Successful Practices to Increase CRC Screening: STOP CRC

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Outline

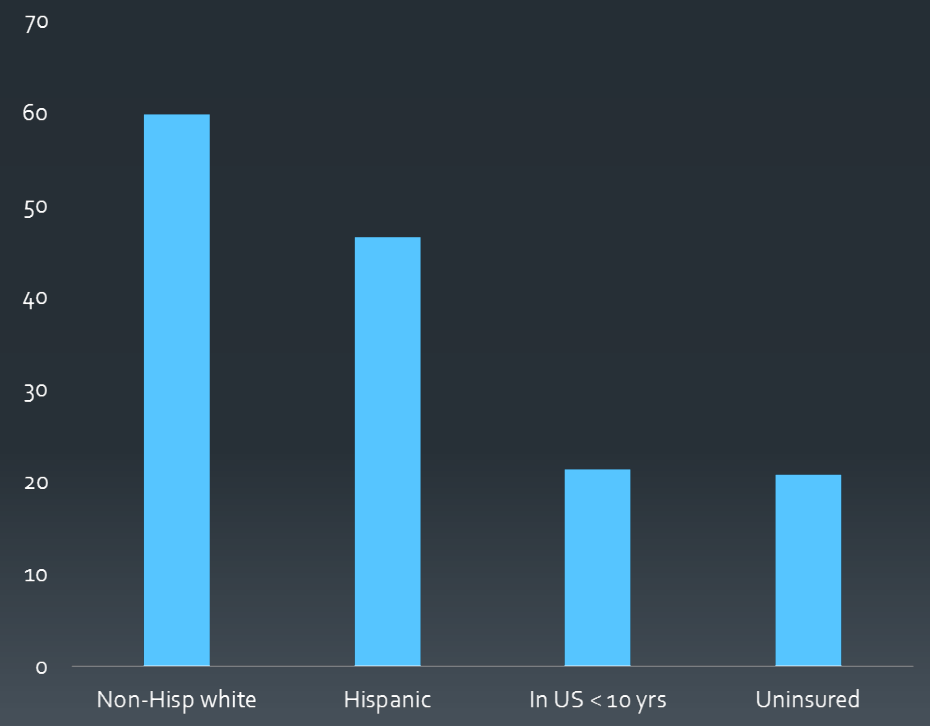
- Surprise! STOP CRC Video
- Addressing colorectal cancer is important and transformative
- Successful, cost-saving programs can be implemented

STOP CRC video

- http://www.youtube.com/watch?v=hcFFqFiMWlk

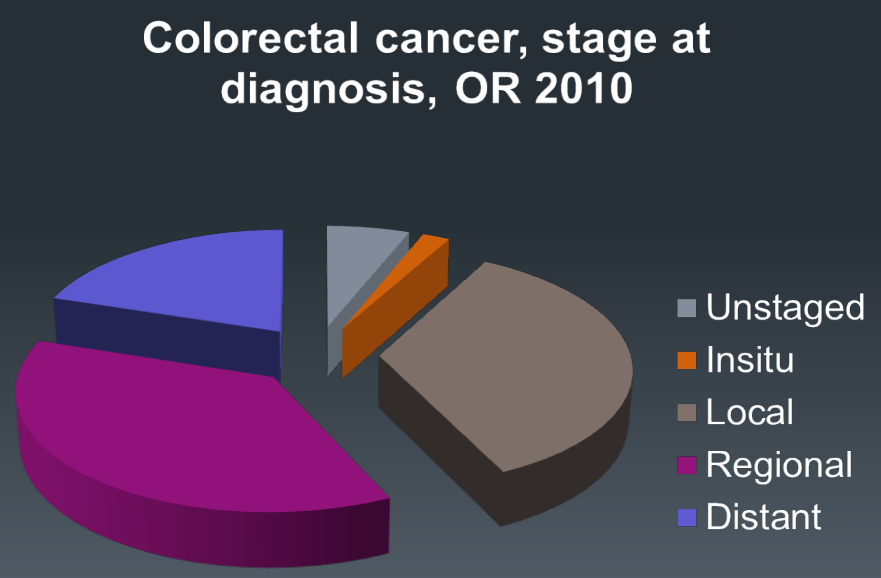
Why colon cancer screening matters…

- Colon cancer is a leading cause of cancer death;
- Nearly 1/3 of age-eligible adults in the US are not up-to-date;
- Colon cancer can be prevented; survival is
  - 93% for Stage 1
  - 8% for Stage IV;
- Screening is effective, inexpensive, easy to do;
- Those unscreened generally receive care at CHCs

