screening recommendations will get screened.
- These findings affirm the need to educate patients on the importance of CRC screening and to provide alternate test options to patients.

REFERENCES

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4 Food and Drug Administration. "Recently-Approved Devices" Accessed 2015 Sept 1. URL: http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/DeviceApprovalsandClearances/Recently-ApprovedDevices/default.htm

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