

Improving Follow-Up of Positive Stool-Based Tests with Timely Colonoscopies in Community Health Centers

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Disclaimer

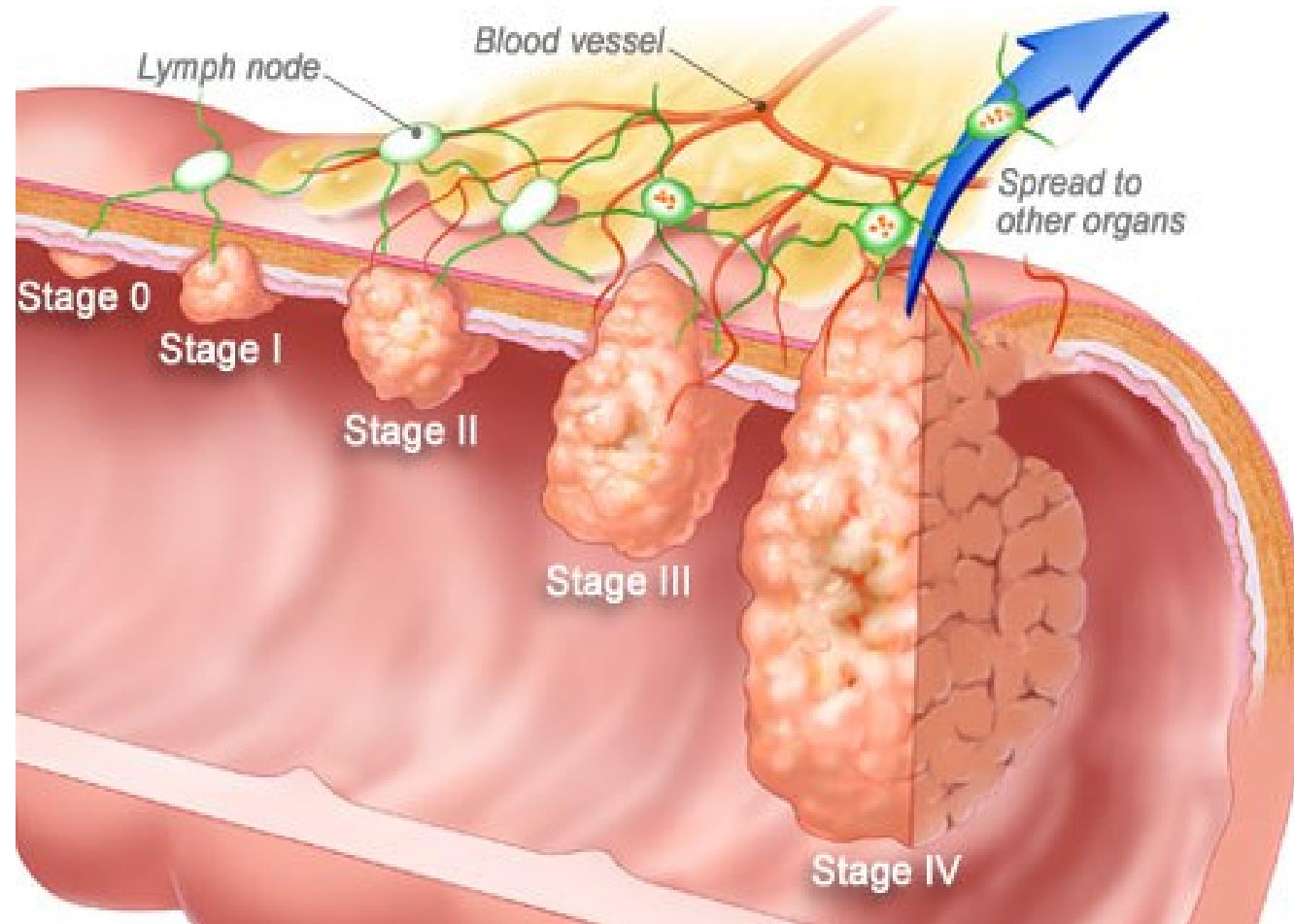
In the past year, I have served as a scientific advisor for Exact Sciences and Guardant Health.

These relationships do not influence my talk today.

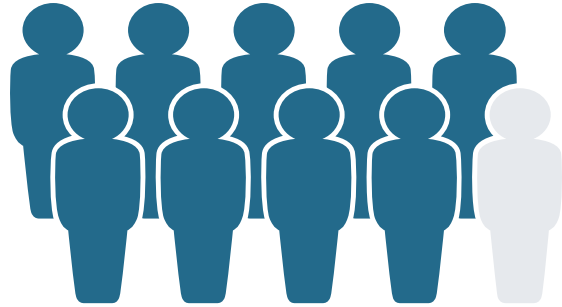
Presentation Outline

- Background on Colorectal Cancer Screening
- Importance of Timely Colonoscopy Follow-Up of Positive Stool-Based Tests
- An Innovative Data-Driven Solution -- (PRECISE) study
- Conclusion and Next Steps

Colon cancer can be treated if found early



Finding colon cancer early is important



More than

9 of 10

individuals diagnosed with
early stage colorectal
cancer that has not
spread beyond the colon
or rectum

survive 5 years

(and many live much longer)



Approximately

1 of 10

individuals with
advanced stage
colorectal cancer that
has spread to other
organs such as the lungs
or the liver