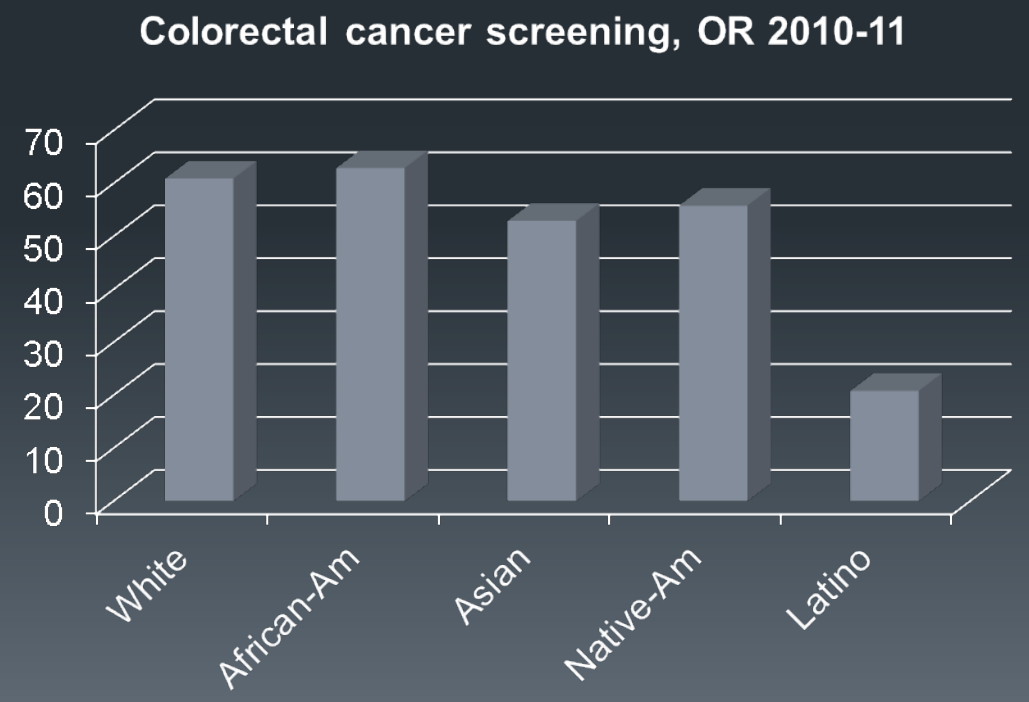


Colorectal cancer statistics for Oregon

Stage of CRC detection



CRC screening disparity



Research on patient preferences

- CRC screening rates highest if patients offered fecal testing or choice between fecal testing and colonoscopy*
- CRC screening rates highest for patients offered free FIT**
  - Free FIT (n = 1593); Free colonoscopy (n = 479); Usual care (n = 3898)
- Systematic review of 7 studies comparing FIT to gFOBT***
  - FIT screening was 11.4-16.3 percentage points higher in 6 studies
  - FIT screening was 15.4-16.3 percentage points higher in studies (n = 3) that compared a 1-sample FIT to 3-sample gFOBT

*Inadomi et al. 2012; ** Gupta et al. 2013; ***Vart et al. 2012

Strategies to increase CRC screening:

- Direct mailing of FOBT/FIT kits
- Interactive voice recognition
- Telephone reminders
- Theory-based counseling
- Decision support tools
- Patient navigation
- FOBT/FIT at time of flu shot

Direct-mail programs

Author	Year	Setting	N patients	Effect size
Green	2012	Western WA HMO	4674	24.1% any CRC test in YR1&2
Coronado	2011	Western WA FQHC	501	24.0% FOBT
Walsh	2010	Santa Clara Hosp clinic	1789	7.8% any CRC test
Sequist	2009	Boston clinic	21,860	5.8% any CRC test

Phase 1: STOP CRC Pilot-test

- Define codes and develop EMR tools
- Pilot-test the intervention in 2 clinics
- Prepare for pragmatic trial

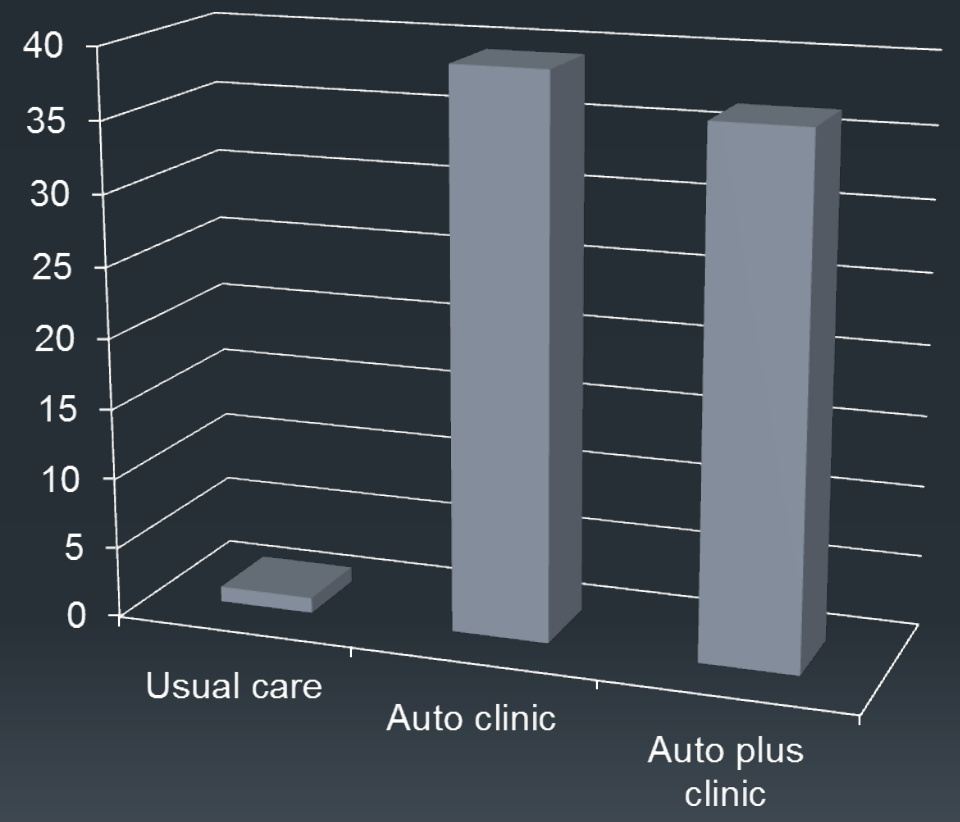
STOP CRC Pilot Findings

STOP CRC Intervention Activities and Outcomes

	Auto Intervention	*Auto Plus* 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

Fecal test completion rates*



*Auto and Auto Plus as percentage of patients mailed a FIT kit.

