



Increasing CRC Screening Rates across Underserved Populations: Strategies and Opportunities to STOP Colon Cancer (STOP CRC)

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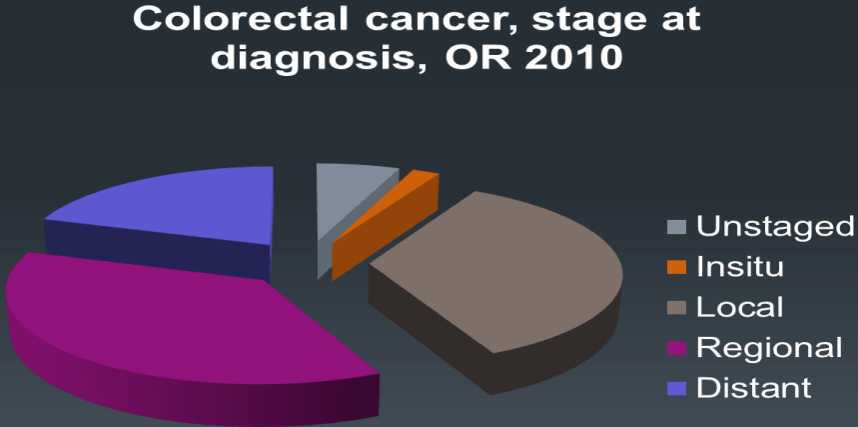
Beverly Green, MD, MPH²

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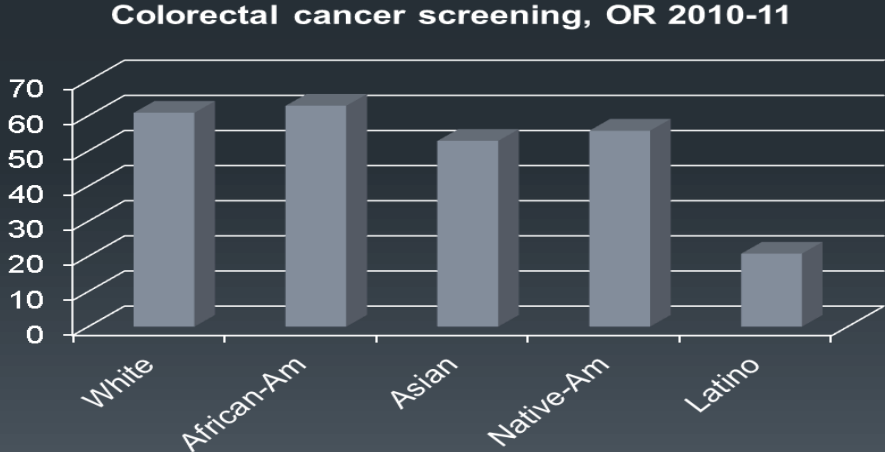
Colorectal Cancer statistics for Oregon

