

### Introduction

According to the National Health Interview Survey, among adults ages 50 and older, colorectal cancer (CRC) screening in accordance with guidelines increased from 38% in 2000 to 66% in 2018<sup>1</sup>

61% reported having a colonoscopy in the past 10 years and approximately 11% reported a recent stool test<sup>1</sup>

Prior studies have been performed at other institutions that evaluated the utilization of patient surveys to determine screening obstacles, the time of the day when cancer screening studies were ordered, and mailing fecal immunochemical test (FIT) screening tests without a recent visit<sup>2,3,4</sup>

At Maimonides Medical Center, from January to March 2020, it was noted that the patients had a 34% compliance rate for CRC screening including colonoscopy, guaiac-based fecal occult blood test (gFOBT), FIT, and multitargeted stool DNA (MT-sDNA)

The data was collected from a health maintenance form stating whether a patient completed colon cancer screening or not

We initiated a quality improvement project to learn more about how CRC screening is performed in resident-run primary care clinics and create methods to improve screening

We also wanted to assess how the health maintenance forms can continue to be modified to improve documentation

### Methods and Materials

In the winter of 2020, our intervention centered on resident-run lectures on utilization of healthcare maintenance forms to ensure appropriate documentation and to assist with more accurate quality improvement metrics; CRC screening was the primary focus

The forms were modified to include the various screening tests, when a patient was a due for a screening test, and whether a patient refused a particular test (Figure 1)

Individual patient panels for house staff with periodic review with an attending were also utilized to improve education and address deficits in patient care

Data for analysis was collected from NextGen Healthcare, an electronic medical record system

### Results

From January to March 2021, 534 unique patients presented to the three resident-run primary care clinics at Maimonides

Among these patients, 173 patients were between ages of 50-75 with 136 patients frequenting the clinic at least three times in the past five years

62 patients among the 136 (45.6%) were compliant with CRC screening; 58 patients underwent colonoscopies, and 4 patients were compliant with FIT, all with appropriate follow-up (Figure 2)

Upon further analysis of the clinic notes, 31 patients (22.8%) were offered only colonoscopies with a gastrointestinal (GI) referral; among this cohort, 8 patients stated refusal, and none were offered fecal stool tests

