



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

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Centers for Disease Control and Prevention

Dialogue for Action on Cancer Screening and Prevention

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# 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**

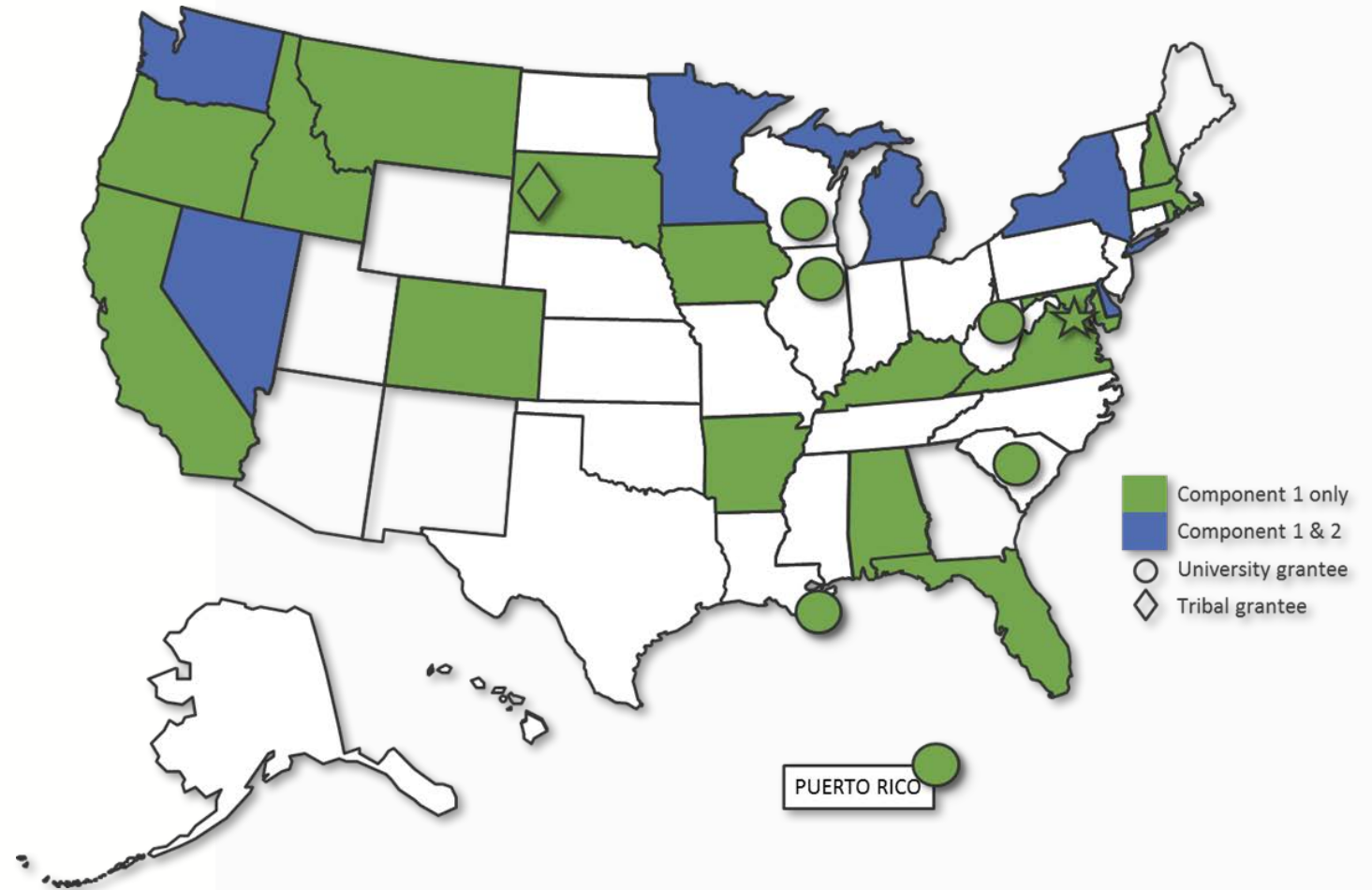
**Provide high quality CRC screening, diagnostics, patient navigation, and other support services to eligible patients.**

### **Patient eligibility criteria:**

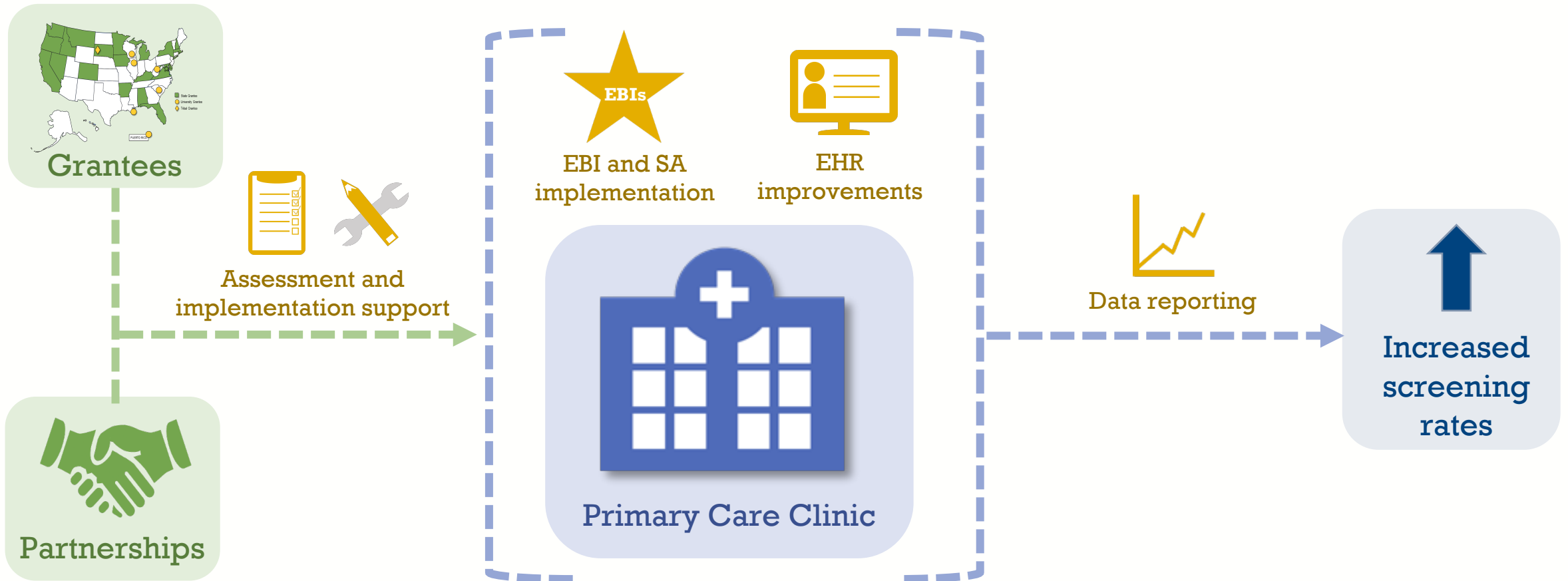
- Un- or underinsured
- <250% of the federal poverty level
- 50-64 years-old
- Asymptomatic and average risk