Stage of CRC detection*



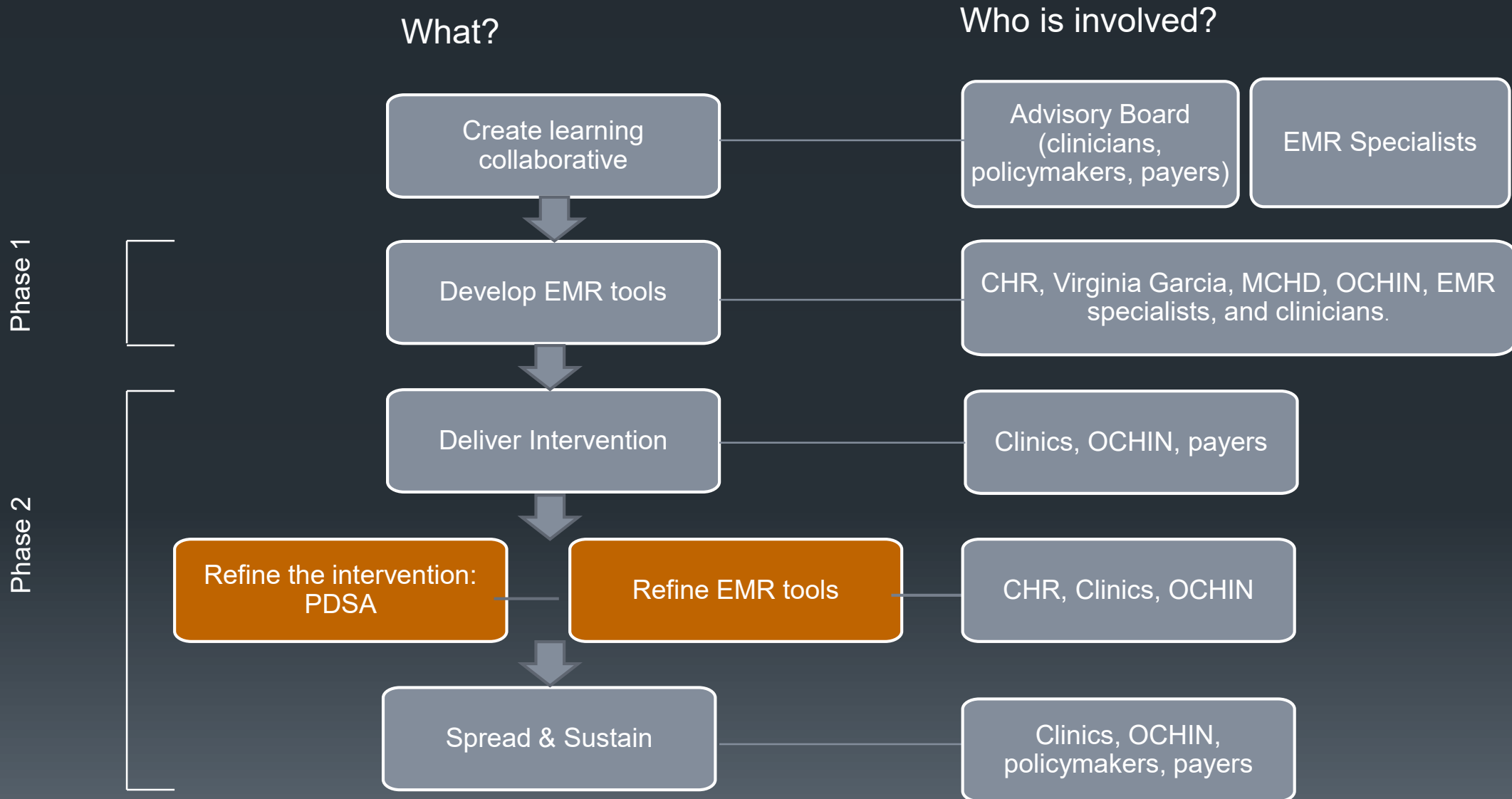
*Source: Oregon State Cancer Registry

CRC screening disparity*



*Source: Behavioral Risk Factor Surveillance Survey

STOP CRC Program Activities



STOP CRC intervention

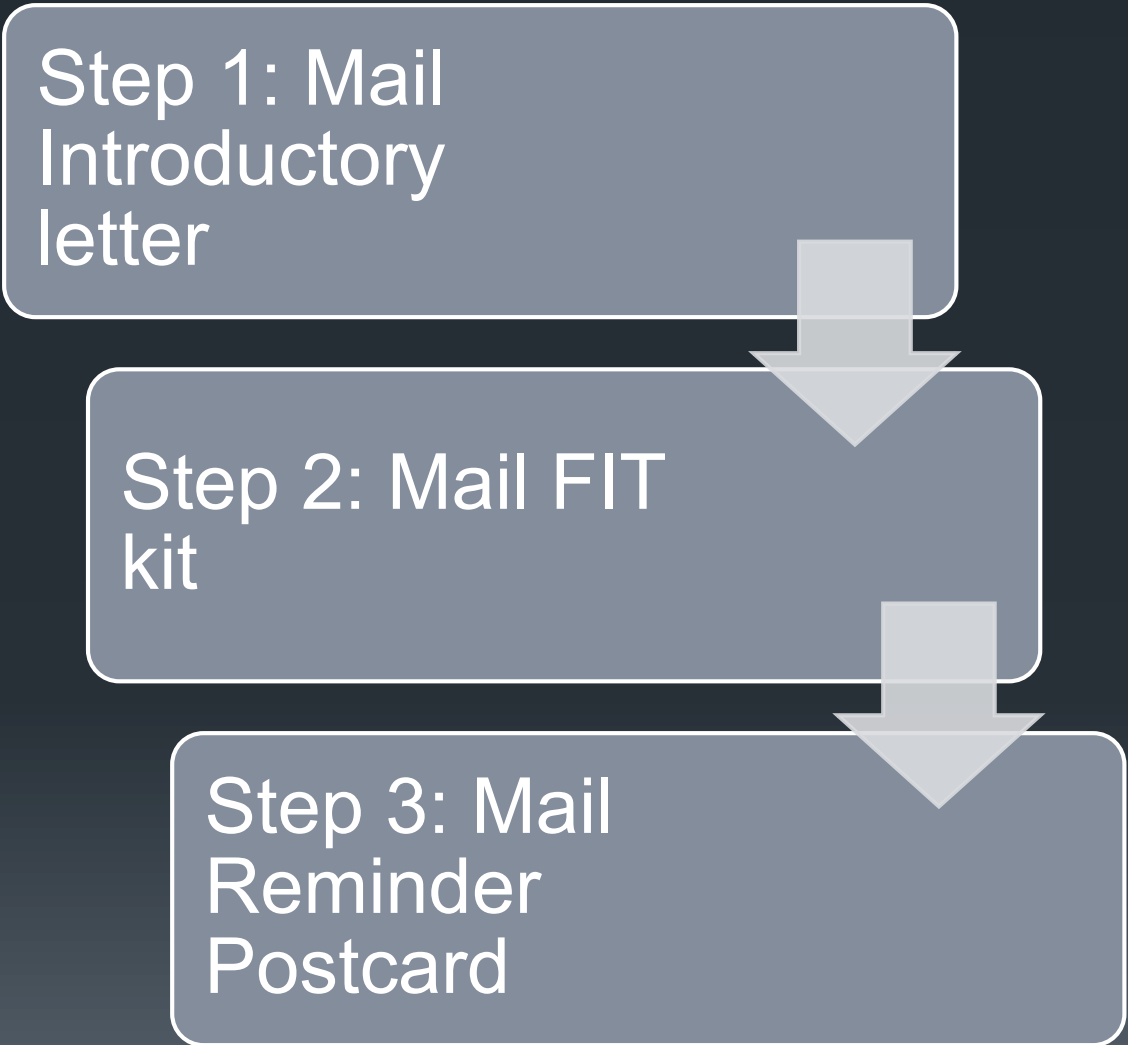
EMR tools in Reporting Workbench, driven by Health Maintenance;