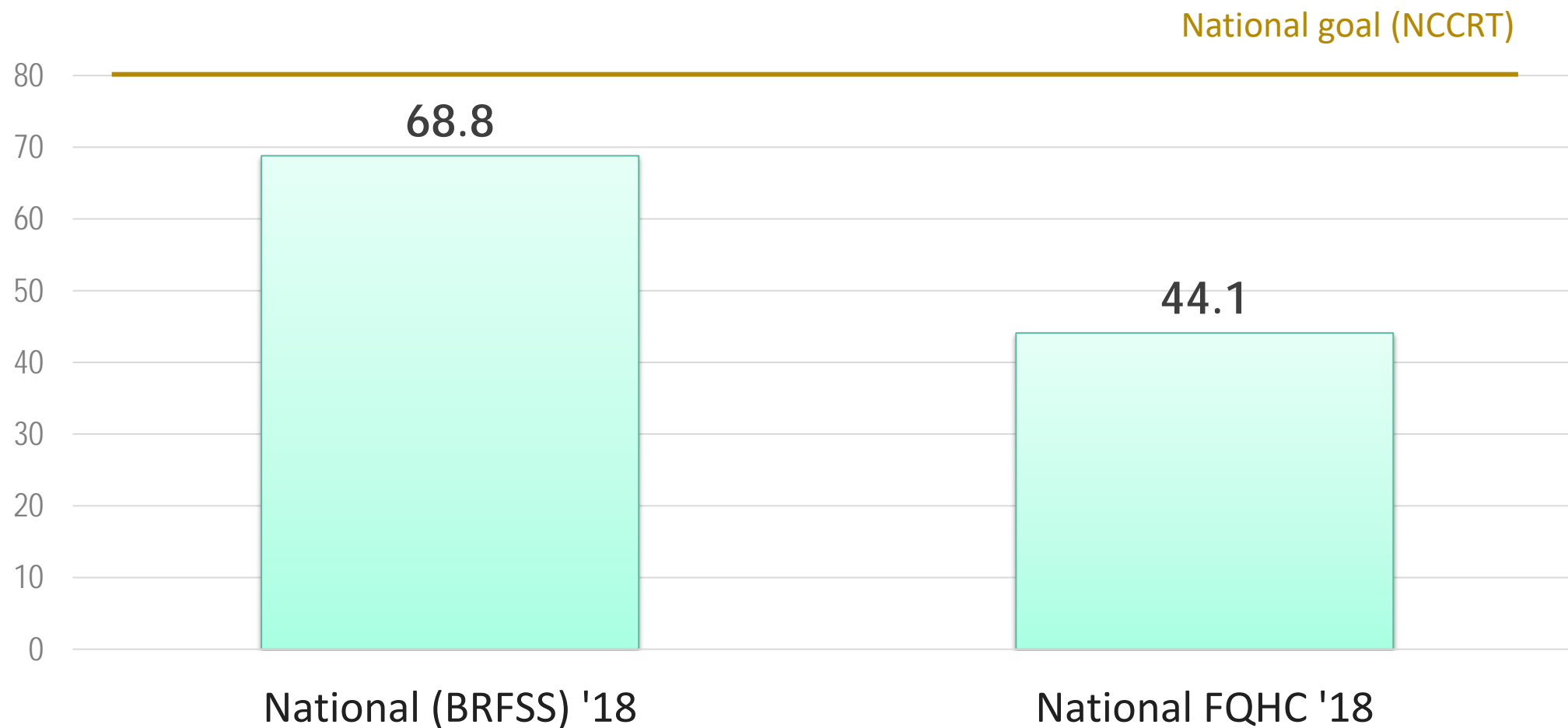
survives 5 years

Recommended screening
could prevent at least

60%

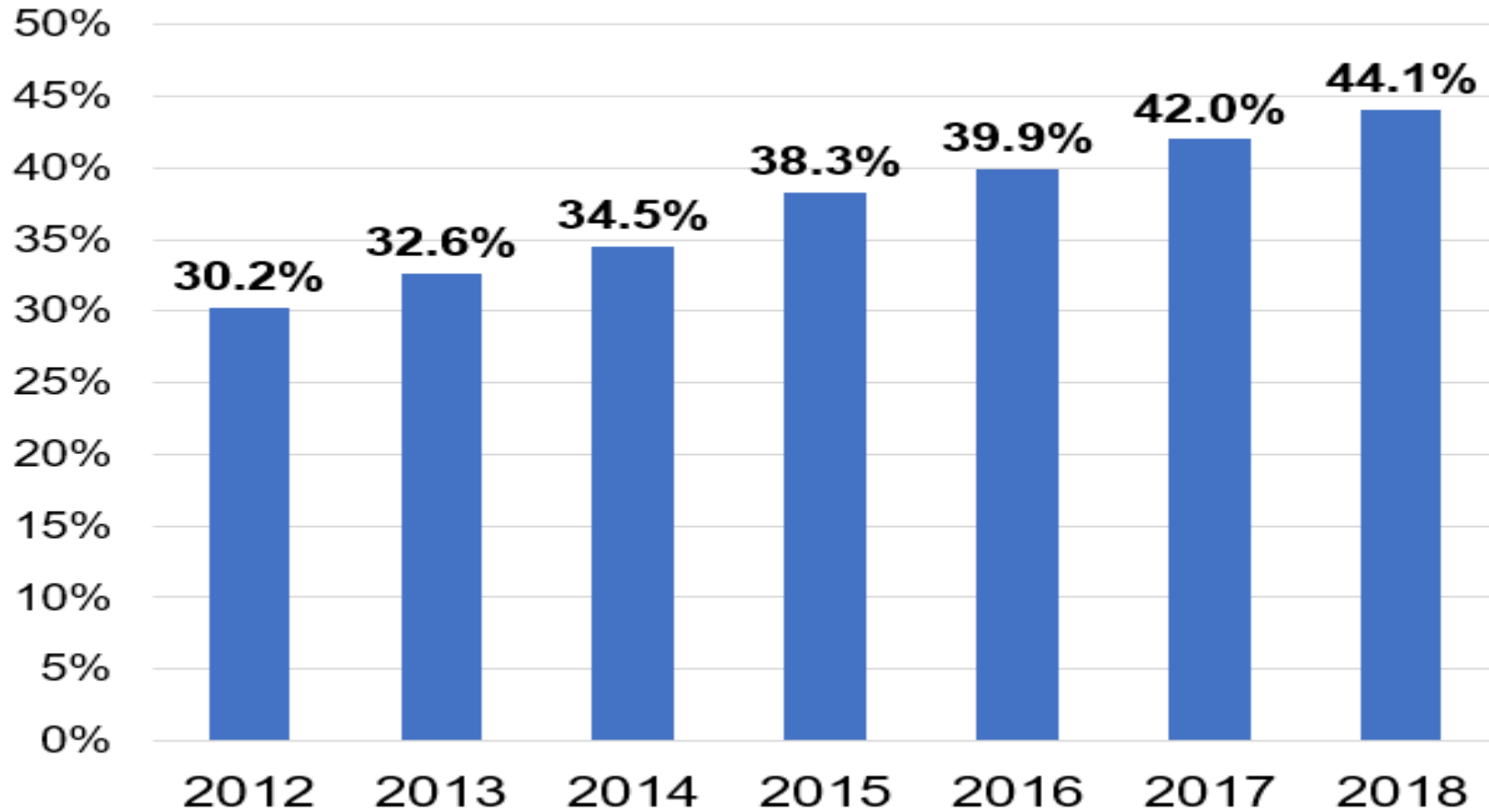
of these deaths

CRC screening rates are particularly low in FQHCs



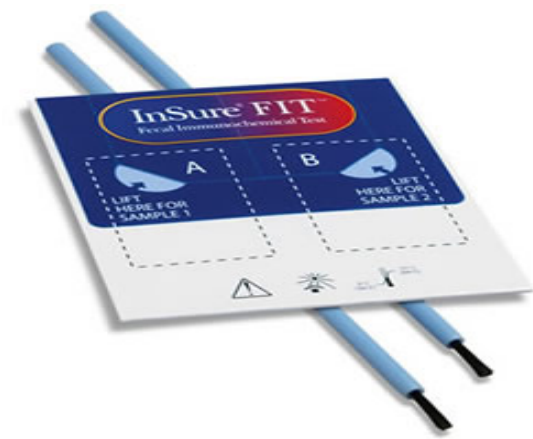
*Centers for Disease Control. *MMWR Morb Mortal Wkly Rep*, 2019 National program grantee data. 2018 Health Center Data Website. <http://bphc.hrsa.gov/uds/datacenter.aspx?year=2016>. Accessed April 8, 2018.

CRC Screening Rates are Increasing in FQHCs