# 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

HOME RESOURCES REPORTS SUBMIT CCDEs CLINIC DATA ADMIN

Welcome | Data Entry

[New Health System]  
[-] Andalusia Health System (123)  
[New Clinic]  
[-] Andalusia Clinic A (001)  
• Baseline  
• Year 1 - py1  
• Year 2 - py2  
• Year 3 - py3  
[-] Andalusia Clinic B (002)  
• Baseline  
• Year 1 - py2  
• Year 2 - py3  
[-] Catalonia Health System (321)  
[New Clinic]  
[-] Catalonia Clinic A (003)  
• Baseline  
• Year 1 - py1  
• Year 2 - py2  
• Year 3 - py3  
[-] Catalonia Clinic B (004)  
• Baseline  
• Year 1 - py3

[Modify] [Delete]

**Partner Health System Characteristics**

Health system name\*: Andalusia Health System

Health system ID\*: 123

Total # of primary care clinics in health system: 3

Health System Type\*: CHC/FQHC

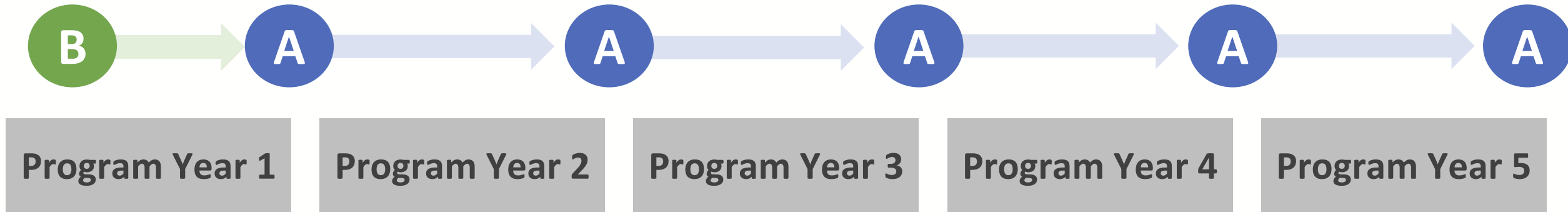
Other health system type\*:

Type of agreement in place with the health system\*: MOU/MOA

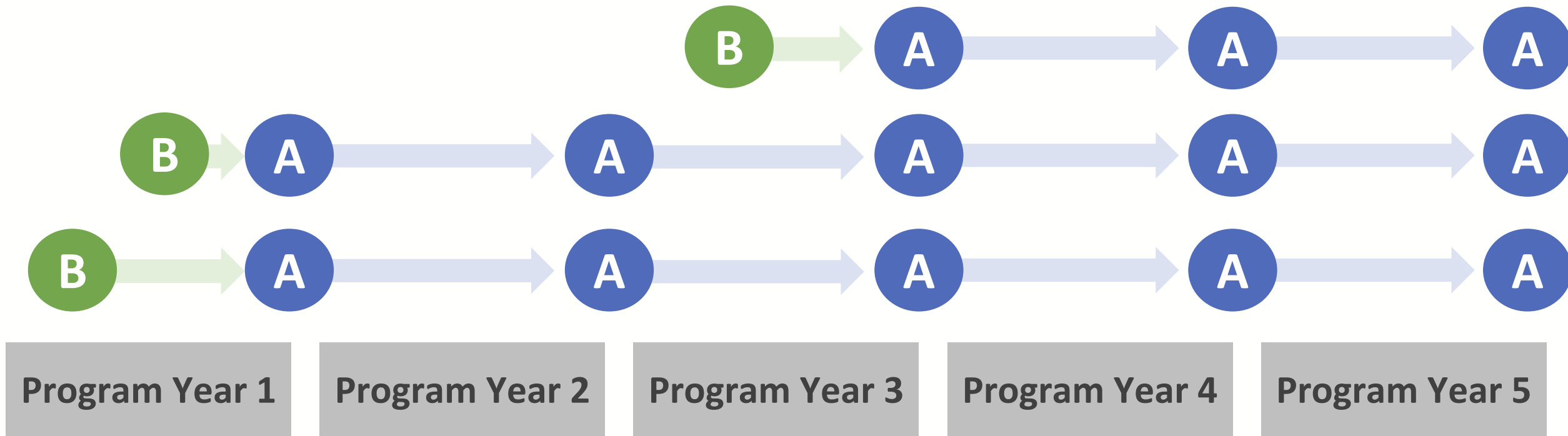
Date of MOU/MOA or Contract: 07/01/2015 (mm/dd/yyyy)

Health Center Controlled Network name:

# 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?

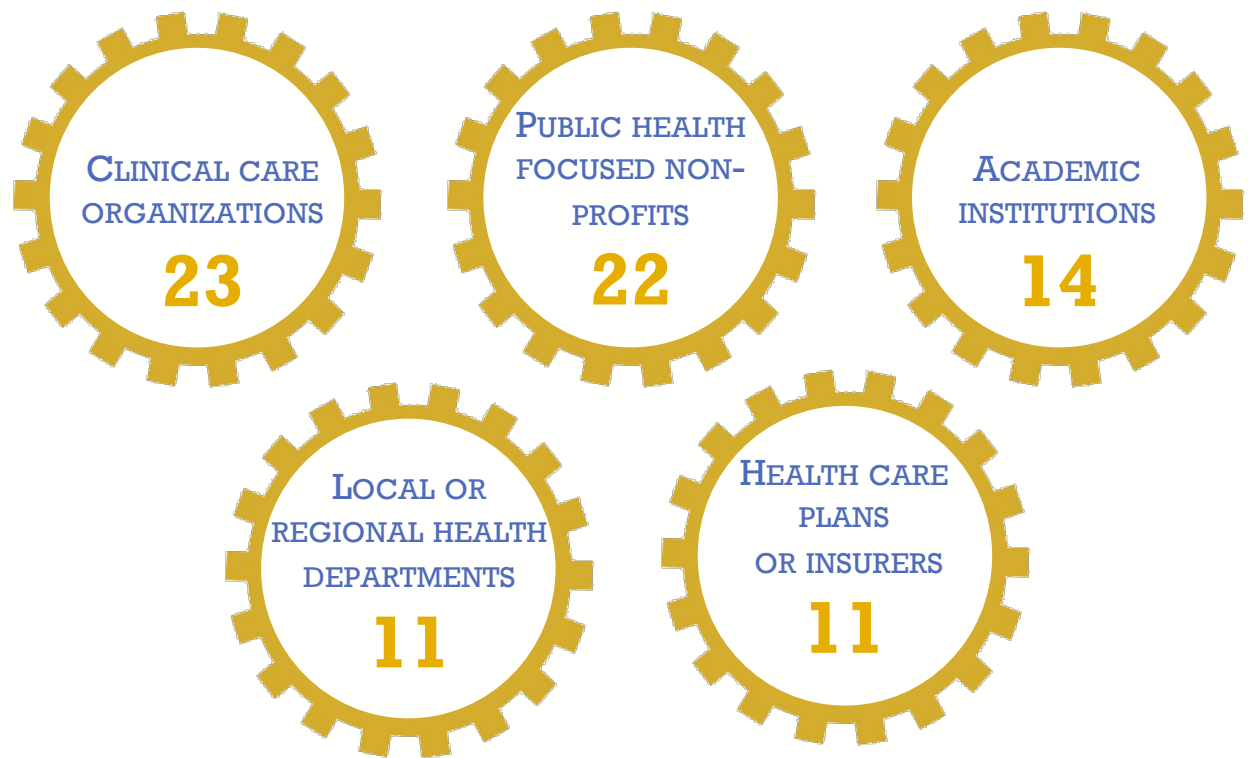
- Who are grantees **partnering** with?
- What is the **reach** of the CRCCP?
- Which **EBIs and SAs** are implemented in CRCCP Clinics?
- Are **screening rates** increasing in CRCCP clinics?
- Do changes in screening rates vary by **clinic setting** or other factors?





# Non-health system partners are critical to the program.

## Grantees' five most common partners:



Source: PY3 Grantee Survey, 30 reporting

## 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

# The reach of the CRCCP grantees is significant.



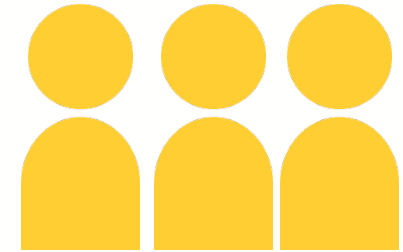
**218**  
Health  
systems



**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%**

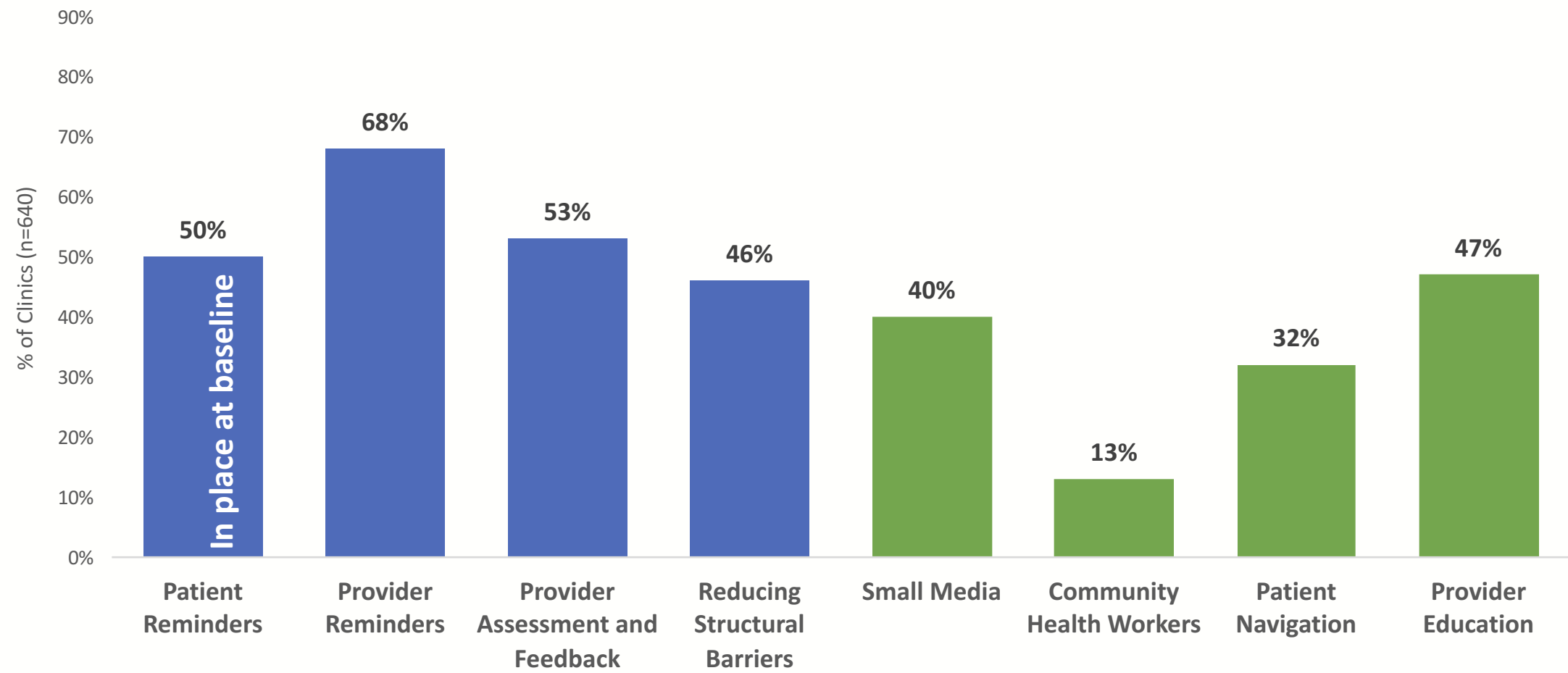
serve high  
percentages of  
uninsured patients  
(>20%)