Coronado et al. BMC Cancer 2014

Follow-up to abnormal FITs

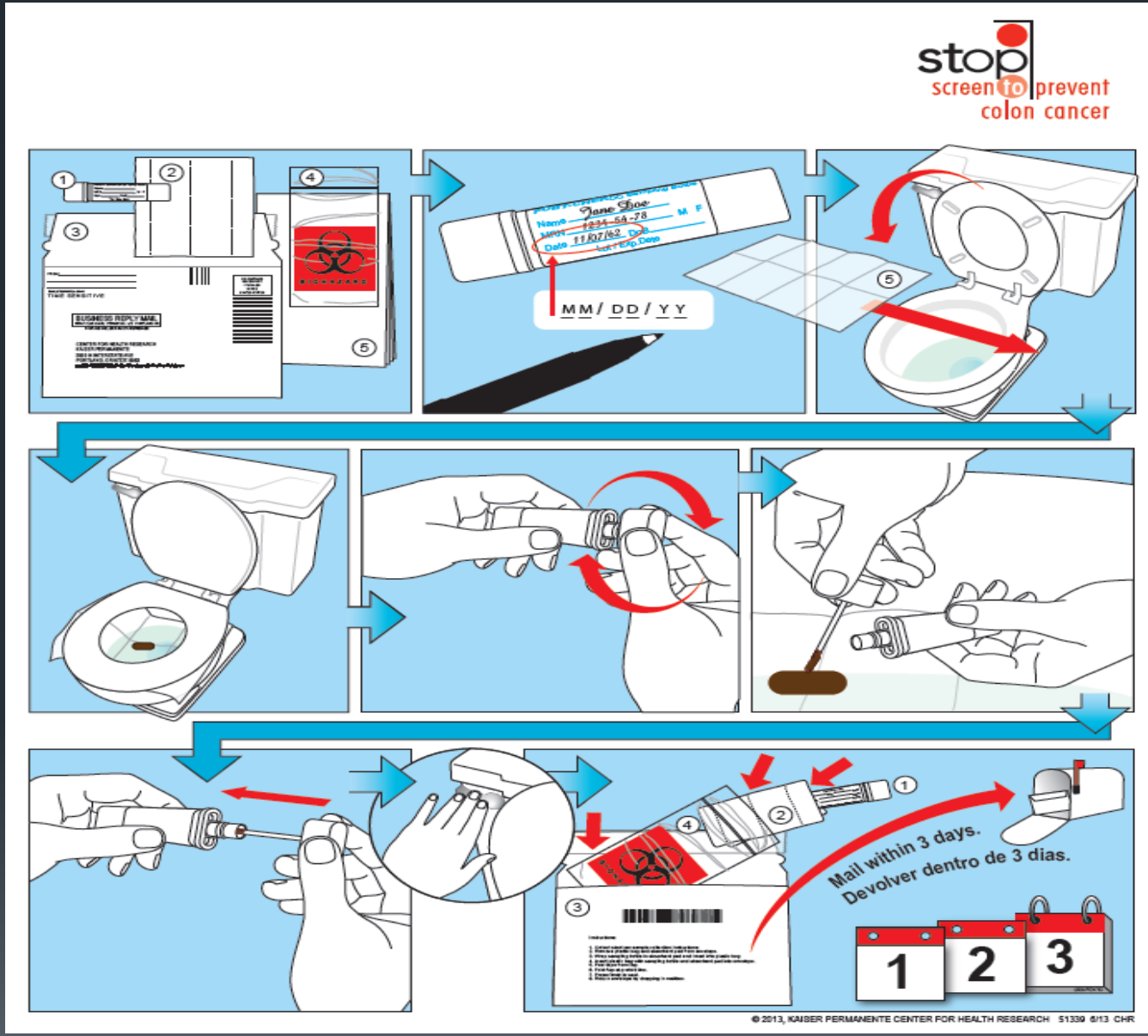
Uninsured patient (n = 2) were offered free f/u colonoscopy through a community-based organization, Project Access Now

Patient	Colonoscopy receipt	Colonoscopy result/comment
1	N	Patient declined
2	Y	Hyperplastic polyps; not precancerous
3	Y	Polyp -- 5mm
4	Y	Abnormal appearing rectal tissue; no masses
5	Y	36 polyps; some tubular adenomas; up to 3 cm.
6	Y	Polyp --5mm
7	Y	Hemorrhoids

Patient-centered approaches: FIT Instructions

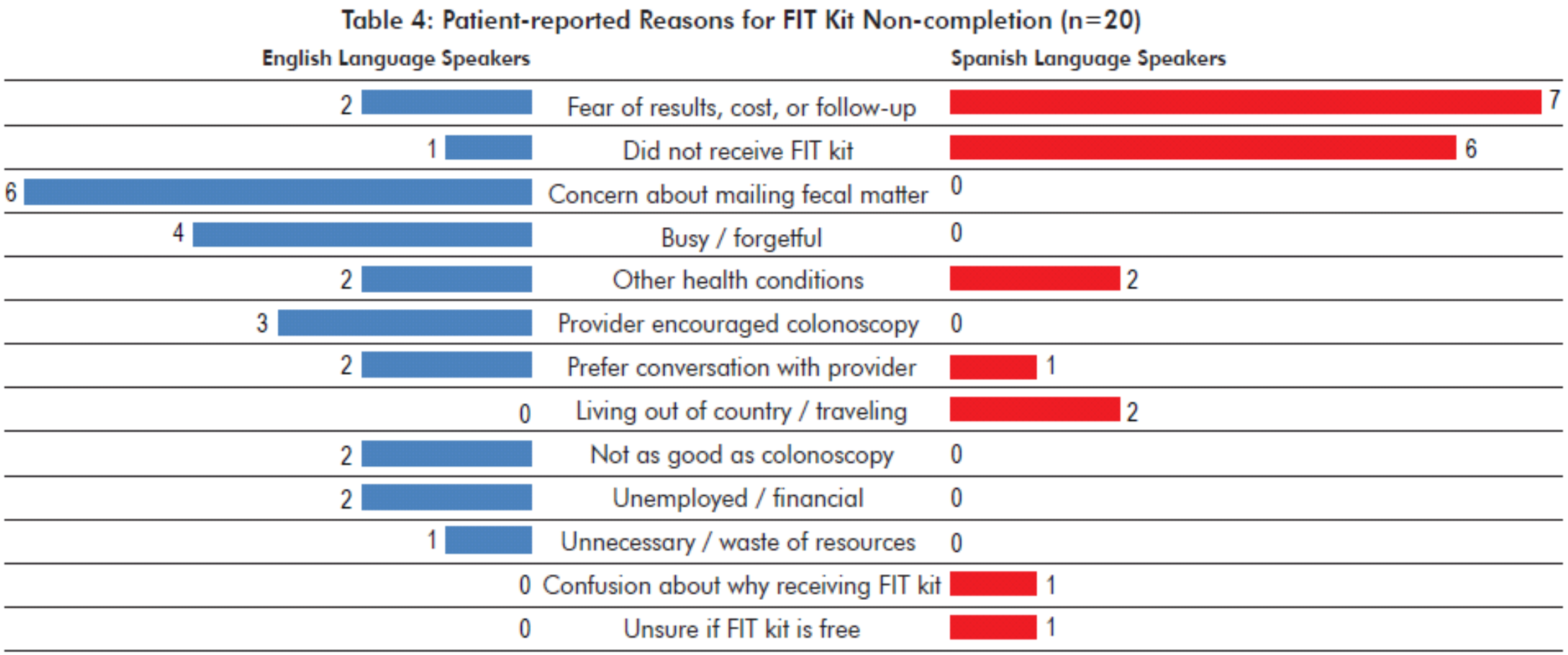
Developed with input from:

- Clinic staff
- Patient advisory council members
- STOP CRC advisory board



Coronado et al. J Cancer Educ 2013

Patient-centered approaches: Reasons for non-response



Coronado et al. Translational Behavioral Medicine (submitted)

Phase 2: STOP CRC Pragmatic Study

- Mail 30,000 kits, over 2 years;
- Process an estimated 10,000 FITs;
- Identify ~30 new cancers;
- Prevent many more, through removal of pre-cancerous polyps;
- Develop and implement tools that will allow program to be sustainable;
- Conduct cost-effectiveness analysis and show return on investment.

