

Introduction

- March 2021 - The ACG updated CRC screening guidelines to ages 45-75
- May 2021 - The USPSTF added Grade B recommendations to screen individuals aged 45-49
- With these updates in mind, a quality improvement project was initiated to increase CRC screening in patients aged 45-49 years

Methods

- **Inclusion Criteria:** average risk patients 45-49 y.o. with no prior CRC screening
- **Exclusion:** personal or family history of CRC, adenomatous polyps, Lynch syndrome, familial adenomatous polyposis, & recent gastrointestinal bleed
- **Intervention:** Institution's healthcare gaps were modified to include CRC screening for ages 45-49
- **Primary Outcomes:** assess for improvement in CRC screening rates in target population, 3 months pre-intervention vs 3 months post-intervention
- **Secondary Outcomes:** Baseline demographics, type of screening, adenoma detection rates, colonic lesion rates, & malignant neoplasm rates were evaluated as secondary outcomes

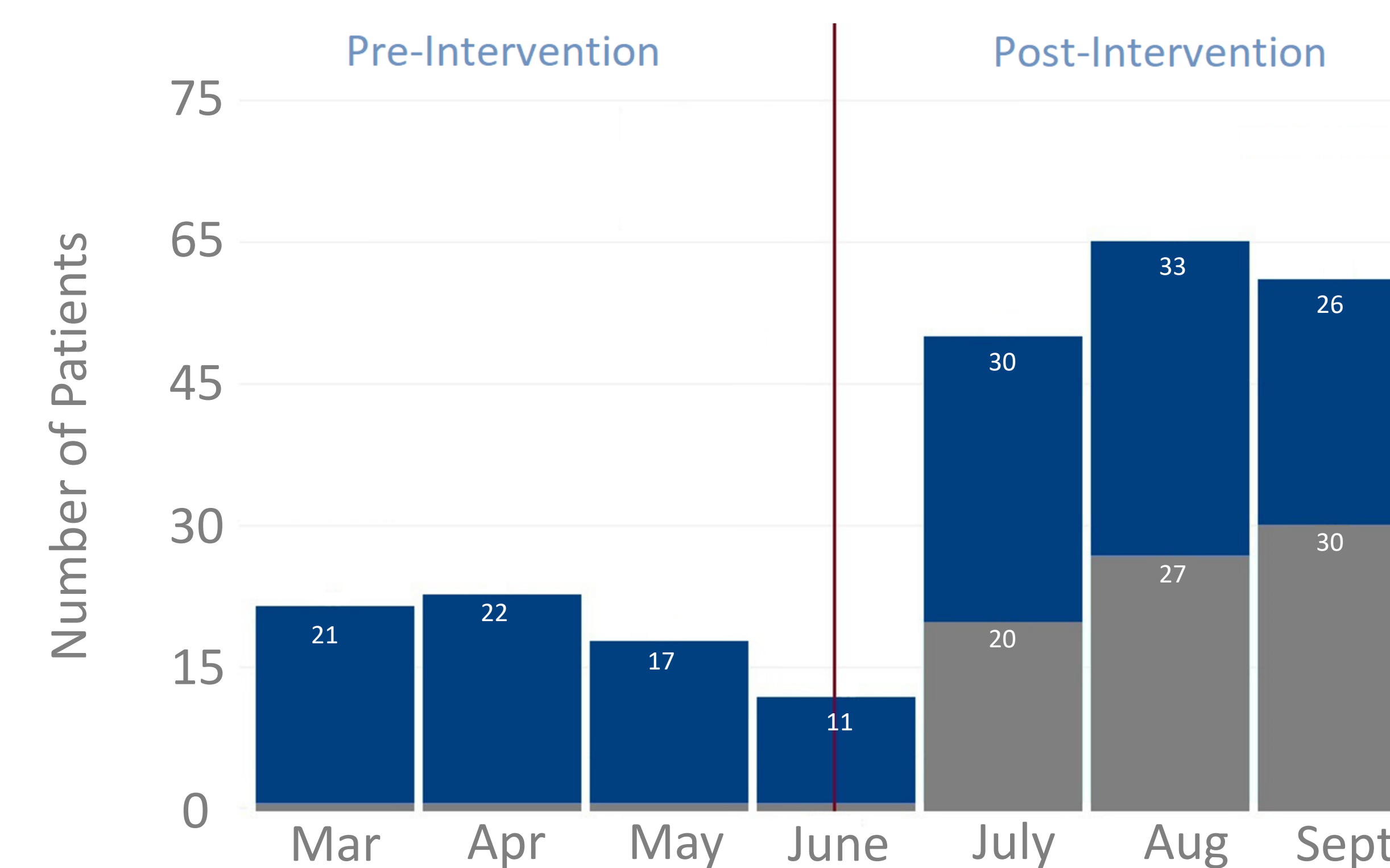
| Demographics & Outcomes | Pre-Intervention | Post-Intervention | P-value |
|---|------------------|-------------------|---|
| Median Age | 48 | 47 | |
| Median BMI | 30.5 | 29.6 | |
| Male Sex Percentage | 54.20% | 46.90% | P = 0.53 [95% CI: -0.147 to 0.285] |
| Median Care Gap Score | 3 | 3 | |
| Max Care Gap Score | 7 | 7 | |
| Average Alcohol Use Per Week | 3 / week | 4 / week | |
| Smoking Percentage | 8% | 20% | P = 0.073 [95% CI: -0.238 to 0.010] |
| Caucasian Race | 86.40% | 91.30% | P = 0.736 [95% CI: -0.343 to 0.240] |
| African American Race | 4.70% | 4.31% | |
| Hispanic Ethnicity | 0.53% | 0.63% | |
| Asian Americans and Pacific Islanders Race | 0.79% | 0.80% | |
| Total Patients Eligible for CRC Screening | 132452 | 132432 | |
| Total CRC Screened Number of Patients | 59 | 131 | |
| Total CRC Screened Percentage | 0.04% | 0.10% | P < 0.0001 [95% CI: -0.000748 to -0.000340] |
| CRC Screened through Colonoscopy | 59 | 80 | |
| CRC Screened through FIT MTS-DNA | 0 | 51 | |
| ADR on Colonoscopy | 44.10% | 38.80% | P = 0.63 [95% CI: -0.162 to 0.269] |
| Colonic Lesion Detection Rate on Colonoscopy | 42.40% | 40% | P = 0.83 [95% CI: -0.192 to 0.240] |
| Malignant Adenomatous Neoplasms Detection Rate on Colonoscopy | 0% | 0% | |