*Centers for Disease Control. *MMWR Morb Mortal Wkly Rep*, 2019 National program grantee data. 2018 Health Center Data Website. <http://bphc.hrsa.gov/uds/datacenter.aspx?year=2016>. Accessed April 8, 2018.

Ways to screen for colorectal cancer



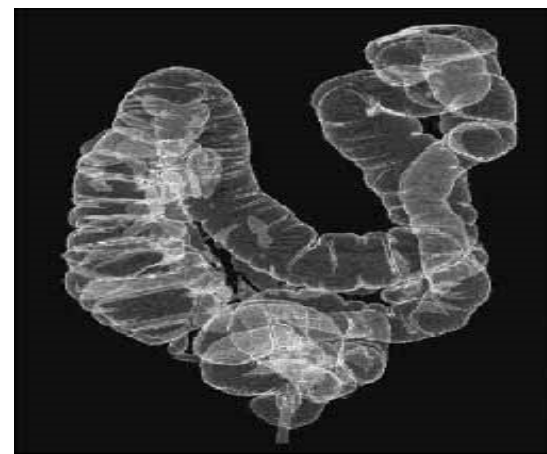
Fecal test (FIT)

Looks for hidden blood in the stool



Colonoscopy

Doctor inserts tube in rectum to view colon



Other tests

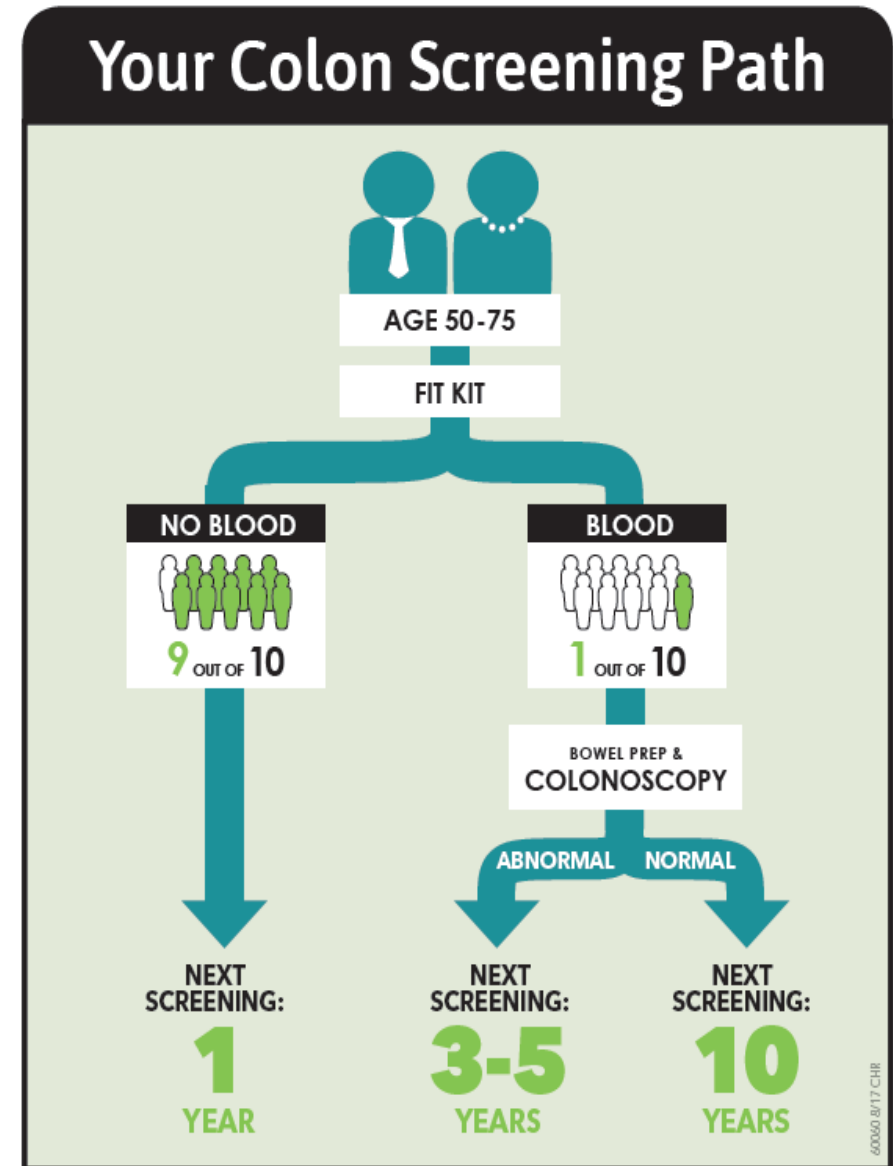
Sigmoidoscopy; X-ray of colon; fecal plus DNA test