**52%**

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

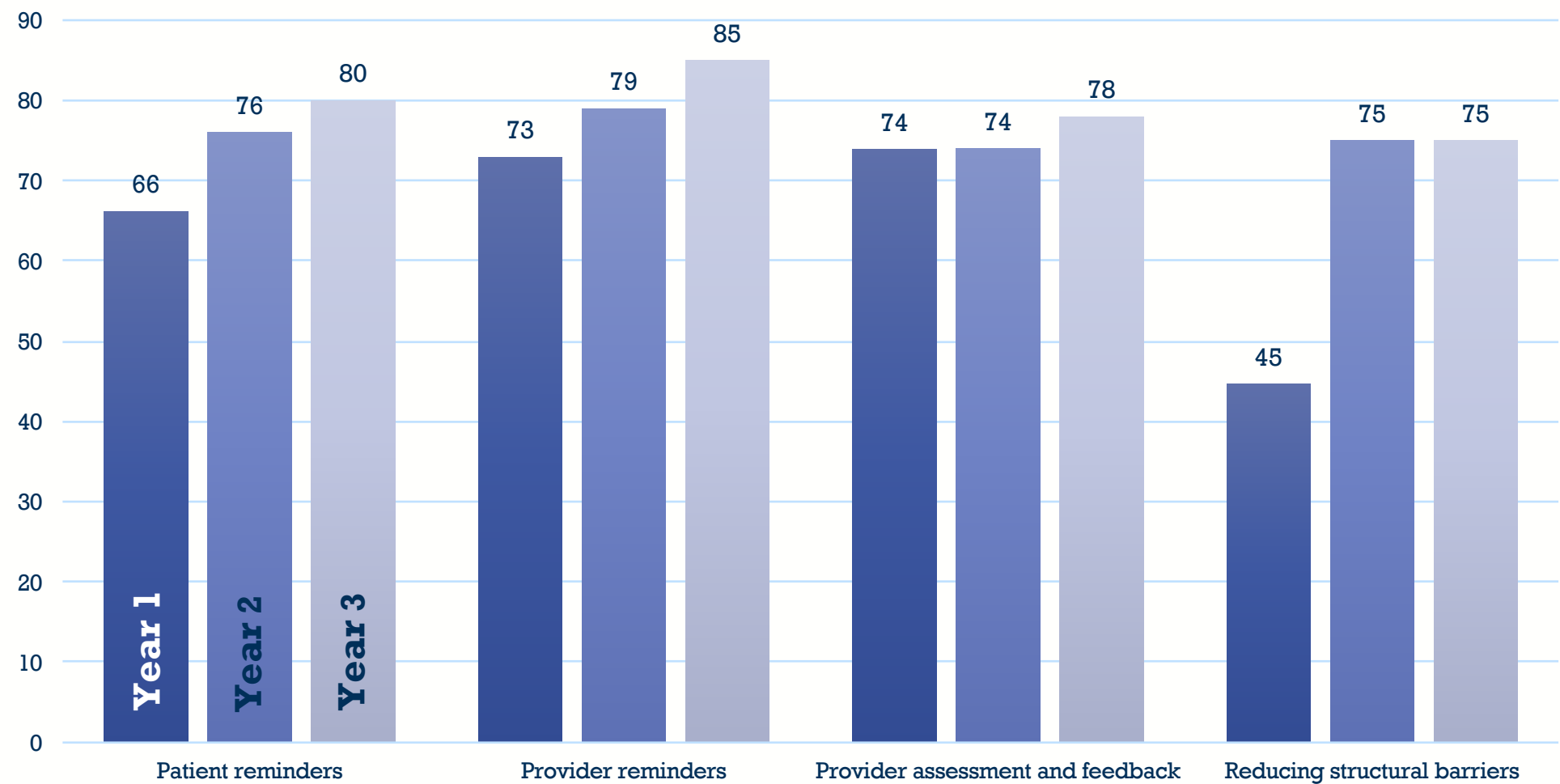
Source: Clinic data submission, Sep. 2018, Component 1 only, all 30 reporting (Includes clinics recruited in PY1, 2, 3 and through Sep. 2019 of PY4)

# Many clinics had EBIs and SAs in place before implementing CRCCP activities.



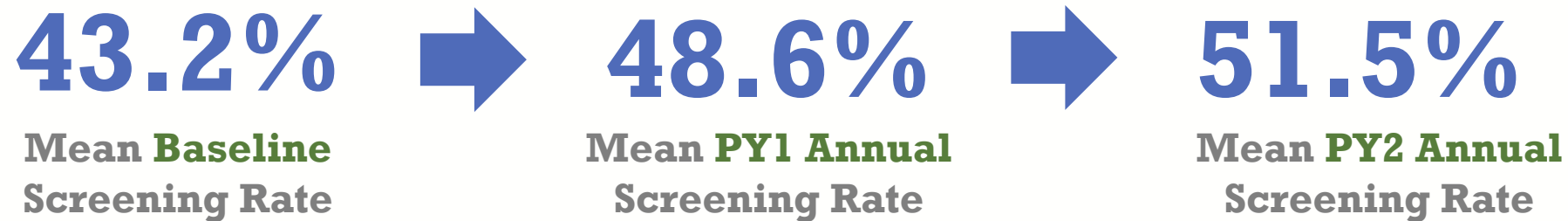
Source: Clinic data submission, Sep. 2018, Component 1 only, all 30 reporting (n=640 Includes clinics recruited through PY3 with at least 1 annual record)