Results

- Overall demographics were similar between the two groups
 - similar age, BMI, sex, race, & ethnicity, open healthcare gaps, use of alcohol, & tobacco use
- Primary objective (statistically significant improvement in CRC screening rates) was met with a P < 0.0001.
 - 59 patients (0.0445%) completed CRC screening pre-intervention
 - 131 patients (0.0989%) received CRC screening post-intervention
 - A comprehensive increase of 71 patients received CRC screening post-intervention
- Secondary outcomes revealed no significant difference between the pre & post-intervention groups

Discussion

- Our interventions translated to a >200% increase in CRC screening rates (71 additional patients)
- Though there was no significant difference in detecting malignant adenomatous neoplasms, this increase still theoretically translates to detection of 2 additional patients diagnosed with CRC per epidemiological studies
- Our implementation did not assess other CRC screening modalities other than colonoscopy & FIT MTS-DNA stool testing as our institution predominantly uses these two methods for screening
- Overall further work needs to be done to improve our CRC screening rates



| Key | |
|--|--|
| Colonoscopies | |
| FIT MTS-DNA | |
| Project Implementation Date Divider Line | |

References

Shaukat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG Clinical Guidelines: Colorectal Cancer Screening 2021. Am J Gastroenterol. 2021 Mar 1;116(3):458-479. doi: 10.14309/ajg.0000000000001122. PMID: 33657038.

US Preventive Services Task Force, Davidson KW, Barry MJ, Mangione CM, Cabana M, Caughey AB, Davis EM, Donahue KE, Doubeni CA, Krist AH, Kubik M, Li L, Ogedegbe G, Owens DK, Pbert L, Silverstein M, Stevermer J, Tseng CW, Wong JB. Screening for Colorectal Cancer: US Preventive Services Task Force Recommendation Statement. JAMA. 2021 May 18;325(19):1965-1977. doi: 10.1001/jama.2021.6238. Erratum in: JAMA. 2021 Aug 24;326(8):773. PMID: 34003218.