US Preventive Services Task Force Guidelines

- Current recommendations call for screening average-risk adults aged 50-75.
- Draft guidelines issued in 2020 drop the initiation age to 45.
- This change will result in 22 million additional adults due for CRC screening.

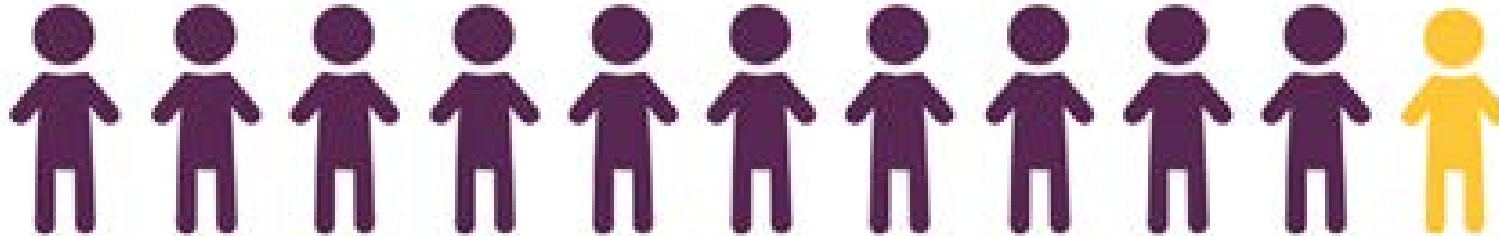
The problem

- Millions of adults complete a fecal test each year;
- Yet, not all individuals who test abnormal get a follow-up colonoscopy;
- For these patients, the benefit of fecal testing is nullified!



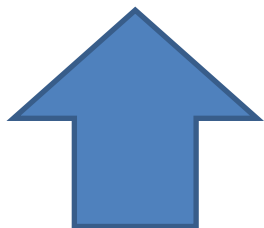
Why this matters...

As many as **1** in **11** patients
[with an abnormal FIT]
will have colorectal cancer

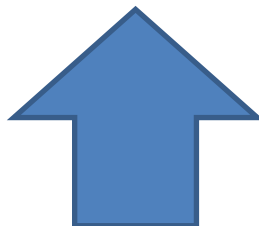


One in 11 to 1 in 28 individuals with an abnormal FIT have CRC, and 1 in 3 to 1 in 7 individuals have advanced neoplasia.
Robertson et al. Gastro 2017; Lee et al. J Natl Cancer Inst 2017; Imperiale et al. N Engl J Med 2014; Heitman et al. JAMA 2016.

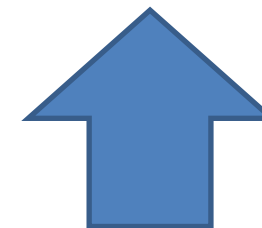
Outcomes for follow-up colonoscopy delay



31% more likely
to get colorectal
cancer*



7 times more likely
to die from colorectal
cancer**



2 times more likely
to have advanced
stage colorectal
cancer*

*Lee et al. Patients who delayed by 6 months or longer versus those who received a FU colonoscopy within 1-3 months.

**Meester et al. Based on modeling for delays of 12 months versus 2-weeks.

**Doubeni 2019. Compared with cancer-free matched controls, patients who died of CRC had 7.26 (95% CI, 5.26–10.03) higher odds of failure to receive follow-up for abnormal results compared with those who were up to date in screening

In safety net practices, only **37% - 53%*** of individuals with an abnormal FIT result obtain a follow-up colonoscopy.



* Bharti et al. *Cancer* 2019; Liss et al. *Cancer Causes and Control* 2016; Coronado et al. *JAMA Int Med* 2018