Step-wise exclusions for:

- Invalid address
- Self-reported prior screening
- Completion of CRC screening

Improvement cycle (e.g. Plan-Do-Study-Act)

Step 1: Mail
Introductory
letter



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graph TD; A[Step 1: Mail Introductory letter] --> B[Step 2: Mail FIT kit]; B --> C[Step 3: Mail Reminder Postcard];
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Step 2: Mail FIT
kit

Step 3: Mail
Reminder
Postcard

Participating clinics*

- Open Door Community Health Centers (4)
- Multnomah County Health Department (6)
- La Clinica del Valle (3)
- Mosaic Medical (4)
- Virginia Garcia Memorial Health Center (2)
- Community Health Center Medford (3)
- Benton County Health Department (2)
- Oregon Health & Science University (OHSU) (2)

*Overall: colonoscopy screening in past 10 years: 5%;
fecal testing in past year: 7.5%



Clinic partnership

- Founded in 1975
- Provides over 132,000 office visits to 34,000+ patients per year in Washington and Yamhill Counties
- Operates 5 primary care clinics, 3 dental offices, and 2 school-based health centers.

Virginia Garcia Memorial Health Center

Clinic	N Patients aged 50-74	% Hispanic aged 50-74	% aged 50-74 who obtained FIT or FOBT
#1	898	73	3.7
#2	1562	52	3.9
#3	1495	31	5.2
#4	1235	38	7.6



STOP CRC Pilot Findings

STOP CRC Intervention Activities and Outcomes

	<i>Auto</i> Intervention	<i>Auto Plus</i> Intervention
Letters mailed	112	101
FIT kits mailed	109	97
Reminder postcards mailed	95	84
Reminder call delivered	NA	30*
FIT kits complete	44 (39.3%)**	37 (36.6%)**
Positive FIT result	5 (12.5%)	2 (5.7%)

*34 patients were not reached after 2 attempts

** FIT completion of 24% was expected

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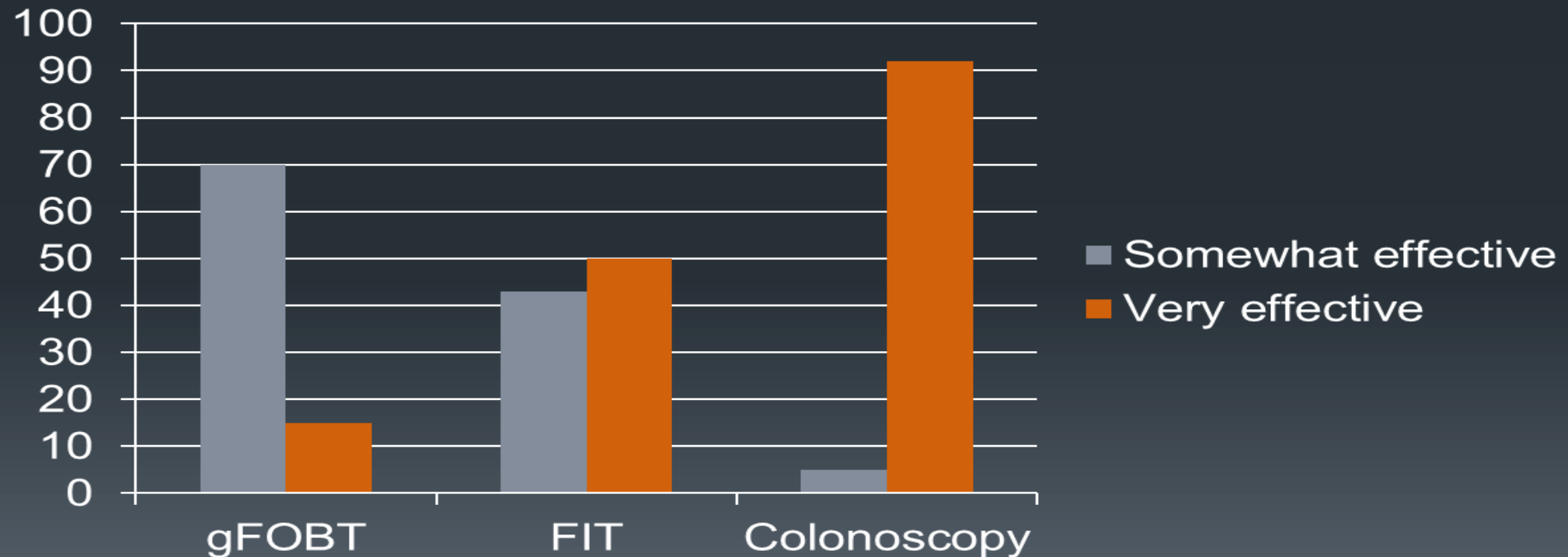