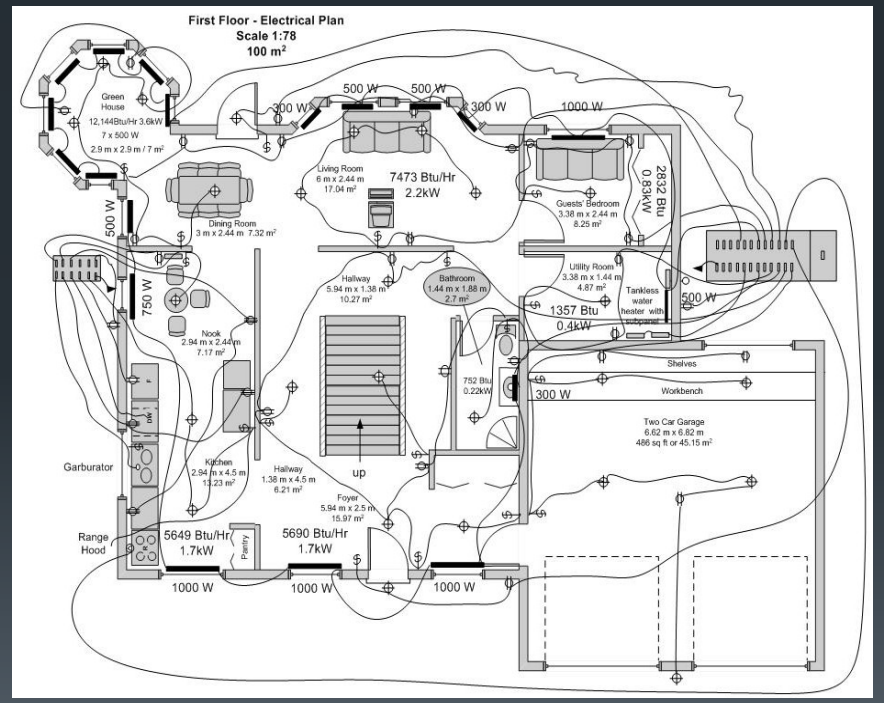
Clinic readiness activities

- Convert from gFOBT to FIT;
- Understand and document clinic workflows;
- Develop lab interfaces;
- Train on STOP CRC tools;
- Implementation planning;
- Reporting – clinic reports, research reports, cost assessment;
- Develop policy agenda.

