Implementation and Sustainability of Evidence-Based Programs: Lessons Learned from the Colorectal Cancer Control Program

Djenaba A. Joseph, MD, MPH
Medical Director, Colorectal Cancer Control Program
Division of Cancer Prevention and Control
National Center for Chronic Disease Prevention and Health Promotion
Centers for Disease Control and Prevention

Dialogue for Action on Cancer Screening and Prevention
April 26, 2019
Colorectal Cancer Control Program (CRCCP)

The CRCCP is a CDC funded five-year cooperative agreement to increase colorectal cancer (CRC) screening rates among low-income, high-need populations by collaborating with health systems partners to implement evidence-based interventions* (EBIs) and supporting activities (SAs) in health care clinics with the goal to increase CRC screening rates.

*The Community Guide
https://www.thecommunityguide.org/topic/cancer
The CRCCP consists of two distinct components:

**Component 1**
**All 30 Grantees**

Partner with health systems to implement evidence-based interventions (EBIs) and supportive activities (SAs).

**EBIs:**
- Patient reminders
- Provider reminders
- Provider assessment & feedback
- Reducing structural barriers

**SAs:**
- Small media
- Patient navigation/community health workers
- Provider education
- Health IT

**Component 2**
**6 Grantees Only**

Provide high quality CRC screening, diagnostics, patient navigation, and other support services to eligible patients.

**Patient eligibility criteria:**
- Un- or underinsured
- <250% of the federal poverty level
- 50-64 years-old
- Asymptomatic and average risk
The CRCCP funded 30 grantees in 2015.

- 23 States
- 6 Universities
- 1 Tribe
The program aims to increase CRC screening in clinics through health system change.
EBIs and SAs to increase CRC Screening through the CRCCP.

**Evidence-based Interventions**
- Patient reminders
- Provider reminders
- Provider assessment and feedback
- Reducing Structural barriers

**Supporting Activities**
- Small media
- Patient navigation
- Community health workers
- Provider education

*The Community Guide
https://www.thecommunityguide.org/topic/cancer
CRCCP Evaluation
We developed a multiple methods evaluation strategy.
Special Studies

- Cost-effectiveness study
- Qualitative case studies
- Secondary analyses of clinic data
Clinic Data Overview
Purpose of the CRCCP clinic data:

To assess program reach, clinic characteristics, EBI implementation, and colorectal cancer screening rates in CRCCP partner clinics.
Grantees report clinic data using the Colorectal Baseline and Annual Reporting System (CBARS).

- Web-based data reporting system
- Standardized response options
- Built-in data dictionary
- Automated data edit checks
- Programmed reports
Clinic-level Data Collection: Baseline and Annual
New clinics may be added periodically.
Results to Date
What questions can we answer with clinic-level data today?

• Who are grantees partnering with?
• What is the reach of the CRCCP?
• Which EBIs and SAs are implemented in CRCCP Clinics?
• Are screening rates increasing in CRCCP clinics?
• Do changes in screening rates vary by clinic setting or other factors?
Non-health system partners are critical to the program.

**Grantees’ five most common partners:**

- **Clinical care organizations**: 23
- **Public health focused non-profits**: 22
- **Academic institutions**: 14
- **Local or regional health departments**: 11
- **Health care plans or insurers**: 11

**Partner Activities**

The five most frequently reported activities were:

1. EBI implementation and support
2. Professional development/provider education
3. 80% by 2018 NCCRT initiative
4. Small media
5. Quality improvement activities

Source: PY3 Grantee Survey, 30 reporting
The reach of the CRCCP grantees is significant.

218 Health systems
681 Clinics
5,653 Providers
1,177,232 Patients aged 50-75

Source: Clinic data submission, Sep. 2018, Component 1 only, all 30 reporting (Includes clinics recruited in PY1, 2, 3 and through Sep. 2019 of PY4)
A closer look at CRCCP clinics

681 CRCCP Clinics

70% are Federally-Qualified Health Centers (FQHCs)

28% serve high percentages of uninsured patients (>20%)

52% use FOBT/FIT tests as the primary CRC screening test type

Source: Clinic data submission, Sep. 2018, Component 1 only, all 30 reporting (Includes clinics recruited in PY1, 2, 3 and through Sep. 2019 of PY4)
Many clinics had EBIs and SAs in place before implementing CRCCP activities.

Source: Clinic data submission, Sep. 2018, Component 1 only, all 30 reporting (n=640 Includes clinics recruited through PY3 with at least 1 annual record)
Percent of PY1 Clinics with EBIs in place over time

Source: Clinic data submission, Component 1 clinics enrolled in PY1 only, 30 grantees reporting: PY1 n= 414; PY2 n=390; PY3 n=368
Among clinics enrolled in PY1, CRC screening rates increased by **8.3 percentage points** from baseline to PY2.

Mean Baseline Screening Rate: **43.2%**  
Mean PY1 Annual Screening Rate: **48.6%**  
Mean PY2 Annual Screening Rate: **51.5%**

Source: Clinic data submission, Component 1 only, 29 reporting, thru April 2018. Baseline n=346; PY1 n= 336; PY2 n= 319. Screening rate % reflects weighted mean rate.
The increase in clinic CRC screening rates through PY2 is greater with each additional EBI that is newly implemented.

Source: Clinic data submission, Component 1 only, 29 reporting, thru April 2018. Screening rate % reflects weighted mean rate.
Among clinics recruited in PY1, changes in screening rates through PY2 varied by clinic characteristics including rurality, primary test type, and clinic type.

Source: Clinic data submission, Component 1 only, 29 reporting, thru April 2018. Baseline n=346; PY1 n= 336; PY2 n= 319. Screening rate % reflects weighted mean rate.
Year 1 analyses identified four factors associated with greater increases in clinic-level CRC screening rates.

- CRC screening champion
- CRC screening policy
- Free CRC fecal tests
- Implemented 3-4 EBIs

What we learned from the data (to date)

- Fidelity to CDC’s CRCCP model
- CRC screening policy
- CRC clinic champion
- 3-4 EBIs

**Screening rates are increasing!**
Cost
Objectives

• To assess the role of multicomponent interventions (i.e. EBIs and SAs) in increasing CRC screening uptake

• To calculate the incremental intervention cost per person successfully screened
CRCCP Learning Laboratory
Grantees and Health System Partner Participants

[Map showing various state departments of health and universities as grantees and health system partner participants]
<table>
<thead>
<tr>
<th>Time period</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 years</td>
<td>3 years</td>
<td>12 months</td>
<td>12 months</td>
</tr>
<tr>
<td>Change in screening uptake (%)</td>
<td>18.1</td>
<td>9.7</td>
<td>7.1</td>
<td>18.9</td>
</tr>
<tr>
<td>Implementation cost ($)</td>
<td>$60,224</td>
<td>$27,497</td>
<td>$30,148</td>
<td>$13,278</td>
</tr>
<tr>
<td>Additional screens (#)</td>
<td>2,533</td>
<td>943</td>
<td>1,607</td>
<td>332</td>
</tr>
<tr>
<td>Incremental intervention cost per person ($)</td>
<td>$23.78</td>
<td>$29.16</td>
<td>$18.76</td>
<td>$40.00</td>
</tr>
</tbody>
</table>

Identifying optimal approaches to scale up colorectal cancer screening: an overview of the centers for disease control and prevention (CDC)’s learning laboratory.

Sustainability
Dissemination of Results

- Manuscripts
- Manuscript Summary Series
- Program Spotlights
- Conference Presentations
Publications to date


Thank you!

Go to the official federal source of cancer prevention information: www.cdc.gov/cancer