# Percent of PY1 Clinics with EBIs in place over time



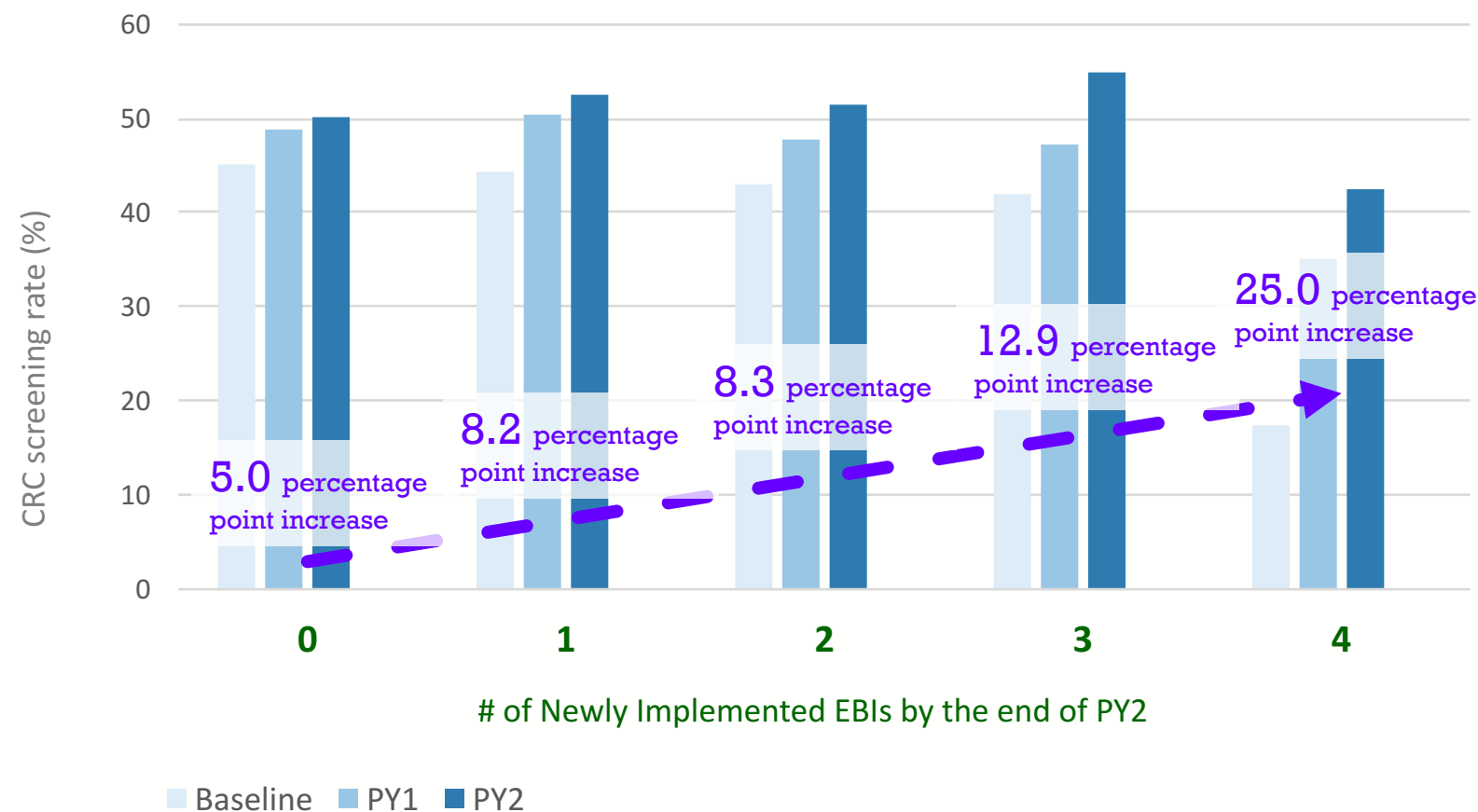
Source: Clinic data submission, Component 1 clinics enrolled in PY1 only, 30 grantees reporting: PY1 n= 414; PY2 n=390; PY3 n=368

Among clinics enrolled in PY1, CRC screening rates increased by **8.3 percentage points** from baseline to PY2.



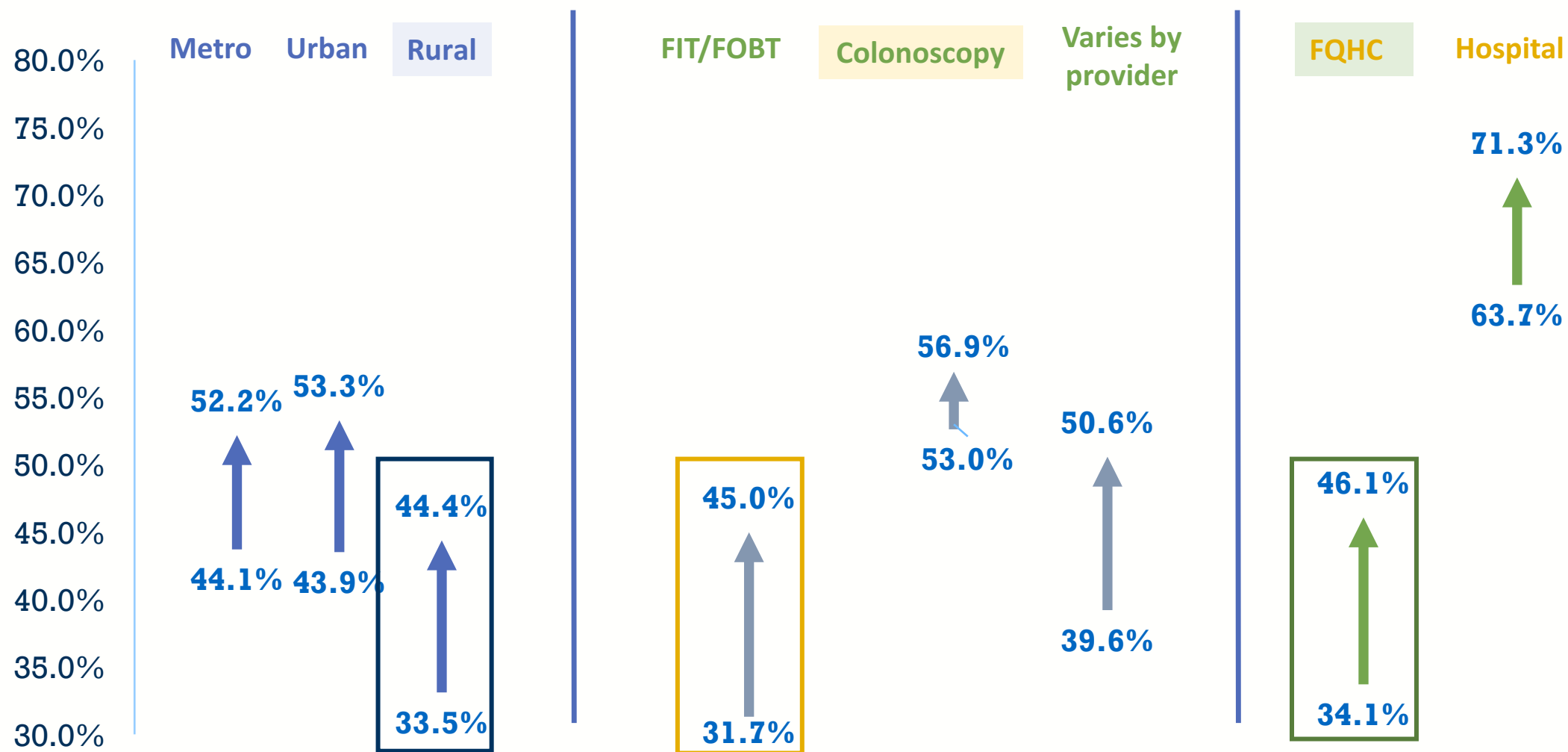
Source: Clinic data submission, Component 1 only, 29 reporting, thru April 2018. Baseline n=346; PY1 n= 336; PY2 n= 319. Screening rate % reflects weighted mean rate.