What we learned in the pilot…

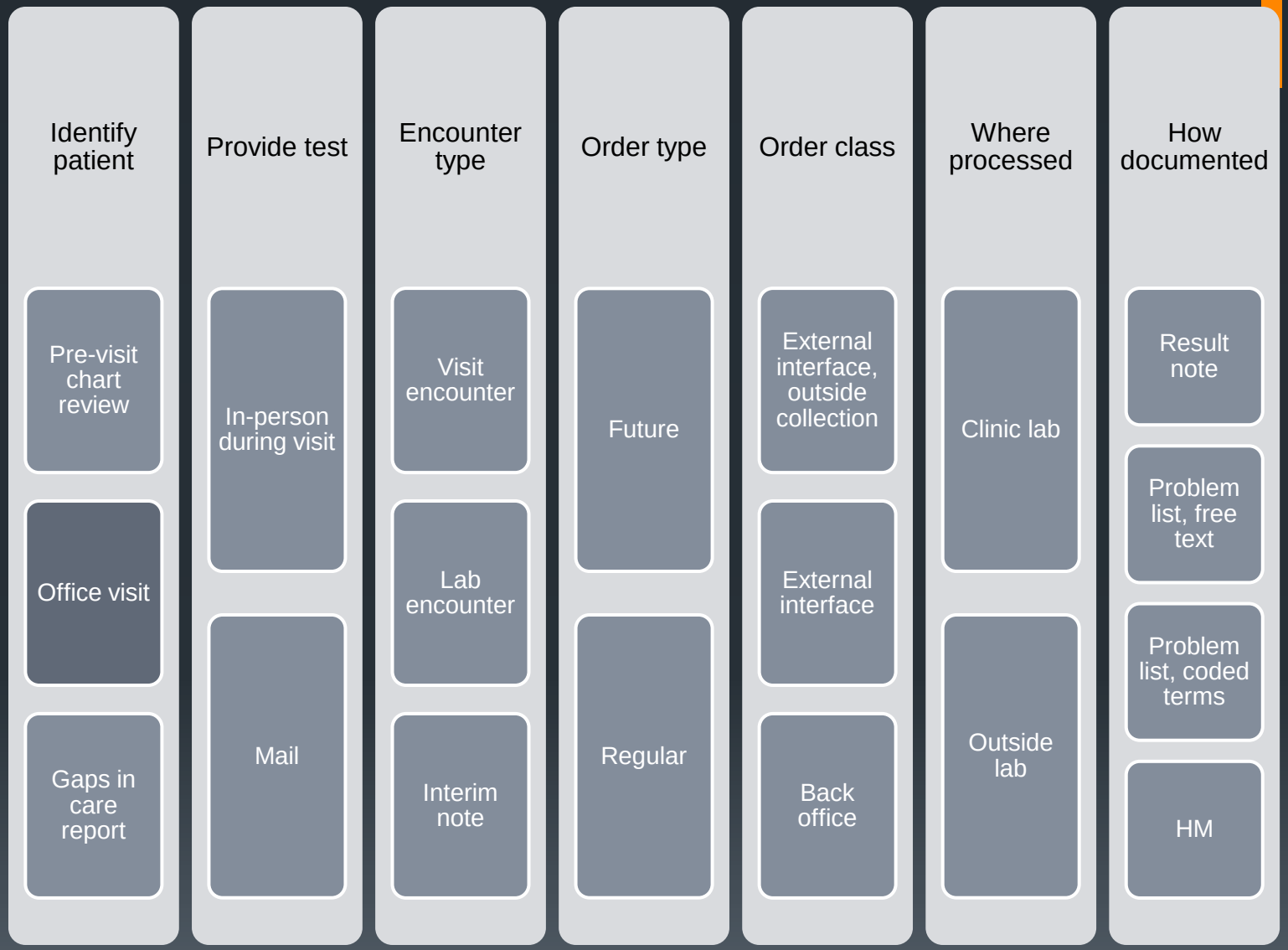
Original thinking

Revised thinking



Clinic workflows

Understanding variations in fecal testing by clinic



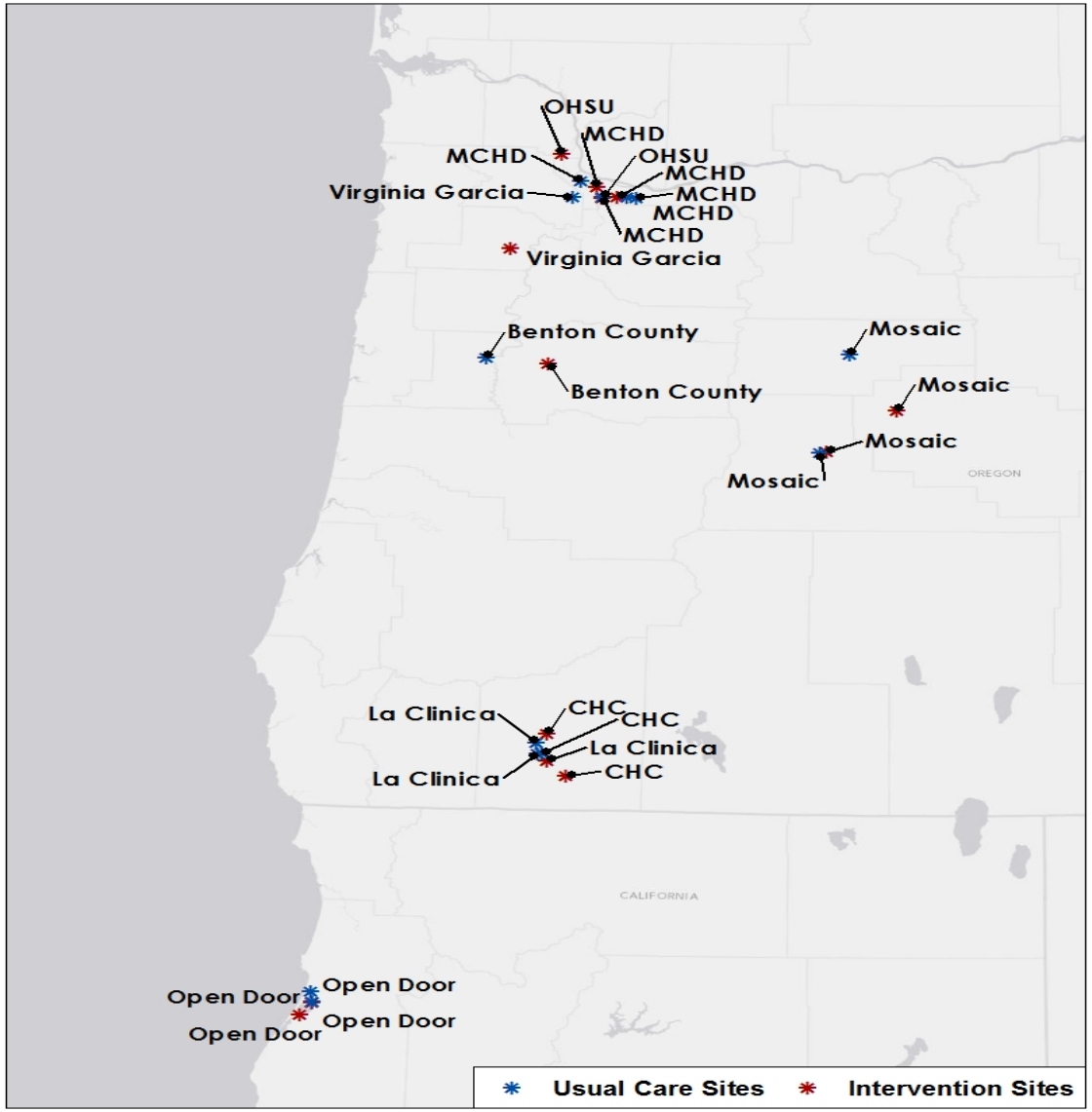
Standardize practices and policies – “better practices”

Topic	Better practice
Patient address	Use patient messaging to indicate invalid
Fecal test orders	Use future order/lab encounter or regular order/interim note
Colonoscopy referral	Use colonoscopy referral, rather than GI referral
	Track all CRC screening related reports
	Group procedure and pathology reports for provider review
Historical colonoscopy	Track Release of Information
	Create historical order

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 (CHC) Medford (3)
Benton County Health Department (2)
Oregon Health & Science University (OHSU) (2)
SeaMar Community Health Centers (4)