Previous Literature on Patient Navigation

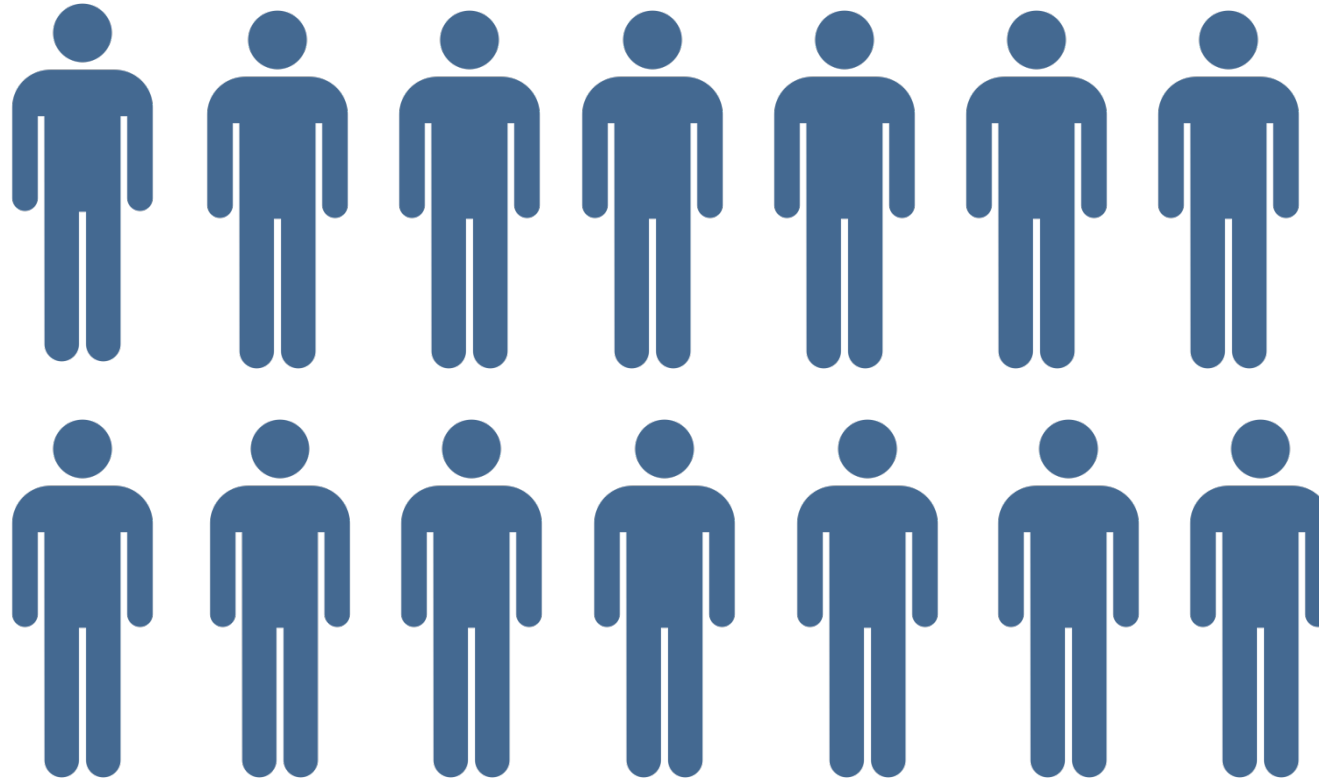
STUDY	DESIGN TYPE	PATIENTS N	CONTROL COLONOSCOPY COMPLETION (%)	INTERVENTION COLONOSCOPY COMPLETION (%)	CHANGE IN PERCENTAGE OF TEST-POSITIVE PATIENTS COMPLETING COLONOSCOPY
					50 60 70 80 90 100
Green et al, 2014 ³⁹	Randomized Trial	140	80	91	
Raich et al, 2012 ⁴⁰	Randomized Trial	235	58	79	
Phillips-Angeles et al, 2013 ⁴⁸	Observational Cohort	176	NA	78	
Ratner et al, 2016 ³¹	Observational Cohort	14	NR	NR	NA

How to winnow targets for patient navigation

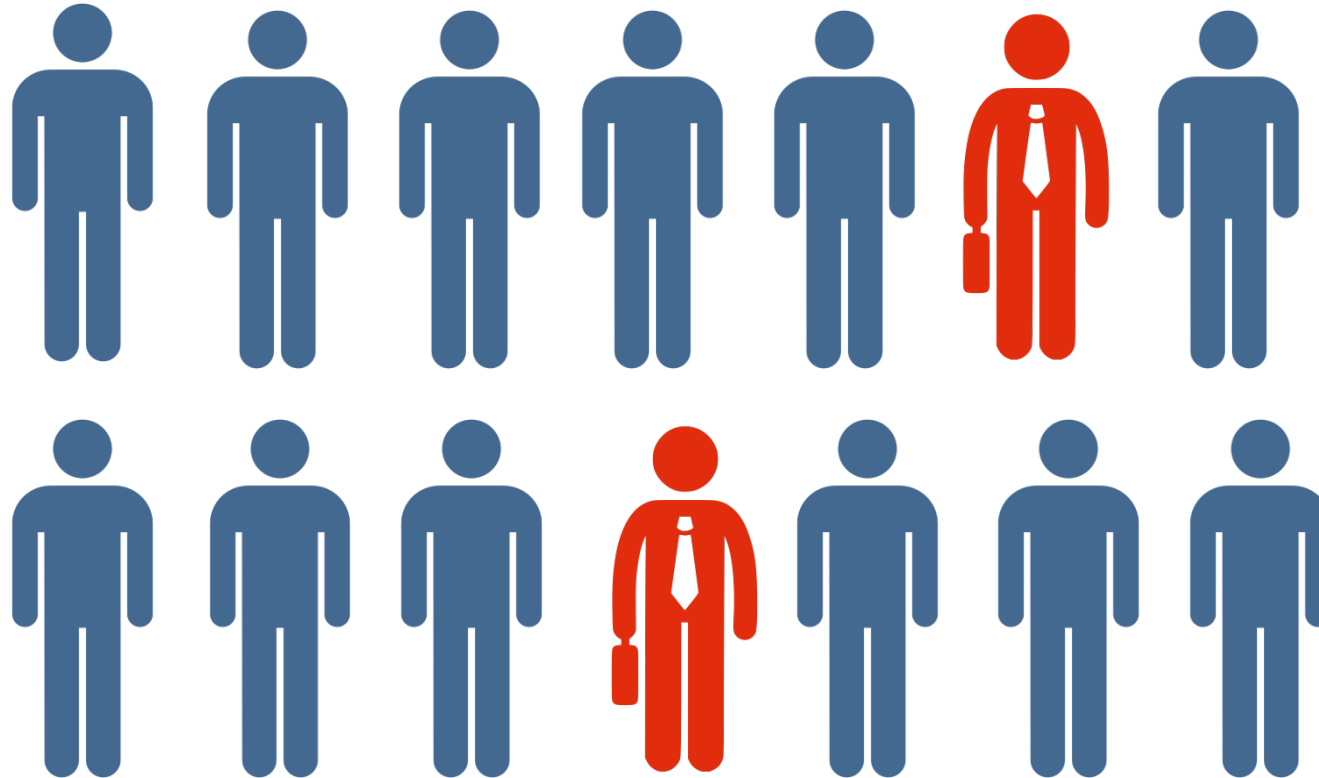
Candidate best practices; select patients who:

- screen abnormal on FIT
- have never had a colonoscopy
- have no upcoming colonoscopy appointment
- have not obtained a colonoscopy after xx months
- are referred by a provider
- are identified using a risk prediction model

Patients with positive FIT tests

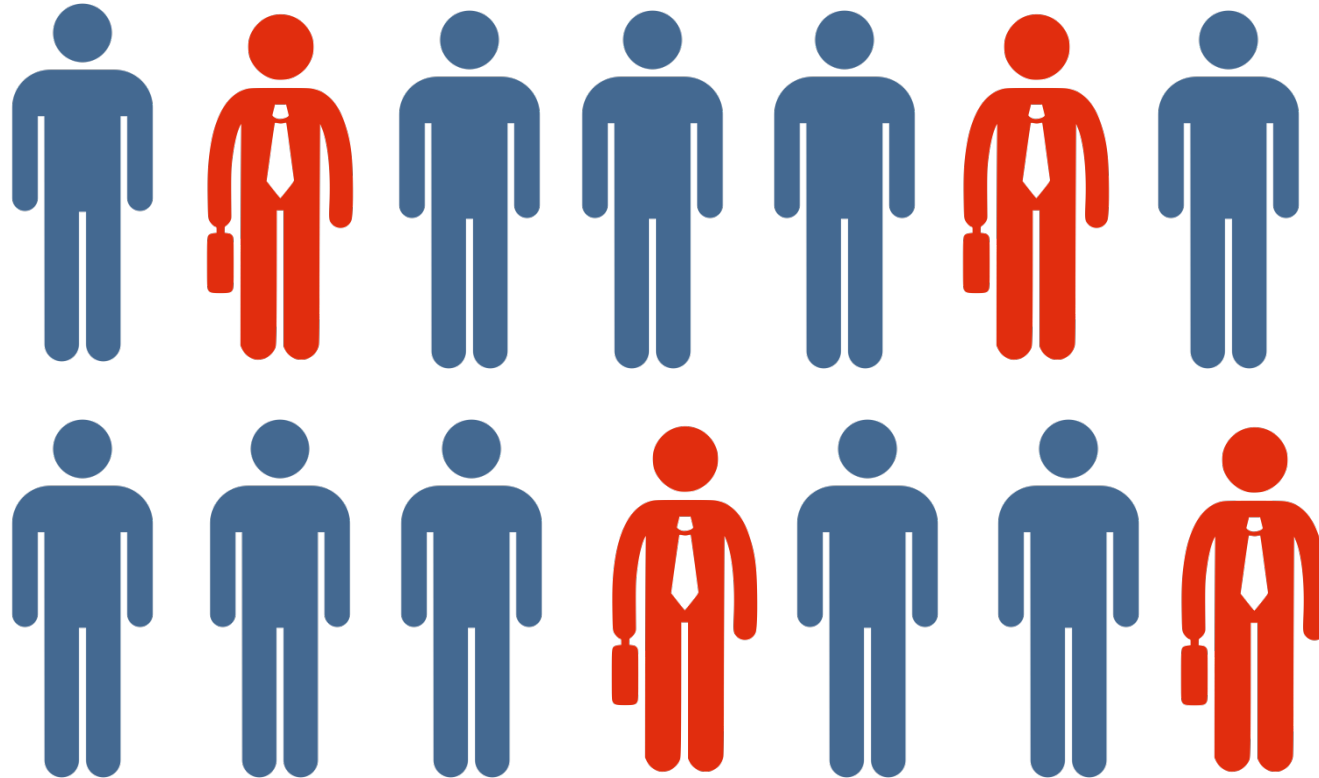


Patients with abnormal FIT tests



patients who need navigation

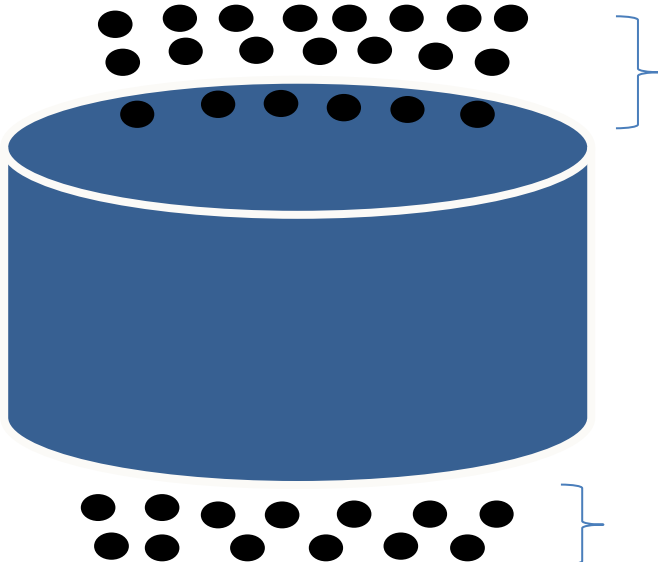
Patients with positive FIT tests



patients who need navigation

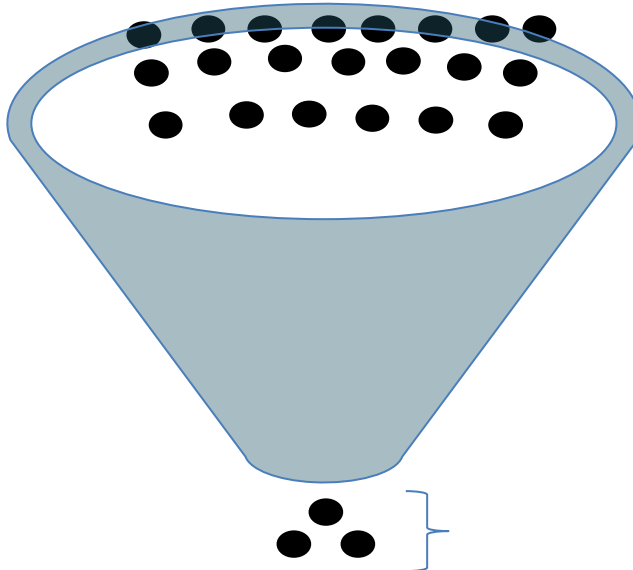
Fundamental problem: Follow-up colonoscopy

Standard patient navigation



All patients are offered navigation, whether they need it or not

PRECISE patient navigation



Patients are assessed for adherence probability.