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**

DeGroff A, Sharma K, Satsangi A, Kenney K, Joseph D, Ross K, Leadbetter S, Helsel W, Kammerer W, Firth R, Rockwell T, Short W, Tangka F, Wong F, Richardson L. (2018). **Increasing colorectal cancer screening in health care systems using evidence-based interventions.** *Prev Chronic Dis.*

# 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

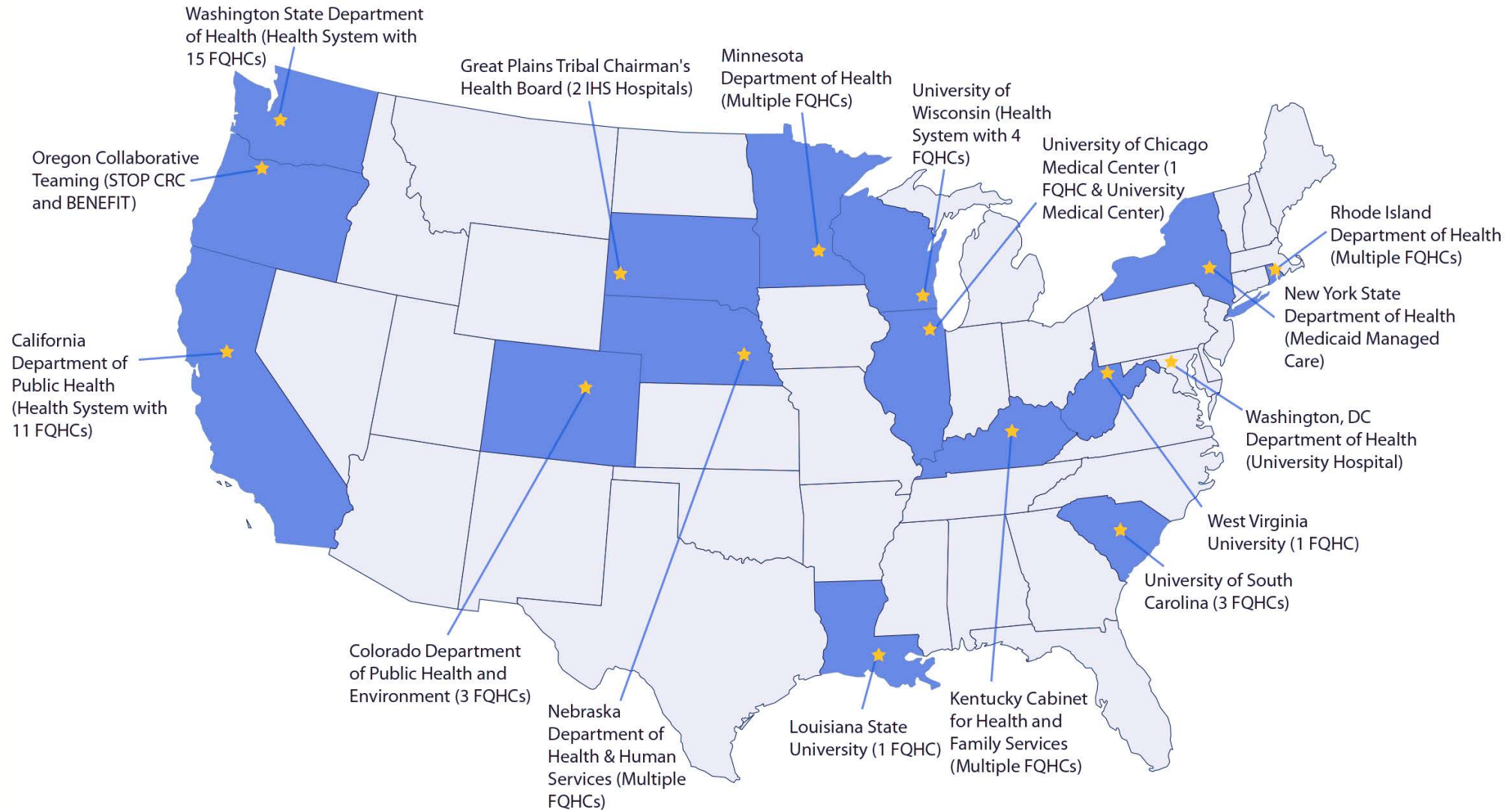


# Objectives

- **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



# Interventions at a Glance

## Patient and Provider Incentives

California

Kentucky

New York

## Navigation for FIT & Colonoscopy

University of Chicago

Washington D.C.