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



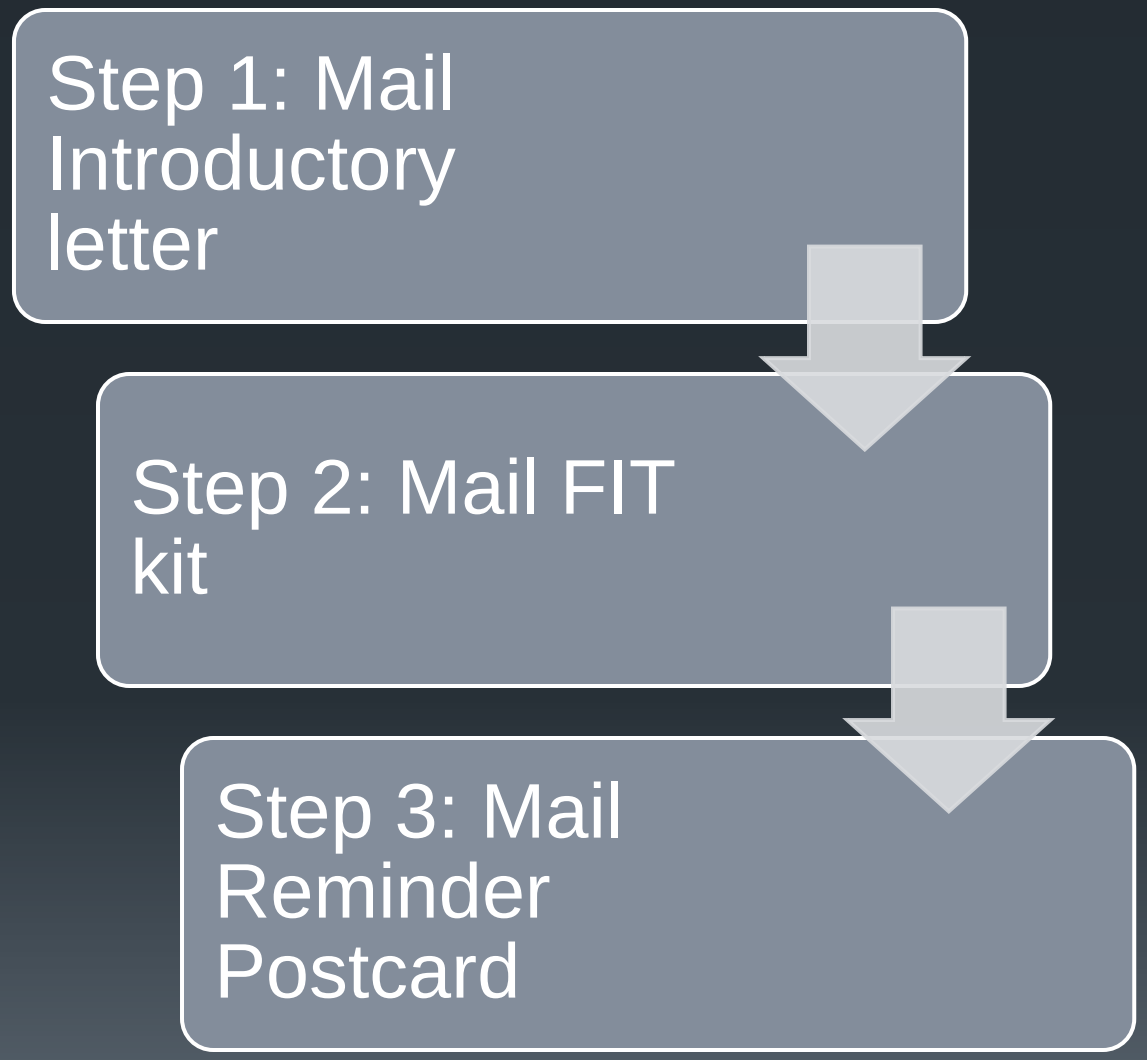
STOP CRC intervention

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)



Key policy updates

Author	Year	Title
Williamson and Tomei (sponsors)	2014	OR passes legislation to require insurance companies to cover screening colonoscopy (when polyps are removed)*
TBD	2014	Legislations that requires insurance companies to cover colonoscopy as follow-up to positive FOBT/FIT

Dissemination of findings: 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.	2014 (submitted)	Reasons for non-Response to Mailed kit program
Coronado et al.	2014 (submitted)	STOP CRC: Pragmatic Trial Protocol

Summary

- Rates of colorectal cancer screening are low and particularly low for Latinos;
- Screening (home-based fecal testing) is highly effective, inexpensive, and easy to deliver, and patients prefer fecal testing;
- How rates of colorectal cancer screening are raised is transformative
  - Home-based testing can allow for risk stratification without clinic visit
- Successful, cost-saving programs can be implemented;
- 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.

Next steps…

Grant to the Centers for Disease Control: SIP 14-012 Pilot Program of Mailed Fecal Immunochemical Tests to Increase Colorectal Cancer Screening Rates (To begin September 2014)

Health Plan	N enrollees*	Enrollees aged 50+				
		Total	% NH White	% Hispanic	% Other[6]	% Female
Oregon State	866,164	151,955	64.0	9.9	26.1	58.0
Care OREGON	237,333	35,540	57.5	8.6	33.9	57.0
Health Share CCO	178,988	28,374	55.1	8.3	36.6	56.9
Columbia Pacific CCO	19,102	2,757	68.1	7.4	24.5	56.8
Jackson County CCO	22,159	2,725	68.4	10.1	21.5	57.8
Yamhill County CCO	17,084	1,684	62.0	14.0	24.0	57.7
Pacific Source	48,548	6,124	68.6	11.2	20.2	57.7
Central Oregon CCO	39,345	5,099	69.3	9.7	21.0	58.3
Columbia Gorge CCO	9,203	1,025	65.0	18.7	16.3	54.6

*as of April 2014

Recent press…

"…the NIH Health Care Systems (HCS) Research Collaboratory, with several million patients, sponsors 7 pragmatic trials, including evaluations of strategies to reduce hospital-acquired infections and methods to improve colon cancer screening in priority populations."

Bruce M. Psaty, MD, PhD; Eric B. Larson, MD, MPH ***Investments in Infrastructure for Diverse Research Resources and the Health of the Public*** *JAMA. 2013;309(18):1895-1896. doi:10.1001/jama.2013.3445.*

"The state [OR] has also developed 33 performance measures to aim to show to the public and the federal government how the project is working, with financial incentives to local Coordinated Care Organizations for meeting goals like rates of adolescent well-care visits and colorectal cancer screening."

Experiment in Oregon Gives Medicaid Very Local Roots, *New York Times April 12, 2013*

Findings from STOP CRC pilot published in: **NPR.com, Portland Business Journal, The Oregonian, Medical News Today, Medical Design Technology, Medical Xpress, BioPortfolio**, **News-Medical.net, La Opinion** and **The Oncology Pharmacist**, among others.

Acknowledgments

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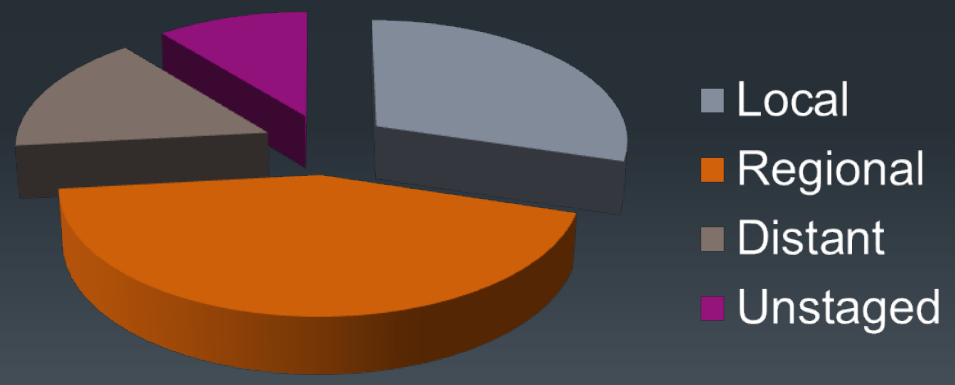
- Group Health Reseach Institute: Beverly Green, MD, MPH
- STOP CRC Advisory Board
- Funding source: NIH Common Fund

