# Finding the Right FIT to Improve Colorectal Cancer Screening

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## Background

- An estimated 28% of eligible US adults have never been screened for colorectal cancer (CRC) [2]
- Fecal Immunochemical Testing (FIT) offers an acceptable non-invasive screening option
- An estimated 56% of patients at our internal medicine clinic have not had colorectal cancer screening and alternatives to colonoscopy were seldom promoted

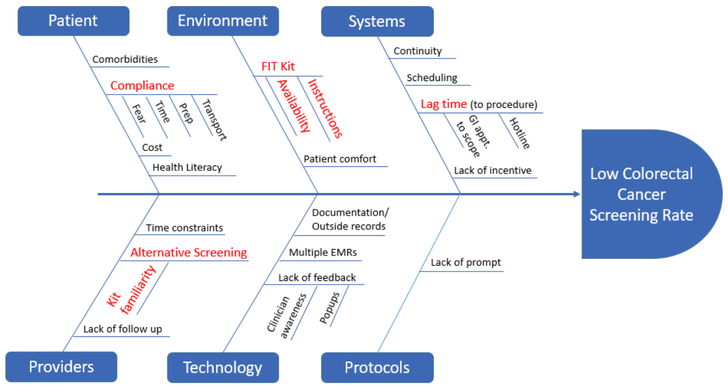
## Aim

- Improve colorectal cancer screening rates of patients at the resident continuity clinic by 25% over a 9-month period (August 2016 – April 2017)

## Methods

- Participants: Weekly continuity clinic residents and patients eligible for colorectal cancer screening
- Design: Electronic Health Record chart review

Figure 1. Fishbone diagram

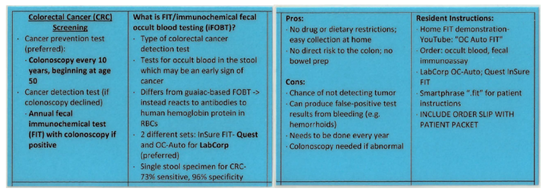



## Intervention

*Stakeholders:*

- *Resident:* Created FIT resource card and kit demonstration
- *Patient:* Discuss CRC alternative with FIT; kit demonstration; EMR smart phrases for kit instructions; follow-up phone calls

Figure 2: FIT resident resource card



**Colorectal Cancer (CRC) Screening**

- Cancer prevention test (preferred):
- **Colonoscopy every 10 years, beginning at age 50**
- Cancer detection test (if colonoscopy declined)
- **Annual fecal immunochemical test (FIT) with colonoscopy if positive**

**What is FIT/immunochemical fecal occult blood testing (iFOBT)?**

- Type of colorectal cancer detection test
- Tests for occult blood in the stool which may be an early sign of cancer
- Differs from guaiac-based FOBT -> instead reacts to antibodies to human hemoglobin protein in RBCs
- 2 different sets: InSure FIT- **Quest** and OC-Auto for **LabCorp** (preferred)
- Single stool specimen for CRC- 73% sensitive, 96% specificity

**Pros:**

- No drug or dietary restrictions; easy collection at home
- No direct risk to the colon; no bowel prep

**Cons:**

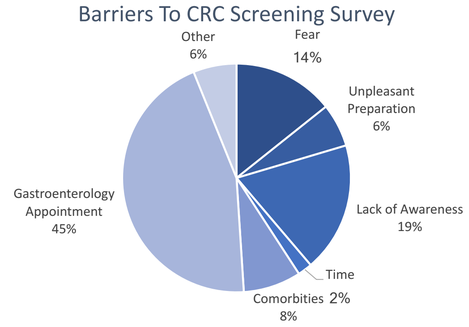
- Chance of not detecting tumor
- Can produce false-positive test results from bleeding (e.g. hemorrhoids)
- Needs to be done every year
- Colonoscopy needed if abnormal

**Resident Instructions:**

- Home FIT demonstration- YouTube: "OC Auto FIT"
- Order: occult blood, fecal immunoassay
- LabCorp OC-Auto; Quest InSure FIT
- Smartphrase ".fit" for patient instructions
- INCLUDE ORDER SLIP WITH PATIENT PACKET

