

Improving Colorectal Cancer Screening at an Employer-Sponsored Health Plan During the COVID-19 Pandemic



KEY WORDS: FIT; colorectal cancer; COVID-19.

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INTRODUCTION

As the COVID-19 pandemic increased in intensity, many United States medical centers halted non-urgent and elective medical procedures¹, including colorectal cancer (CRC) screenings² which already have poor screening rates prior to the pandemic.³ Recent US studies have shown the effectiveness of using mailed fecal immunochemical tests (FITs) programs to increase CRC screening rates.^{4, 5} Given the limited resources during the pandemic and low CRC screening, our academic medical center launched a CRC screening initiative, and we report on the results of this initiative and the characteristics of those who received screening through this program.

METHODS

The clinical leadership team convened a multidisciplinary workgroup to improve CRC screening rates and identified screening with FIT kits as a potential solution. Polymedco OC-Auto FIT kits were mailed to members at home, and provided instructions with pre-addressed, and postage-paid return envelopes, as well as an informational letter outlining the value of screening. A standardized order for laboratory processing of mailed specimens was developed alongside a protocol to direct results to the patient's primary care provider. Samples were delivered to a satellite lab, processed, and inputted directly into the electronic medical record (EMR), triggering a notification to the patient's primary care provider for follow-up. Members with questions were directed to designated staff who addressed concerns and

any laboratory issues to improve return results. Inclusion criteria for the initiative were membership in the institution's health plan for its employees and their families, and aged 50–75 years without an up-to-date CRC screening. The Institutional Review Board at the University of Southern California approved this study (UP 2100239). Patient information was acquired from the MR and anonymized. All analyses were performed using SAS, version 9.4 (SAS Institute Inc., Cary, NC, USA).

RESULTS

FIT tests were mailed to 578 members between July 2020 and January 2021. Demographic data were available for 556 members (96.2%). The mean age was 60.3 years and 52.9% were female. The population was racially and ethnically diverse: 48.7% White, 15.5% Asian, 10.3% Black or African American, and 7.7% Hispanic or Latino. Twenty-eight percent of all mailed members and 29.3% of members with demographic data returned a completed FIT (Table 1). Six positive FIT tests were received, and all were referred for colonoscopy of which six (100%) received a colonoscopy, with one revealing colon cancer. Those who returned the FIT were older than those who did not ($P = 0.03$). There were no other differences between the two groups' characteristics, and multi-variate analysis did not identify any statistically significant risk factors between the groups. The CRC screening rate for the employee population in 2020 was 49%. This is a 10% absolute increase and 25.6% relative increase from the previous year's screening rate of 39% (Fig. 1).

DISCUSSION

During the COVID-19 pandemic, cancer screening rates have decreased which may be due to limited in-person primary care visits. Our health system historically relied on colonoscopy as the primary modality for CRC screening. Given members' hesitancy to come to the medical center during the pandemic, we successfully mailed FIT kits to promote colorectal cancer screening of institution-

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Table 1 Patient Demographics

	All members <i>n</i> =556 Mean (SD)	FIT completed <i>n</i> =163 Mean (SD)	FIT incomplete <i>n</i> =393 Mean (SD)	<i>P</i> -value
Age (years)	60.3 (6.0)	61.2 (5.9)	60.0 (6.0)	0.03
Sex				0.4
Male	259 (46.6)	79 (48.5)	180 (45.8)	
Female	294 (52.9)	81 (49.7)	213 (54.2)	
Missing	3 (0.5)	3 (1.8)	0	
Race				0.5
American Indian/Alaska Native	2 (0.4)	1 (0.6)	1 (0.3)	
Asian	86 (15.5)	25 (15.3)	61 (15.5)	
Black or African American	57 (10.3)	16 (9.8)	41 (10.4)	
Hawaiian/Pacific Islander	2 (0.4)	0	2 (0.5)	
White	271 (48.7)	85 (53.3)	186 (47.3)	
Multiple	2 (0.4)	1 (0.6)	1 (0.3)	
Other	62 (11.2)	11 (6.8)	51 (13)	
Patient refuses/doesn't know	69 (11.4)	21 (12.9)	48 (12.2)	
Missing	5 (0.9)	3 (1.8)	2 (0.5)	
Ethnicity				0.1
Hispanic or Latino	43 (7.7)	6 (3.7)	37 (9.4)	
Non-Hispanic or Latino	492 (88.5)	148 (90.8)	344 (88.0)	
Patient refuses/doesn't know	15 (2.7)	6 (3.8)	9 (2.3)	
Unknown	1 (0.2)	0	1 (0.3)	
Missing	5 (0.9)	3 (1.8)	2 (0.5)	
Language preference				1.0
English	547 (99.3)	159 (97.6)	388 (98.7)	
Spanish	4 (0.7)	1 (0.6)	3 (0.8)	
Missing	5 (0.9)	3 (1.8)	2 (0.5)	
FIT completion				
Yes	163 (29.3)	—	—	
Negative result	—	157 (96.3)	—	

FIT fecal immunochemical test, SD standard deviation

insured employees and their family members. The initiative’s promising rate of return of FIT kits (28.2%)—as compared to average return rates of 10–28% seen in prior studies⁶ and plummeting pandemic screening rates—may suggest that some patient populations are open to at-home screenings. There are some limitations to the study: the initiative only included employees and their families with the institution’s health plan therefore reflects a small

sample size and may differ from other patient populations. The increased screening rate may be due to the mailer campaign; however, the pandemic may also have attributed to members more willing to participate in an organized screening program. With the initial launch of the mailed CRC screening program, the institution is looking to sustain this strategy for its employee population and their families in a yearly basis.

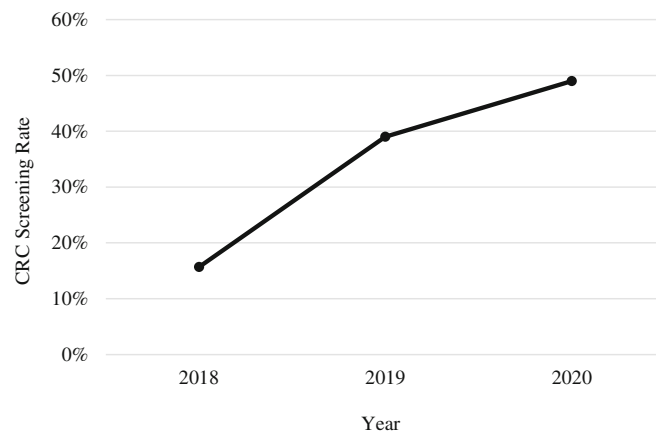


Fig. 1 Employee CRC screening rates from 2018 to 2020.

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Jennifer S. Kim, PhD, MPH¹

Omar Bakr, MD, MPH²

Mimi Xu, MD²

Michael Hochman, MD, MPH²

Veronica M. Pagán, MA, MPH¹

¹Gehr Family Center for Health Systems Science & Innovation, Keck School of Medicine, University of Southern California,

Los Angeles, CA, USA

²Department of Medicine, Keck School of Medicine, University of Southern California,

Los Angeles, CA, USA

Corresponding Author: Mimi Xu, MD; Department of Medicine, Keck School of Medicine, University of Southern California, Los Angeles, CA, USA (e-mail: mimi.xu@med.usc.edu).

Declarations:

Conflict of interest: The authors declare that they do not have a conflict of interest.

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