Summary of health center data

- QUALITATIVE AND SURVEY DATA
- Data were gathered from all STOP CRC health center:
 - Provider surveys (n = 120)
 - Leadership interviews (n = 40)
 - Organizational surveys (n = 9)

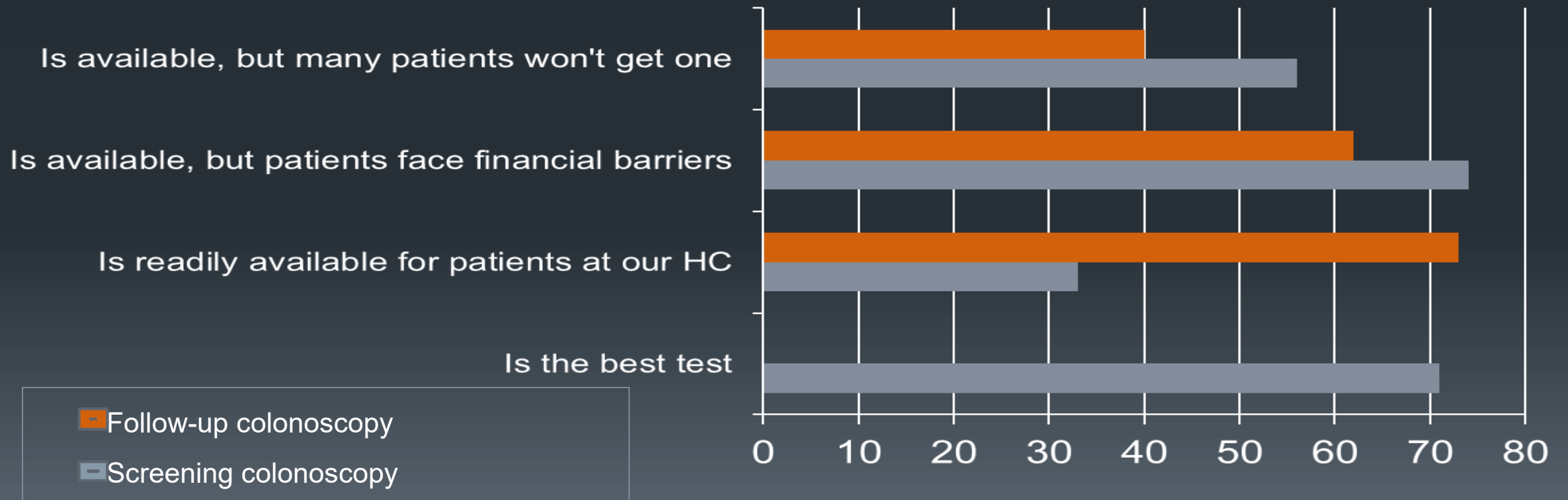
Provider survey findings (n = 120)

Under optimal circumstances, how effective do you believe the following screening procedure are for reducing CRC mortality in average-risk patients?



Provider survey findings (n = 120)

Please indicate whether you agree or disagree with the following statements...



Provider survey findings (n = 120)

How often do you encounter the following barriers to CRC screening.