## Intervention

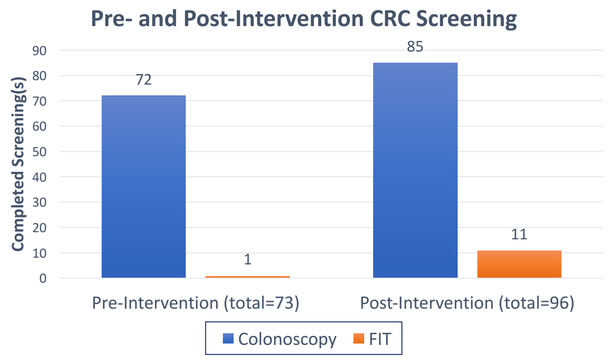
Figure 3. Patient survey with percentages of CRC barriers




- 49 of 91 (53.9%) patients who did not complete CRC screening pre-intervention responded
- Lack of follow up with a gastroenterologist after primary care physician referral was most common (n=22)
- Lack of awareness (n=9)
  - CRC prevalence, purpose of asymptomatic screening, lack of options
- Colonoscopy-specific barriers
  - Fear of peri-procedural complications, unpleasant prep
- 13 of 49 (26.5%) patients reported barriers supporting potential advantages of FIT to colonoscopy
- 0 reported "embarrassed to prep/collect stool"

## Results

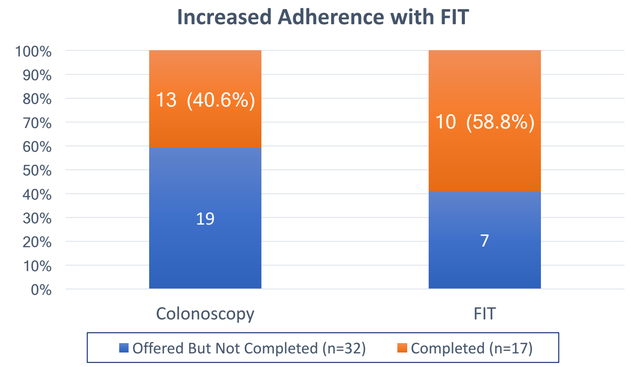
Figure 4. Completed CRC screenings pre- and post-intervention




- Pre-Intervention- 73 of 164 (44.5%) had up to date CRC screening
  - 1 of the 73 patients were offered and completed FIT
- Post-Intervention- 96 of 164 (58.5%) had up to date CRC screening
  - 10 of the 23 completed screenings were FIT
- Absolute increase in CRC screening rates was 14.02% with a relative increase of 31.51%

## Results

Figure 5. Offered versus completed CRC screening tests




- 10 of 17 (58.8%) patients completed FIT
- 13 of 32 (40.6%) patients completed GI referral with colonoscopy
- 18.2% completion difference with a 31% higher adherence rate for FIT

## Conclusions

- Resident and patient education was an effective approach to promoting FIT as it resulted in an increased CRC screening rate when offered as routine as colonoscopy
- Advantages of FIT offer a quick, non-invasive, cost-effective alternative
- A positive FIT result may potentially motivate patients to complete further evaluation
- Higher adherence with FIT may counteract its lower detection capacity

## Limitations/Future Considerations

- Gap in data availability with implementing new electronic health record
- Difficulty contacting patients for follow up
- Develop an efficient tracking mechanism to ensure FIT was offered, properly submitted, and follow-up was completed
- Minimize lag time between gastroenterology referral and colonoscopy
- Identify patients eligible for undergoing colonoscopy without a gastroenterology pre-procedure office visit

## References

1. Quintero E, Castells A, Bujanda L, et al. Colonoscopy versus fecal immunochemical testing in colorectal-cancer screening. N Engl J Med. 2012;366(8):697-706.
2. Lin JS, Piper MA, Perdue LA, et al. Screening for Colorectal Cancer: Updated Evidence Report and Systematic Review for the US Preventive Services Task Force. JAMA. 2016;315(23):2576-94.
3. Weinberg DS, Barkun A, Turner BJ. Colorectal Cancer Screening in the United States: What Is the Best FIT?. Ann Intern Med. 2017;166(4):297-298.