Of note, MT-sDNA was not utilized

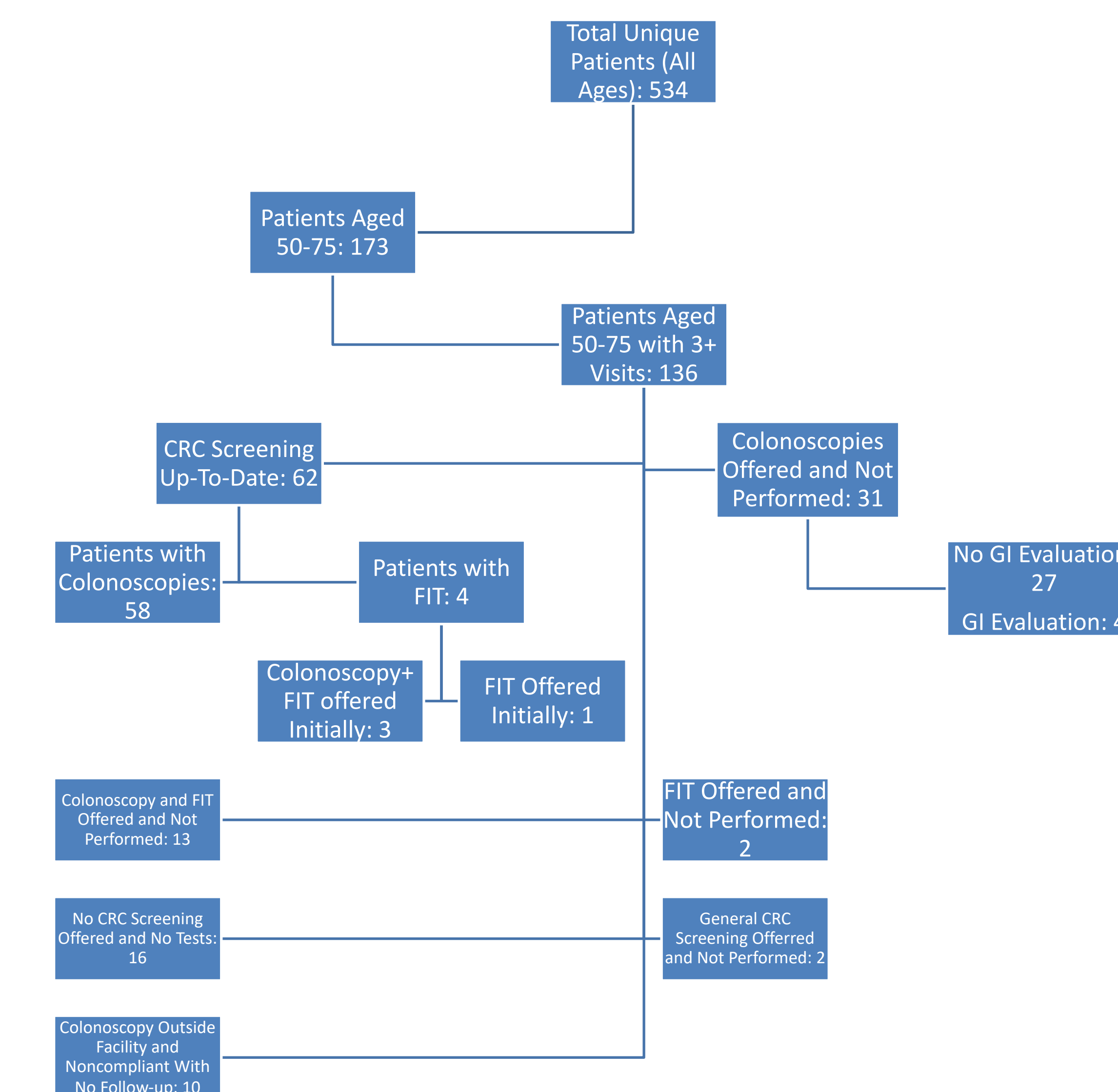


Figure 2. Flowchart depicting CRC screening from January to March 2021 in resident-run primary care clinics at Maimonides Medical Center.

Health Maintenance					
Adult Patients					
Tests/Screenings:	Timeframe:	Date completed:	Next date:		
<b>General</b>					
Annual Physical Exam	all ages; annually	09/02/2022	09/02/2023	<input type="checkbox"/> Refused	//
Dental Referral	ages 18-21; annually	//	//	<input type="checkbox"/> Refused	//
Colonoscopy	ages 50-75; every 10 years	//	//	<input type="checkbox"/> Refused	//
FIT Test	ages 50-75; without colonoscopy; annually	//	//	<input type="checkbox"/> Refused	//
Cologuard	ages 50-75; without colonoscopy; every 3 years	11/21/2021	11/21/2024	<input type="checkbox"/> Refused	//
Spirometry Testing in COPD	ages 40 and over; new Dx of COPD or newly active COPD. Should be completed 2 years prior and 6 months after.	//	//	<input type="checkbox"/> Refused	//
Hepatitis C testing	patients born between 1945 - 1965; once	05/29/2015		<input type="checkbox"/> Refused	//

Figure 1. Sample healthcare maintenance form completed for a patient by a resident in the primary care clinic.

### Discussion

Our approach with utilizing, analyzing, and continuously updating healthcare maintenance forms at each visit yielded increased CRC screening rates in our patient population

Improvements in documentation, which may have corresponded to the improved screening rates, not from increased number of screening tests, must be considered

Utilization of gFOBT, FIT, and MT-sDNA for patients who refuse colonoscopies remains a barrier

### Contact

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### References

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2. Ruggeri CA, Reed RE, Coyle B, et al. Closing the Gap: A Resident-Led Quality Improvement Project to Improve Colorectal Cancer Screening in Primary Care Community Clinics. J Grad Med Educ. 2020 Feb; 12(1): 104-108.
3. Hsiang EY, Mehta SJ, Small DS, et al. Association of Primary Care Clinic Appointment Time With Clinician Ordering and Patient Completion of Breast and Colorectal Cancer Screening. JAMA Netw Open. 2019 May 3; 2(5):e193403.
4. Goldshore MA, Mehta SJ, Fletcher W, et al. An RCT of Fecal Immunochemical Test Colorectal Cancer Screening in Veterans Without Recent Primary Care. Am J Prev Med. 2020 Jul; 59(1):41-48.