% sometimes or usually



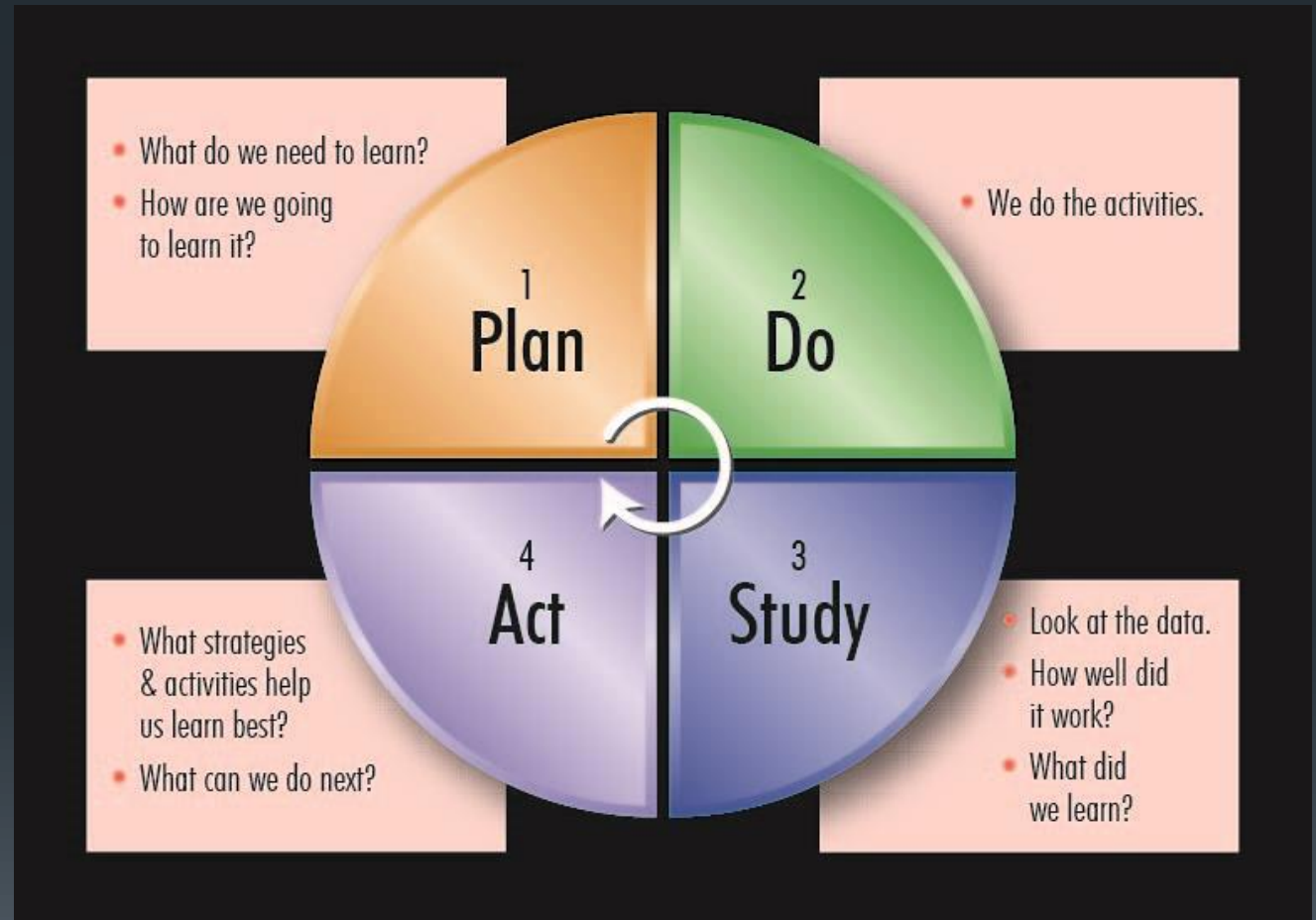


Recent Milestones

- All clinics have implemented the intervention;
- Held work session with EMR sites specialist to prioritize tool refinements;
- Held third full-day advisory board meeting;
- Partnering with Health Plans on program sustainability;
- Launched Plan-Do-Study Act Cycles at all clinics;
- Analyzed findings from 2 pilot clinics.

Pragmatic adaptations: Plan-Do-Study-Act Cycles

- Partnered with practice improvement facilitators trained in PDSA;
- Held 1.5 hour in-person meetings with leadership teams from all sites; provided some site-specific data
- Asked sites to submit a PDSA plan.



PDSA plan summary



Health Center	Issue/ Question	Plan
1	Too many kits w/o collection date.	Test new materials to prompt patients to write collection date.
2	Patients must drop off test.	Obtain/use metered envelopes to allow patients to return kits by mail.
3	Prior colonoscopies missing in EMR.	Test mailing to patients with a clinic visit in past 6 months, rather than past year.
4	How effective is mailing kits to patients with upcoming clinic visits?	Test mailing to patients 1-2 weeks prior to scheduled appointments.
5	Can follow-up phone calls improve return rate?	Test phone call reminders to patients who have not completed their test.
6	Too many kits to mail.	Test staffing plans.
7	Clinic burden is high.	Mail in small batches.
8	Is the introductory letter needed?	Mail kits w/ and w/o intro letter.



PDSA example: Introductory letter and kit insert

Dear Client,

There is an easy test that can find signs of colon cancer before you have symptoms. This test can be done at home and can save your life. You will get this test if you are between the ages of 50 and 74 and have **not** had a colonoscopy in the past 9 years.

Estimado(a) Cliente,
Existen análisis fáciles para encontrar señales de cáncer de colon antes de que tenga síntomas. Estos análisis pueden hacerse en casa y pueden salvar su vida. Usted recibiera este análisis si tiene entre 50 y 74 años de edad y **no** ha tenido una colonoscopia en los últimos 9 años.

Here is your Insure Fit test. Do the test at home and send it back to us. The test will look at the health of your colon to see if there is any blood in your poop. Finding these warning signs early gives you a better chance of getting the best treatment.