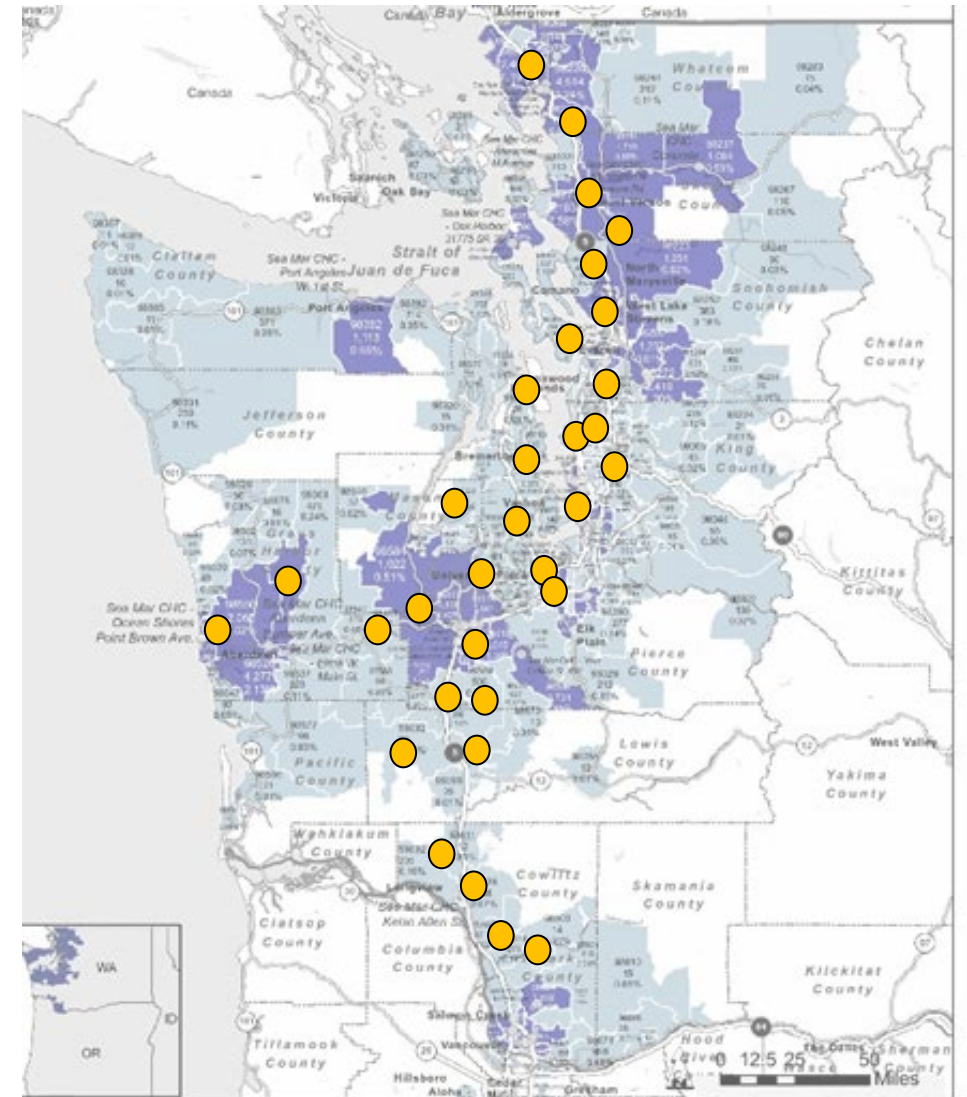
Those with low/moderate probability are offered navigation

Predicting and Addressing Colonoscopy non-Adherence in Community Settings (PRECISE)

- Partnership between KP Center for Health Research and Sea Mar Community Health Centers; 2-phase, patient-randomized trial of Patient Navigation vs. Usual care
- Enroll ~1200 patients across 28 Sea Mar clinics
- 5-year R01 study funded by the National Cancer Institute