Minnesota

Great Plains

## FIT Mailings and Processes

Washington

Oregon

## Health Information Technology - Azara

University of Wisconsin

Louisiana

## Integrated Cancer Screening Programs

Nebraska

Rhode Island

## Multicomponent Interventions

Colorado

University of South Carolina

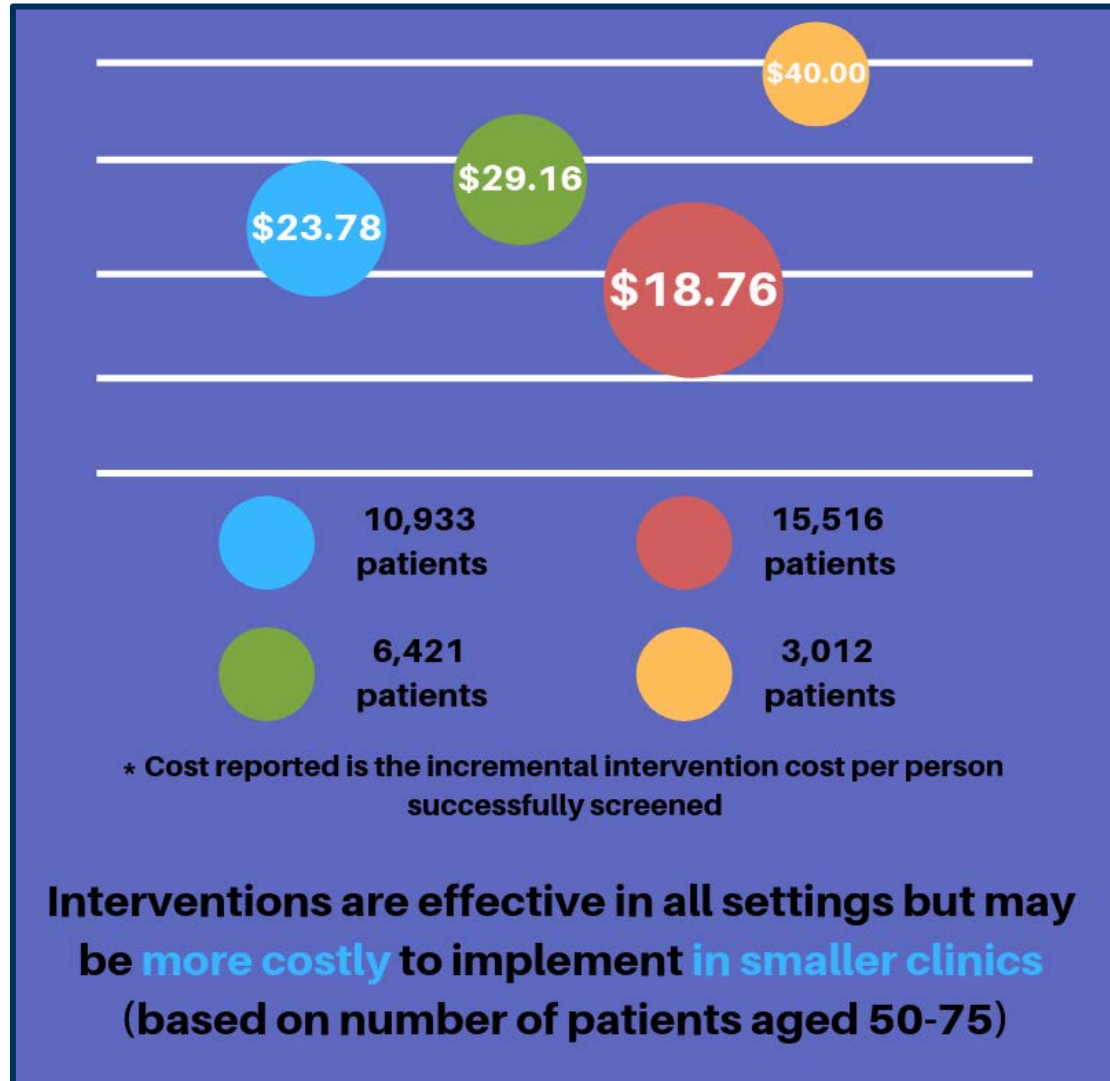
West Virginia University

# Summary of Studies by Learning Laboratory Participants: Effectiveness & Cost of Multilevel Interventions

	Health Systems			
	1	2	3	4
Time period	2 years	3 years	12 months	12 months
Change in screening uptake (%)	18.1	9.7	7.1	18.9
Implementation cost (\$)	\$60,224	\$27,497	\$30,148	\$13,278
Additional screens (#)	2,533	943	1,607	332
Incremental intervention cost per person (\$)	\$23.78	\$29.16	\$18.76	\$40.00

Tangka FKL, Subramanian S, Hoover S, Lara C, Eastman C, Glaze B, Conn ME, DeGroff A, Wong FL, Richardson LC.  
[Identifying optimal approaches to scale up colorectal cancer screening: an overview of the centers for disease control and prevention \(CDC\)'s learning laboratory.](#)  
Cancer Causes Control. 2018 Dec 14. doi: 10.1007/s10552-018-1109-x. [Epub ahead of print]

# Incremental Intervention Cost per Person Successfully Screened



Tangka FKL, Subramanian S, Hoover S, Lara C, Eastman C, Glaze B, Conn ME, DeGroff A, Wong FL, Richardson LC.

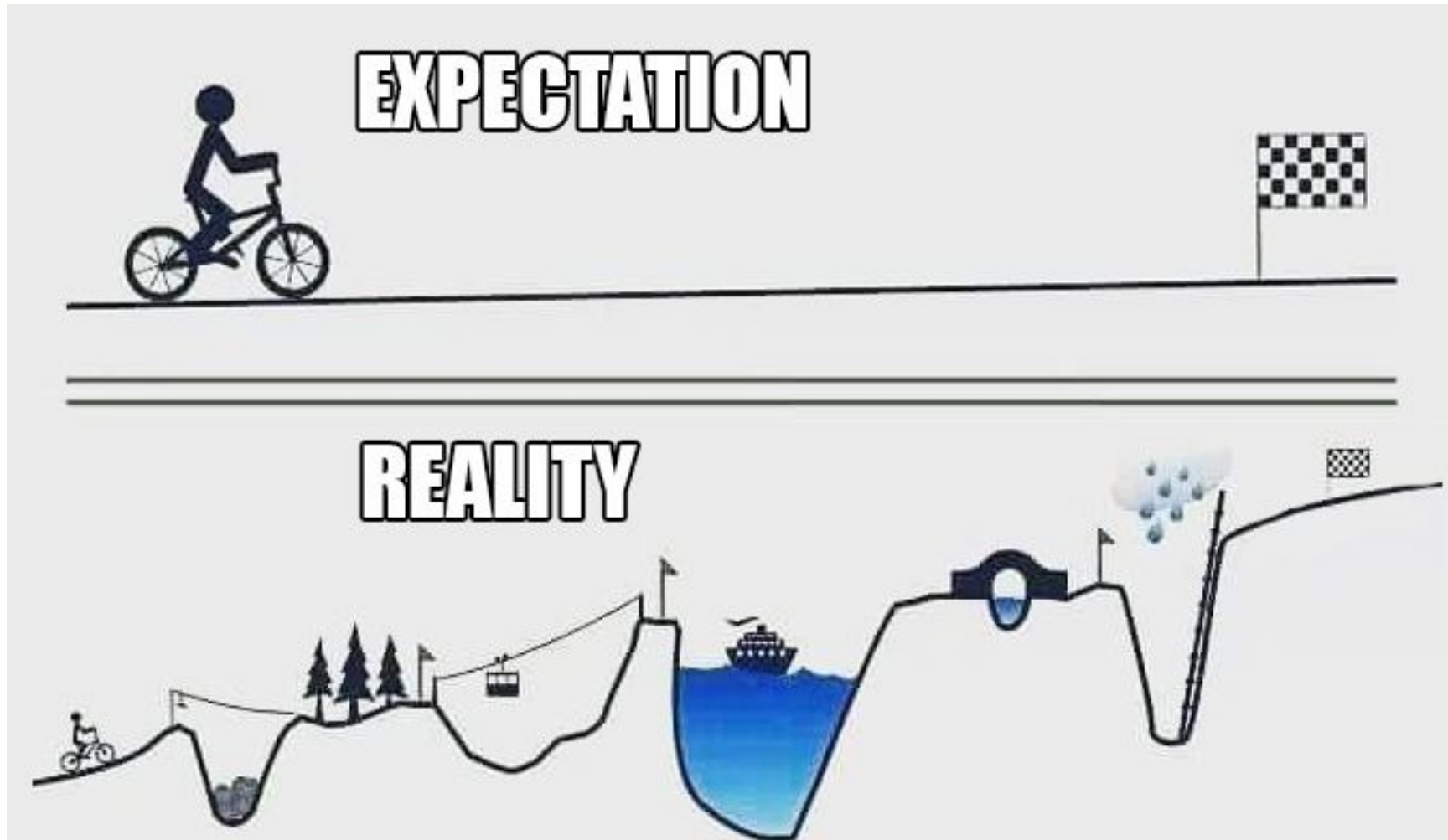
[Identifying optimal approaches to scale up colorectal cancer screening: an overview of the centers for disease control and prevention \(CDC\)'s learning laboratory.](#)