Aquí esta su análisis Insure FIT. Haga lo en casa y devuélvanoslo. El examen verá la salud de su colon para ver si hay sangre en su popó. Encontrar estas señales de advertencia temprano le da la mejor posibilidad de un

- Use 2 different poop samples. 1 for slot A, and a different 1 for slot B.
- Write the date on the sticker at the time you do each test.
- Send back the test in the pre-paid yellow envelope in 3 days of finishing the test.

- Use 2 different poop samples. 1 for slot A, and a different 1 for slot B.
- Escriba la fecha en la etiqueta al momento de hacer cada lado.
- Devuelva el examen en el sobre amarillo dentro de 3 días siguientes de haber completado el análisis.

Don't forget to put the date you collected your poop sample

NOTE: This text will be translated in Spanish, Cantonese and Russian

If you have any questions, please call your care team at 503-988-3601.

Si tiene cualquier pregunta, llame a su equipo de salud al 503-988-3601.

Thank you,

Gracias,

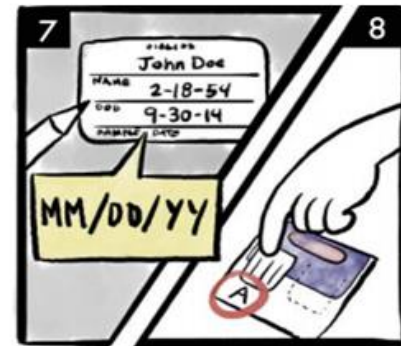
Meena Mital, MD
Deputy Medical Director

Meena Mital, MD
Directora Médica Adjunta

MID COUNTY HEALTH CENTER : 12710 SE DIVISION ST PORTLAND, OR 97236
PHONE: 503-988-3601 FAX: 503-988-4144

DOB: 01/01/1980
MRN: 1234567
Date: _____

Last Name, First Name
DOB: 01/01/1980
MRN: 1234567
Date: _____





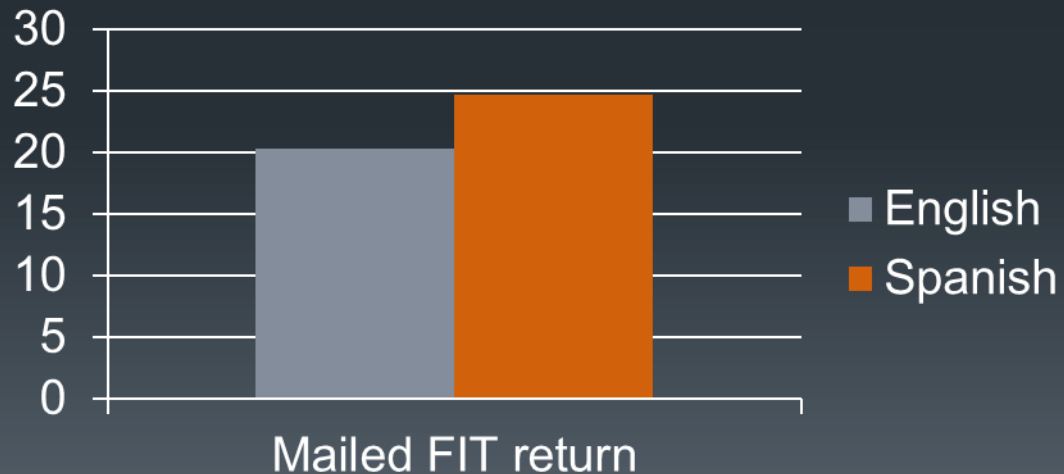
PDSA Summary

- Process has identified implementation issues and unintended consequences;
- Has empowered clinics to identify and address local problems;
- Has provided research team with useful knowledge about implementation challenges.

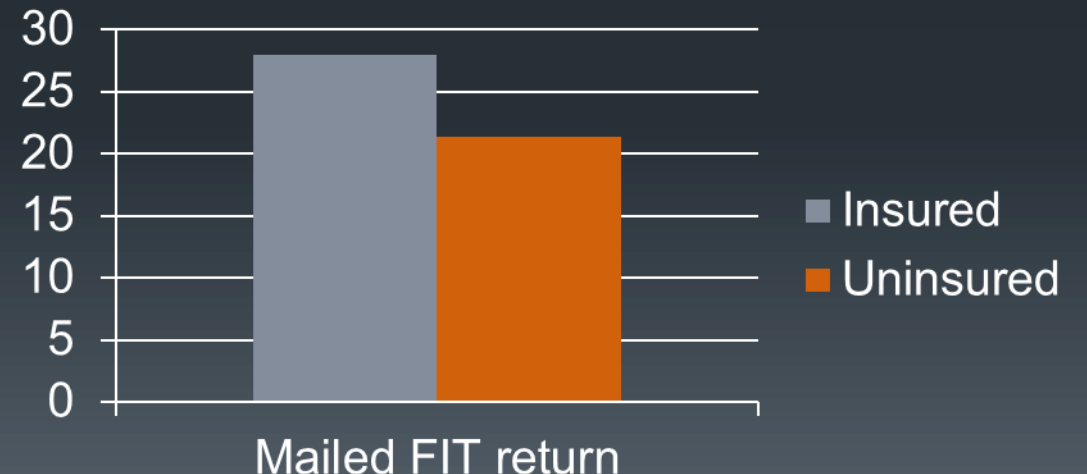
Findings from pilot clinics

- Direct-mail program may address some health disparities
 - 2 VG clinics participated in Year 1 pilot;
 - Delivered STOP CRC program to all eligible patients (n = 1034; 710 Latino)

