Improving Colorectal Cancer screening rates using home FIT kits

Sarah Zubair, MD, MSc; Tavleen Aulakh, MS IV; Mary Ramsbottom, MDcM, MPH, FACP; Khadj Assani, DO | Internal Medicine | Skagit Regional Health

Project Abstract

**Purpose:** The purpose of our project is to increase colorectal cancer screening by 10% in eligible patients at Skagit Valley Hospital over 24 months.

**Methods:** Eligible patients are identified within the clinic electronic system and are contacted to gather the following information: 1) whether they have completed their CRC screening, 2) the reason they missed their screenings in the last year, and 3) whether they are interested in receiving an at-home FIT kit for screening. We will then mail kits to interested individuals and follow up with a reminder phone call in four weeks for unreturned kits. PDSA cycles will be evaluated every 3 months.

**Outcome measures:** 1) How many individuals request the CRC screening kit, 2) How many complete the kit, and 3) How many abnormal screenings (polyps or cancers) are detected. Our long-term goal is to implement a sustainable process of promoting surveillance at home, non-invasive CRC screenings and to spread the program to other primary care clinics in the system. Ultimately, we want to increase the proportion of up-to-date eligible individuals for CRC screening. Our final goal is to increase screening by 10% in the eligible population by 24 months. Once we have a standard process that is working well in the Internal Medicine Residency Clinic, we will take the results to the SRH Administration for support to expand the process to other primary care clinic sites.

Introduction

Colorectal cancer (CRC) is the second leading cause of cancer-related deaths in the United States (2). In 2018, the National Colorectal Cancer Roundtable (NCRT) reported that Washington State’s CRC rates were 65.7% of the eligible individuals between ages 50-64. Washington state thus ranked 17th, while many other states had reached their goal of 80% (2). For the Internal Medicine Residency Clinic, preliminary data drawn using the SRH Population Health Dashboard shows that 2500 patients were eligible for CRC screening using the U.S. Preventive Services Task Force (USPSTF) criteria. Of these, 50% of patients were up to date for CRC screening as of March 1, 2021. Approximately 45% of patients were due for screening and did not have any tests ordered at the time of data collection. Of these, 45% were due for screening and had tests ordered by their primary care physicians. In regard to ethnicity, 45% of Hispanic patients were up to date in contrast to the 51% of non-Hispanic patients who were up to date. This data highlights that our clinic rates are significantly below both the state and national average, and that our Hispanic population was further behind than other ethnicities.

Our project focuses on closing the gap between the national average for CRC screenings and that of Skagit Regional Health. In the era of COVID-19 we propose to increase screening by developing a standard process that encourages the use of at-home stool tests. These tests are non-invasive, inexpensive, and can be completed by patients independently. Multiple studies have shown that mailed FIT testing can be an efficient means of conducting CRC screening. In a randomized clinical trial, Singal et al. (2016) divided eligible individuals into three study groups: FIT testing, colonoscopy, and usual care (3). They implemented a means of contacting and distributing FIT kits or scheduling colonoscopies for the respective groups. Their research showed that the FIT group screening rates were significantly higher as well as having a shorter time-to-response compared to the colonoscopy group. Furthermore, they concluded that underserved communities would respond well to non-invasive tests, and colonoscopies were more expensive for patients.

Goals and Objectives

Our goals are: 1) Identifying patients who have missed their colorectal cancer screening in the past year from the SVH Internal Medicine Residency Clinic patient population. 2) Gathering data as to why these individuals missed their screenings. 3) Increasing the percent of patients who complete their colorectal cancer screening by 10% over the course of the project (24 months).

**Methods**

In order to measure the effectiveness of our intervention, the first step is to use the USPSTF guidelines to determine individuals who are eligible for CRC screening. In order to eliminate bias and standardize the project, we provided educational sessions for providers and staff members. From their list of clinic patients, primary care providers identify which patients should complete the screening and subsequently have a discussion with the patients during their appointment, regardless of the reason/type of appointment. The following information is attained: 1) If they have completed their CRC screening 2) If not, what are the barriers, and 3) Whether they are interested in receiving an at-home stool kit for screening? If not, then why? Interested individuals receive a kit with instructions in their language and a follow up phone call in four weeks as a “reminder”. To facilitate provider orders and result notifications, our clinic implemented a protocol which allows for immediate PCR result notification through the electronic medical record (EMR) so that positive tests can be followed up appropriately and timely. The EMR tracks the patient’s age up to date for CRC screening, and automatically flags the patient as due again in 12 months. Results from the survey and all other data are stored on a private computer drive in a password protected file at Skagit Valley Hospital. Extensive measures of maintaining and protecting patient privacy and following HIPAA guidelines are ensured.

**Outcome Measures:**

1. How many individuals request the kit
2. How many complete the kit
3. How many abnormal screenings (polyps or cancers) are detected. Data will be collected to determine which gender, age, race/ethnicity was the most receptive to the intervention.

We anticipate the need for multiple Plan-Do-Study-Act cycles to fully maximize the project outcome.

Results

The same number of female and male patients were asked about the screening; however 40% of female patients actually completed the kit and only 30% of male patients did.

A similar percentage of patients per ethnicity were asked about the screening at their appointments; African American patients were the most likely to complete the screening at 50% while those who identified as “Other” were the least. Asian patients were the second most likely to complete the screening with Caucasians and Hispanics unlikely to do.

Discussion and Conclusion

Overall, our clinic was able to increase our CRC rates to 49% to 58% in 15 months. This shows that using FIT kit screening in our community is an effective means of screening patients. Thus far, our research has shown that although many patients are eligible, they are not being asked during their appointments. Furthermore, a lack of follow-up of patients who agree is resulting in less completed kits than anticipated. Future PDSA projects should focus on increasing physician reminders to ask eligible patients and more thorough follow ups to close the loop. We are confident that we will be able to not only reach our goal of 10% increase but to surpass it.