[UH2AT007782 and 4UH3CA188640-02] and Kaiser Permanente Community Benefit

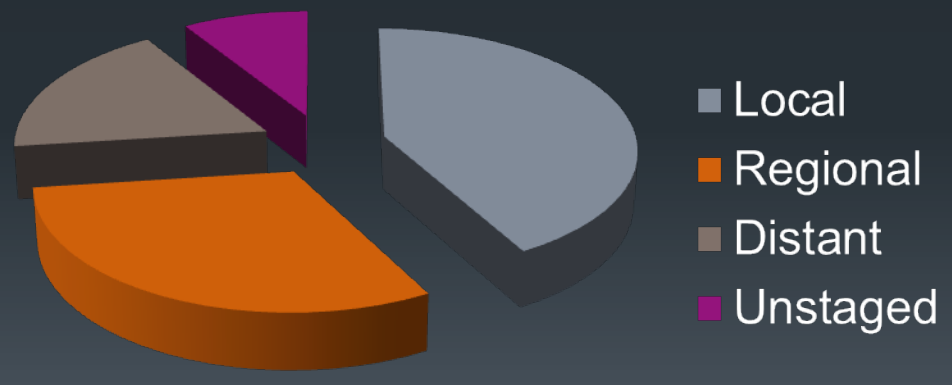
APPENDIX

Delaware Colorectal Cancer Stage of Diagnosis, All Races

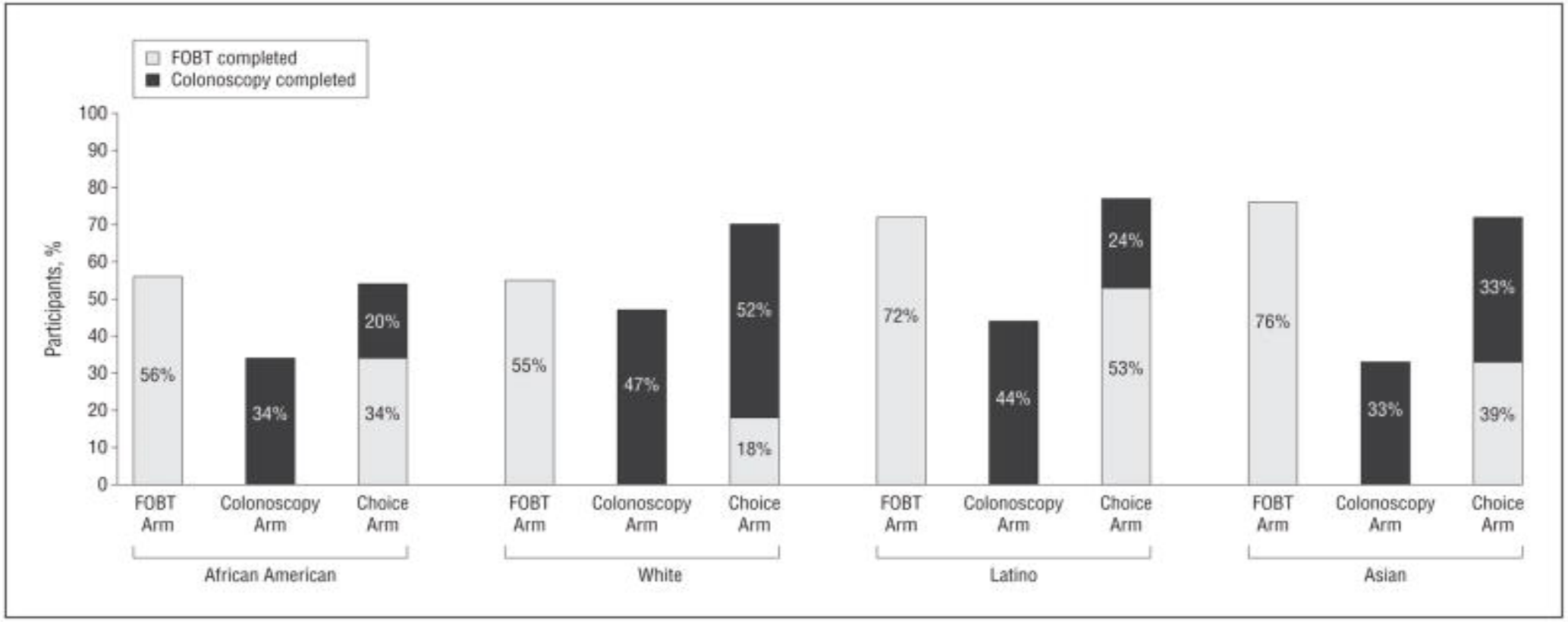
YR 2001 (n = 471)



YR 2009 (n = 406)