FIT Return, by Language (n = 1753)



FIT Return, by Insurance status (n = 1753)



Barriers Score Card



Barrier	Level of Difficulty				
	1	2	3	4	5
Enrollment and engagement of patients/subjects	X				
Engagement of clinicians and Health Systems		X			
Data collection and merging datasets	X				
Regulatory issues (IRBs and consent)	X				
Stability of control intervention		X			

1 = little difficulty

5 = extreme difficulty



Challenges

- Concerns that analytic plan may not be flexible for pragmatic study with real-time tools;
- Leadership, provider, and staff turnover at several sites (n = 3);
- Influx of newly insured patients has resulted in higher clinic burden;
- Multiple steps involved in ...
 - Selecting a FIT kit
 - Establishing lab interfaces
 - Testing EMR tools
 - Updating Health Maintenance with claims data



Analytic plan

- Primary outcomes
 - Rate of fecal testing 12 months after identified as eligible
- Secondary outcomes
 - Any CRC screening 12 months after intervention
 - CRC HEDIS score
 - Reach
 - Adoption (in YR01 among intervention sites, and in YR02 among usual care sites)
 - Implementation (by intervention component)
 - Maintenance (patient-level and clinic-level)

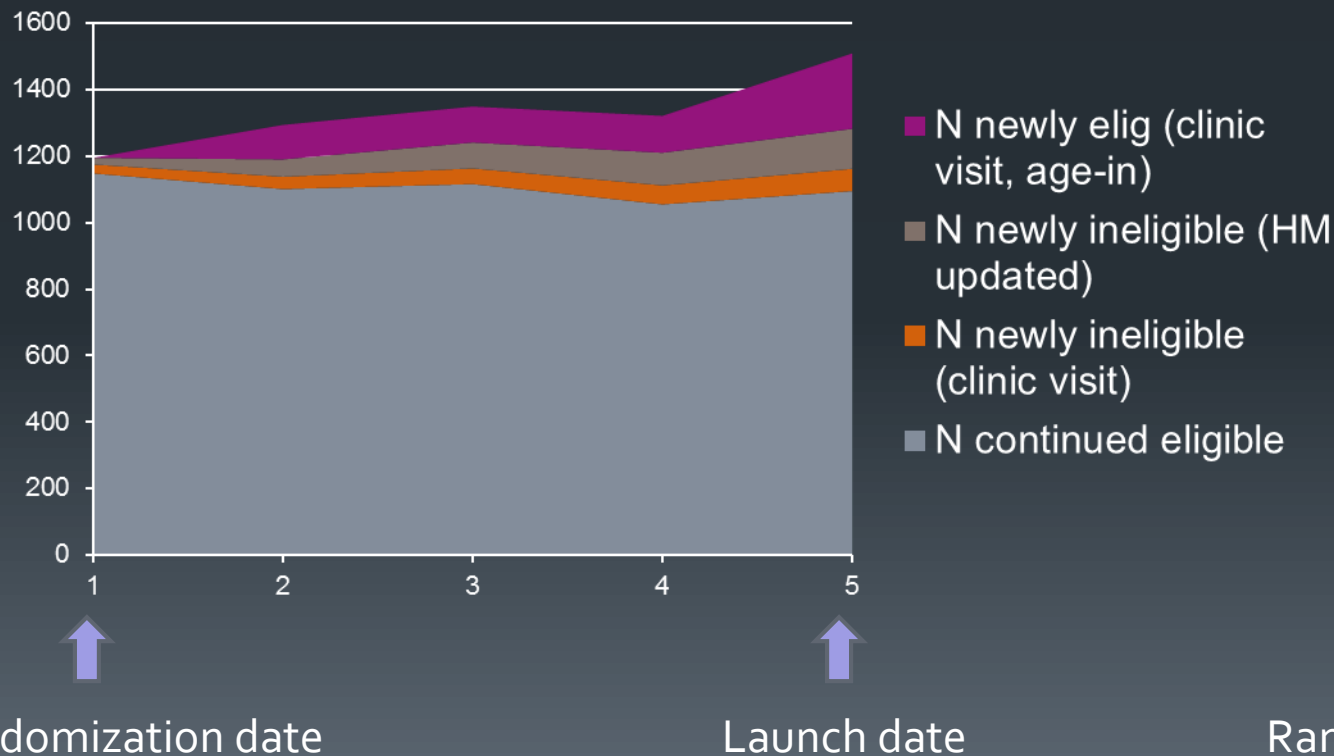


Concerns with analytic plan

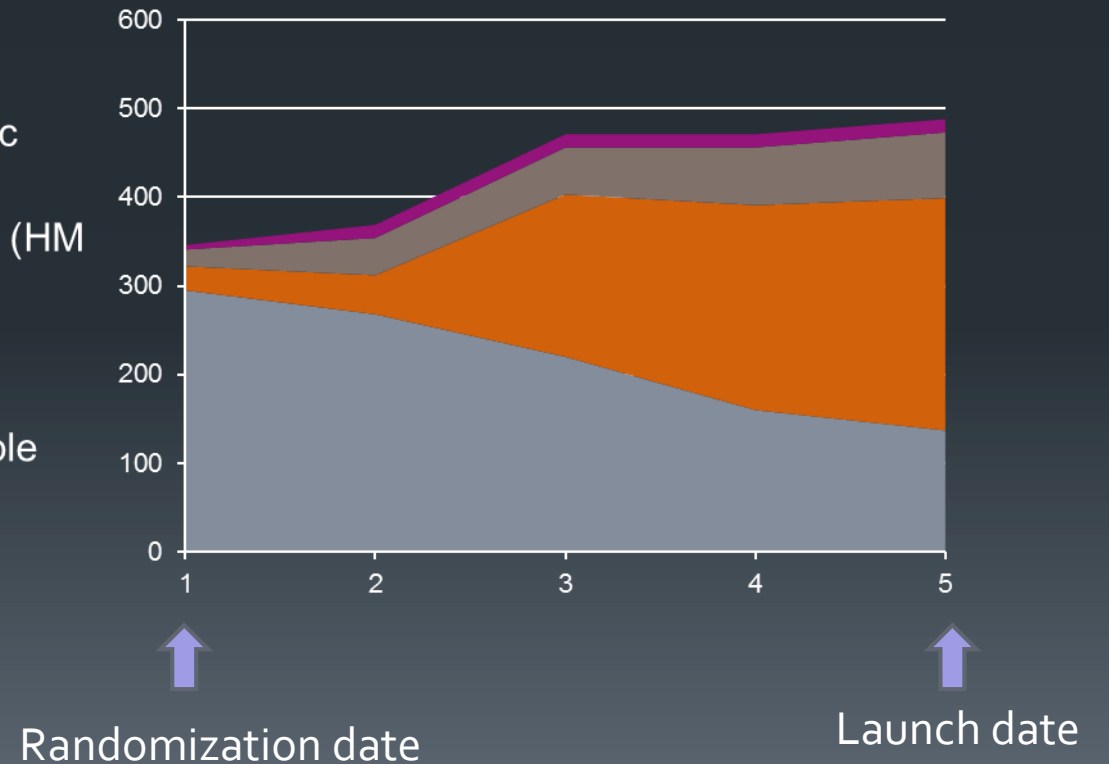
- Overlap in measurement and accrual periods, for our intervention and usual care patients in Year 2;
 - Not practical to delay roll-out to usual care sites another year;
 - Cannot modify EMR tools for usual care sites only.
- Discordance between the real-time lists viewed by clinic staff (viewed monthly or quarterly) and back-end reports gathered for research (tally patients ever eligible);
 - Rule for establishing ‘active patient’ = visit in past year;
