

Strategies and Opportunities to Stop Colorectal Cancer in Priority Populations (STOP CRC)

Principal Investigator(s)

Gloria D. Coronado, PhD; Beverly B. Green, MD, MPH

ClinicalTrials.gov Identifier

[NCT01742065](https://clinicaltrials.gov/ct2/show/study/NCT01742065)

Sponsoring Institution

Kaiser Permanente Center for Health Research

Collaborators

- Oregon Community Health Information Network (OCHIN)
- Kaiser Permanente Washington Health Research Institute
- National Center for Complementary and Integrative Health (NCCIH)

NIH Institute Providing Oversight

National Cancer Institute (NCI)

DATA AND RESOURCE SHARING

- [Data sharing checklist](#)
- **Data request:** Deidentified dataset available upon request to <mailto:gloria.d.coronado@kpchr.org>
- [Protocol](#)
- **Project website:** www.mailedFIT.org
- **Primary study results:** Coronado et al. Effectiveness of a mailed colorectal cancer screening outreach program in community health clinics: the STOP CRC cluster randomized clinical trial. *JAMA Intern Med.* 2018 Sep 1; 178(9):1174-1181. PMID: [30083752](https://pubmed.ncbi.nlm.nih.gov/30083752/).

STUDY AT A GLANCE



STUDY QUESTION AND SIGNIFICANCE

Federally qualified health centers have low rates of colorectal cancer screening. The objective of the study was to determine the effectiveness of an electronic health record (EHR)-embedded outreach program implemented in health centers as part of standard care to improve screening rates.



DESIGN AND SETTING

Cluster randomized trial in 26 federally qualified health center clinics in 8 health centers in Oregon and California with participants who were overdue for colorectal cancer screening. Of the 26 participating clinics, 13 received the intervention and 13 practiced usual care.



INTERVENTION AND METHODS

The intervention involved embedding a tool in the EHR to identify patients who were overdue for colorectal cancer screening, mailing a fecal immunochemical test (FIT) kit

and reminder letter to eligible patients, and implementing a practice improvement process at participating clinics.



FINDINGS

Compared with clinics that practiced usual care, intervention clinics had a significantly higher proportion of participants who completed a FIT (3.4 percentage points) and any colorectal cancer screening (3.8 percentage points). The improved screening rates occurred despite low and highly variable rates of implementation of the program.



CONCLUSIONS AND RELEVANCE

An EHR-based mailed outreach program improved rates of colorectal cancer screening. Successful implementation of the outreach program was correlated with higher rates of FIT completion.

GENERALIZABLE LESSONS

Challenge	Solution
Inadequate capacity at some clinics to immediately activate the EHR tool, a process that required several steps and took longer than anticipated	Regular teleconferences with clinic representatives and staff of the data coordinating center to facilitate activation of the EHR tool
Analysis challenges resulting from system-level EHR upgrades and clinic-level delays in implementation	Extensive consultation with the NIH Collaboratory's Biostatistics and Study Design Core to modify the statistical analysis and to develop a secondary analysis of a lagged dataset to account for delays
Lack of reliable data on colonoscopies (because they are performed outside primary care)	Validation of the colonoscopy codes that were available and chart audits
Difficulty of motivating clinic staff to learn a new technology and clinical process	Frequent contact with the intervention clinics and offers of training and support; creation of an advisory board that included representatives from all participating clinics, which held quarterly conference calls and annual all-day, in-person meetings

“Technology can solve some problems and introduce others. Having a team that can effectively troubleshoot issues is important.” — Gloria Coronado

“We sometimes found that clinic staff were unaware of our project and were advocating for introducing a similar program into the health system. Thus, developing implementation and communication plans that provide the right level of information to clinic staff is key. This can help keep teams engaged and avoid contamination from conflicting efforts.” — Gloria Coronado

ADDITIONAL RESOURCES

- Article: [Strategies and Opportunities to STOP Colon Cancer in Priority Populations: Design of a Cluster-Randomized Pragmatic Trial](#)
- Article: [Analytic Challenges Arising from the STOP CRC Trial: Pragmatic Solutions for Pragmatic Problems](#)
- Video interview: [Drs. Coronado and Green Discuss Lessons Learned in STOP CRC](#)
- NIH Collaboratory Grand Rounds: [Direct Mail Programs Work...But Will Health Centers Implement Them? Findings from STOP CRC](#)
- NIH Collaboratory Steering Committee Meeting Presentation: [STOP CRC 2018 Update](#)

Access the complete set of [STOP CRC resources](#).