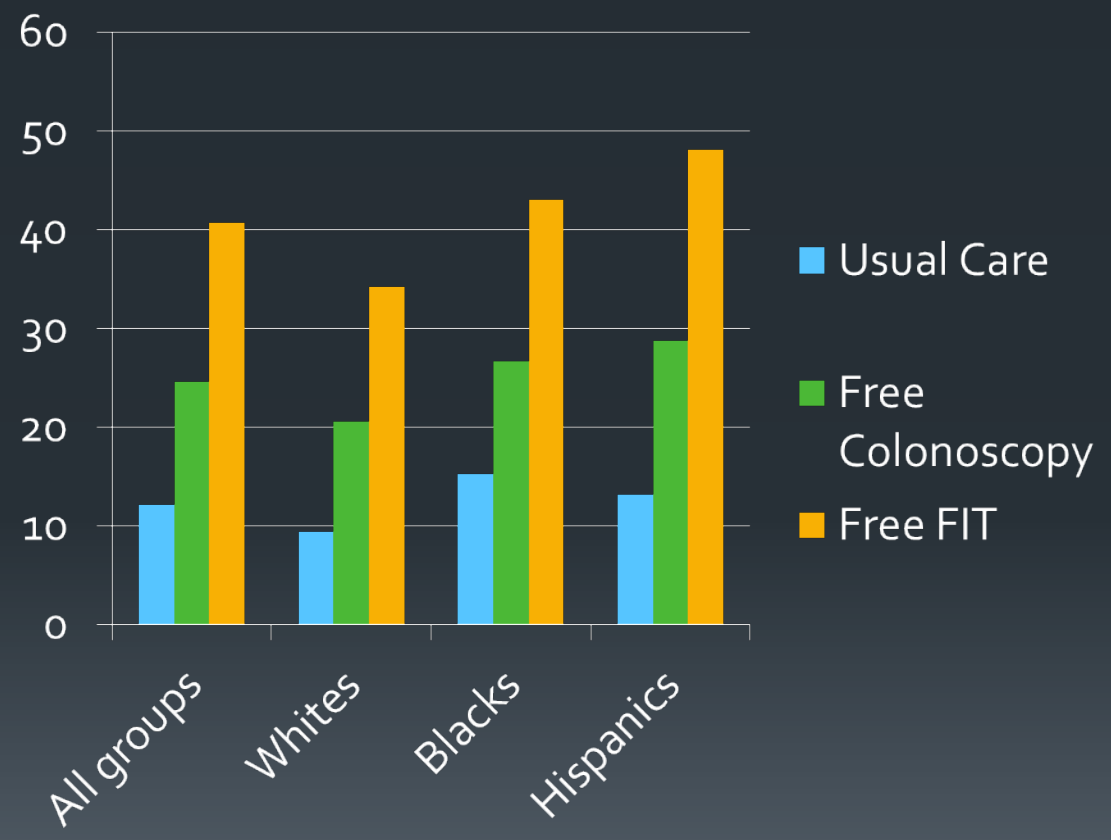
CRC screening rates are highest if patients offered fecal testing or choice



Inadomi et al. 2012

Free FIT vs. Free colonoscopy program

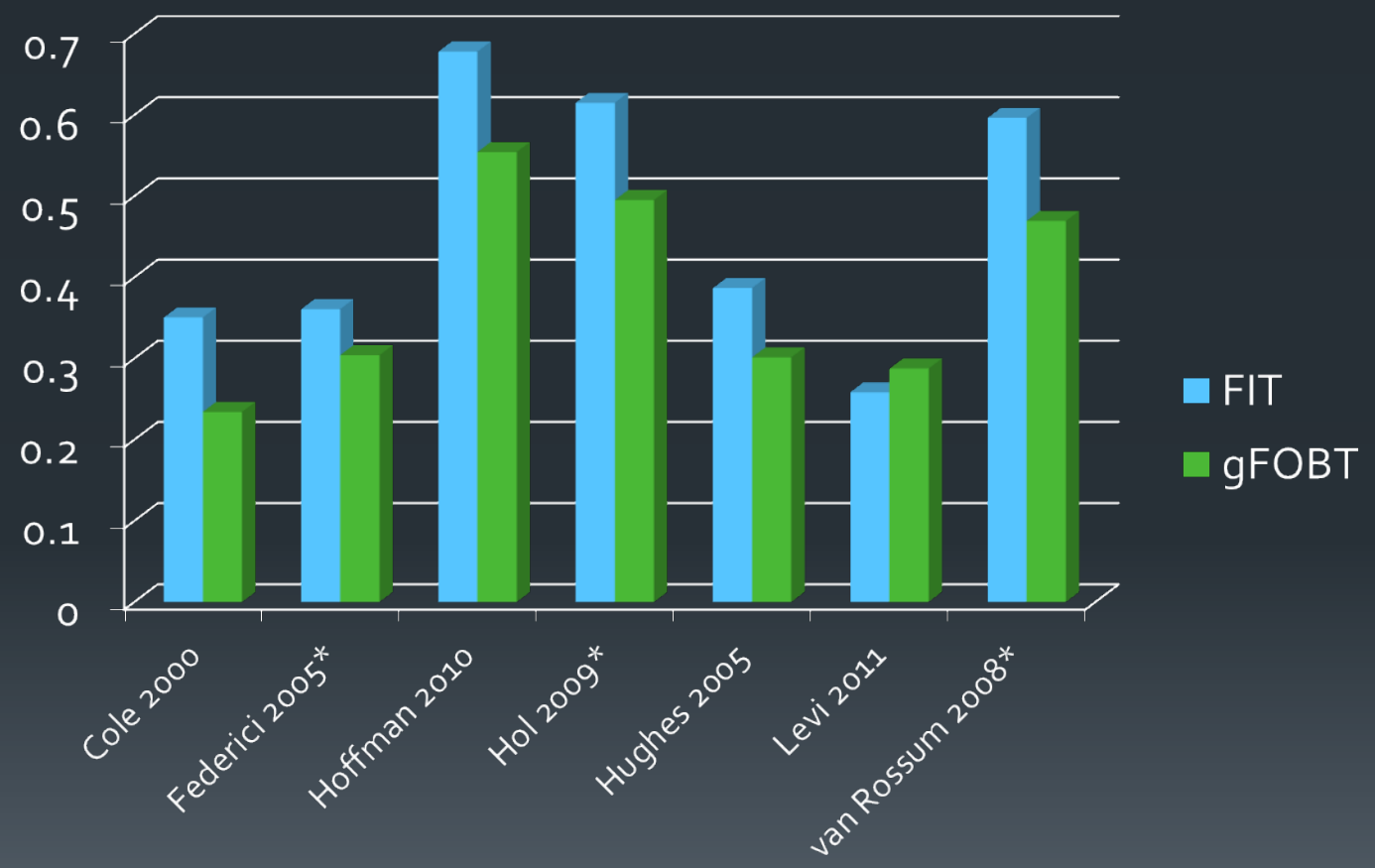
- Study included uninsured patients aged 54-64 at the John Peter Smith Health Network, a safety net health system.
- Randomized patients into 3 groups:
  - Free FIT (n = 1593)
  - Free colonoscopy (n = 479)
  - Usual care (n = 3898)



Gupta et al. JAMAIM 2013

CRC screening rates higher with FIT vs. FOBT

- A recent systematic review of randomized trials comparing adherence of FIT and gFOBT found 6 of 7 studies reported increased adherence with FIT versus gFOBT:
  - Adherence was **11.4-16.3 percentage points higher** in 6 studies
  - Adherence was **15.4-16.3 percentage points higher** in studies (n = 3) that compared a 1-sample FIT to 3-sample gFOBT



* Studies that compared 1-sample FIT to 3-sample gFOBT

Vart et al. Prev Med 2012