Cancer Causes Control. 2018 Dec 14. doi: 10.1007/s10552-018-1109-x. [Epub ahead of print]



Sustainability



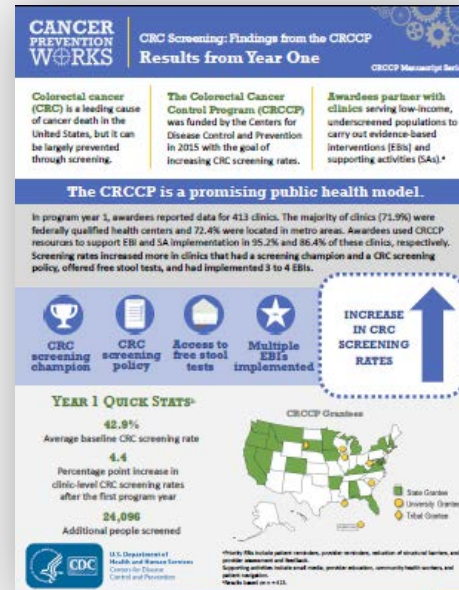


Dissemination

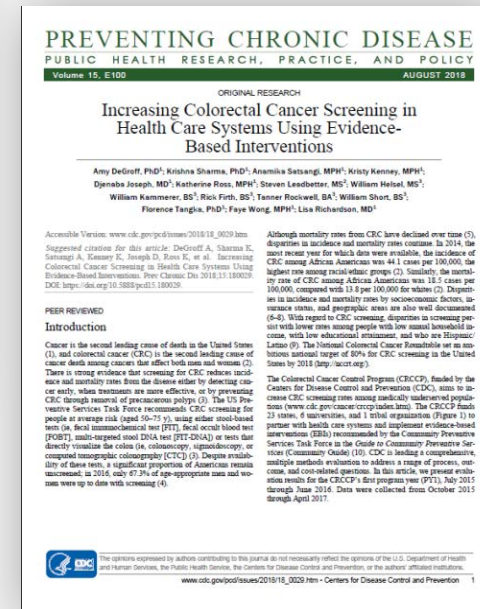


# Dissemination of Results

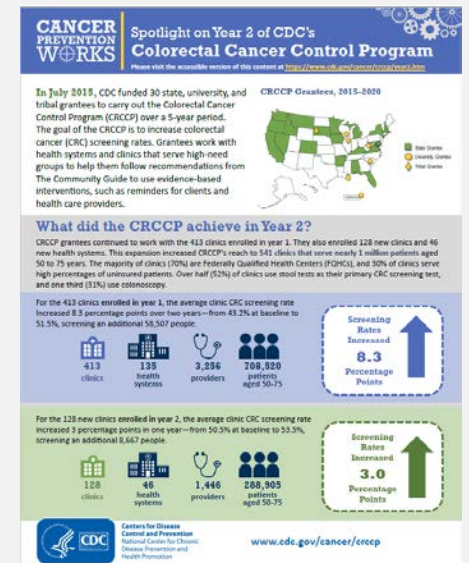
- Manuscripts
- Manuscript Summary Series
- Program Spotlights
- Conference Presentations



## Manuscript Summaries



## Manuscripts



## Program Spotlight

# Publications to date

- Satsangi A, DeGross A. (2016). **Planning a National-level outcome evaluation of the Colorectal Cancer Control Program.** *J Ga Public Health Assoc.*
- DeGross A, Sharma K, Satsangi A, Kenney K, Joseph D, Ross K, Leadbetter S, Helsel W, Kammerer W, Firth R, Rockwell T, Short W, Tangka F, Wong F, Richardson L. (2018). **Increasing colorectal cancer screening in health care systems using evidence-based interventions.** *Prev Chronic Dis.*
- Kim K, Randal F, Johnson M., Quinn M, Maene C, Hoover S, Richmond-Reese V, Tangka F, Joseph D, Subramanian S. (2018). **Economic assessment of patient navigation to colonoscopy-based colorectal cancer screening in the real-world setting at the University of Chicago Medical Center.** *Cancer, 124* (21), 4137-4144.
- Subramanian S, Hoover S, Tangka F, DeGross A, Soloe C, Arena L, Schlueter D, Joseph D, Wong F. (2018). **A conceptual framework and metrics for evaluating multicomponent interventions to increase colorectal cancer screening within an organized screening program.** *Cancer, 124* (21), 4154-4162.
- Lara C, Means K, Morwood K, Lighthall W, Hoover S, Tangka F, French C, Gayle K, DeGross A, Subramanian S. (2018). **Colorectal cancer screening interventions in two health care systems serving disadvantaged populations: Screening uptake and cost-effectiveness.** *Cancer, 124* (21), 4130-4136.
- Kemper K, Glaze B., Eastman C, Waldron R, Hoover S, Flagg T, Tangka F, Subramanian S. (2018). **Effectiveness and cost of multilayered colorectal cancer screening promotion interventions at federally qualified health centers in Washington State.** *Cancer, 124* (21), 4121-4129.
- Tangka F, Subramanian S, DeGross A, Wong F, Richardson L. (2018). **Identifying optimal approaches to implement colorectal screening through participation in a learning laboratory.** *Cancer, 124* (21), 4118-4120.
- Dacus H, Wagner V, Collins E, Matson J, Gates M, Hoover S, Tangka F, Larkins T, Subramanian S. (2018). **Evaluation of patient-focused interventions to promote colorectal cancer screening among New York State Medicaid managed care patients.** *Cancer,*
- Tangka F, Subramanian S, Hoover S, Lara C, Eastman C, Glaze B, Conn M, DeGross A, Wong F, Richardson L. (2018). **Identifying optimal approaches to scale up colorectal cancer screening: An overview of the Centers for Disease Control and Prevention (CDC)'s learning laboratory.** *Cancer Causes Control.*

# Thank you!

Go to the official federal source of cancer prevention information:

[www.cdc.gov/cancer](http://www.cdc.gov/cancer)



Division of Cancer Prevention and Control

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*The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.*