 - ‘Research denominator’ > ‘clinic denominator’; thus effect size will be underestimated.
- Delays in implementation due to multiple external and internal factors.

Impact of changes in clinic volumes

Maintenance of clinic volumes



Drop in clinic volumes



Grand Round Presentation by Dr. Bill Vollmer

- April 24th





Multiple steps involved in start-up

- Partnership with Medicaid Health Plans in Oregon to develop readiness checklist and training to prepare non-study clinics for STOP CRC;
- Incorporating information into Dissemination Guide.

Project Publications

Author	Year	Title
Coronado, et al.	2013	Advantages of Wordless FIT Kit Instructions
Green et al.	2014	Navigating the Murky Waters...
Coronado et al.	2014	STOP CRC: Pilot Outcomes...
Coronado et al.	2014	EMR-embedded intervention...
Coronado et al.	2015	Reasons for non-Response to Mailed kit program...
Coronado et al.	2014	STOP CRC: Pragmatic Trial Protocol...
Green et al.	2014	BeneFITs to Increase Colorectal Cancer Screening...

Plus authorship on national workgroup publications



Summary

- Rates of colorectal cancer screening are low and particularly low for socio-economically disadvantaged groups;
- Screening (home-based fecal testing) is highly effective, inexpensive, and easy to deliver, and patients prefer fecal testing;
- STOP CRC can provide evidence to support
 - broad adoption of direct-mail program;
 - long-term sustainability;
 - improvements in program efficiency (i.e. PDSA cycles);
 - information about cost; and
 - data to drive policy changes that support use of FIT.

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- NIH:
 - Stephen Taplin, MD, MPH
 - Jerry Sals, PhD
 - Nila Geta, PhD
- STOP CRC Advisory Board



QUESTIONS?