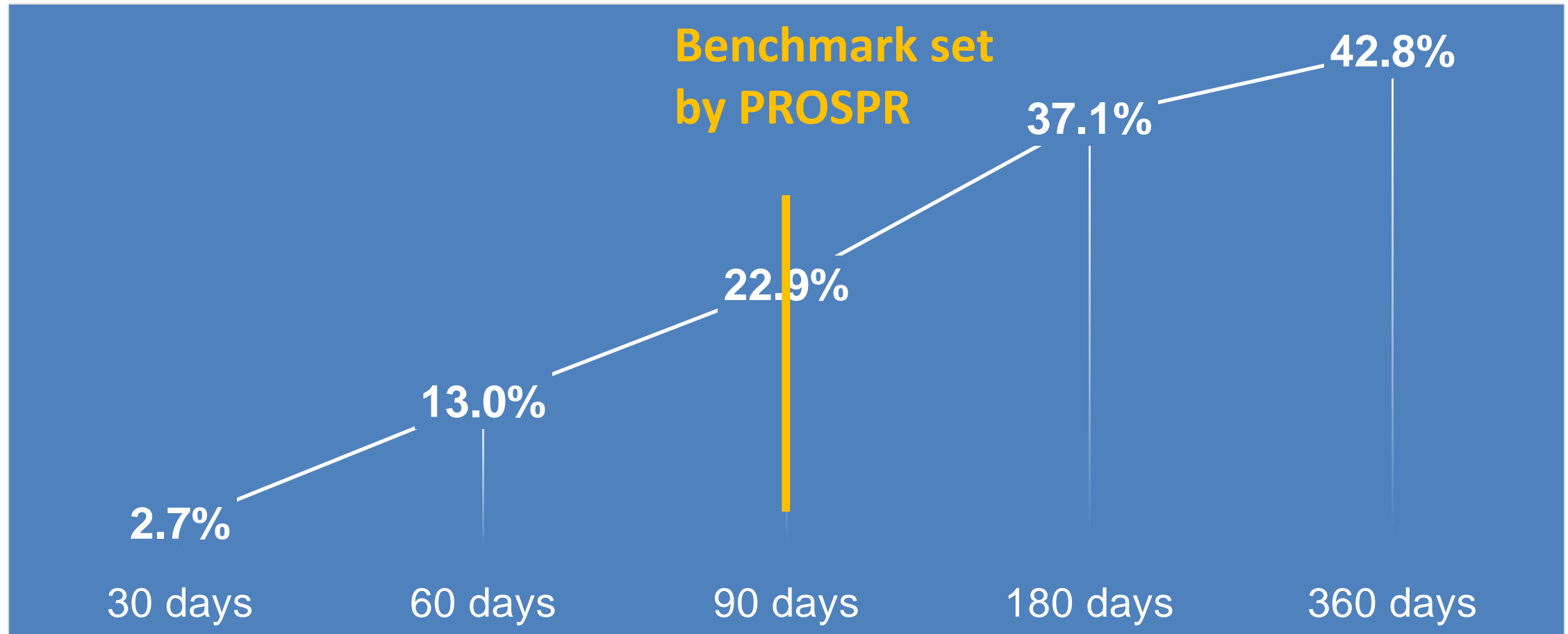
Partnering Health Center

- Serves about 300,000 patients in 32 primary care clinics in Western Washington (40% Latino);
- Mailed FIT outreach program
- ~700 patient who screen abnormal on FIT each year.
- Follow-up colonoscopy rate ~43%



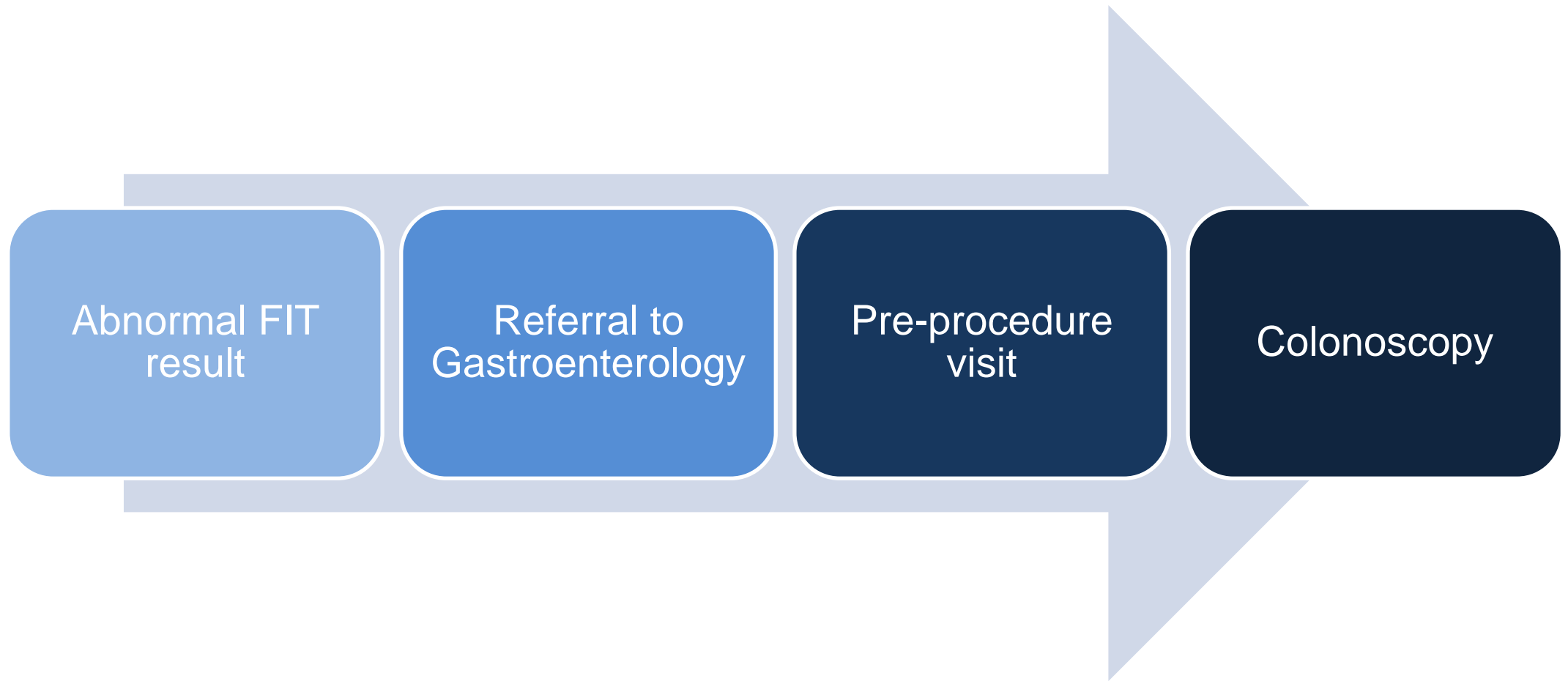
*In 2019, Sea Mar patients were referred to 180 GI practices; 107 of which only had ONE referral each

Time to Colonoscopy, Sea Mar Community Health Centers

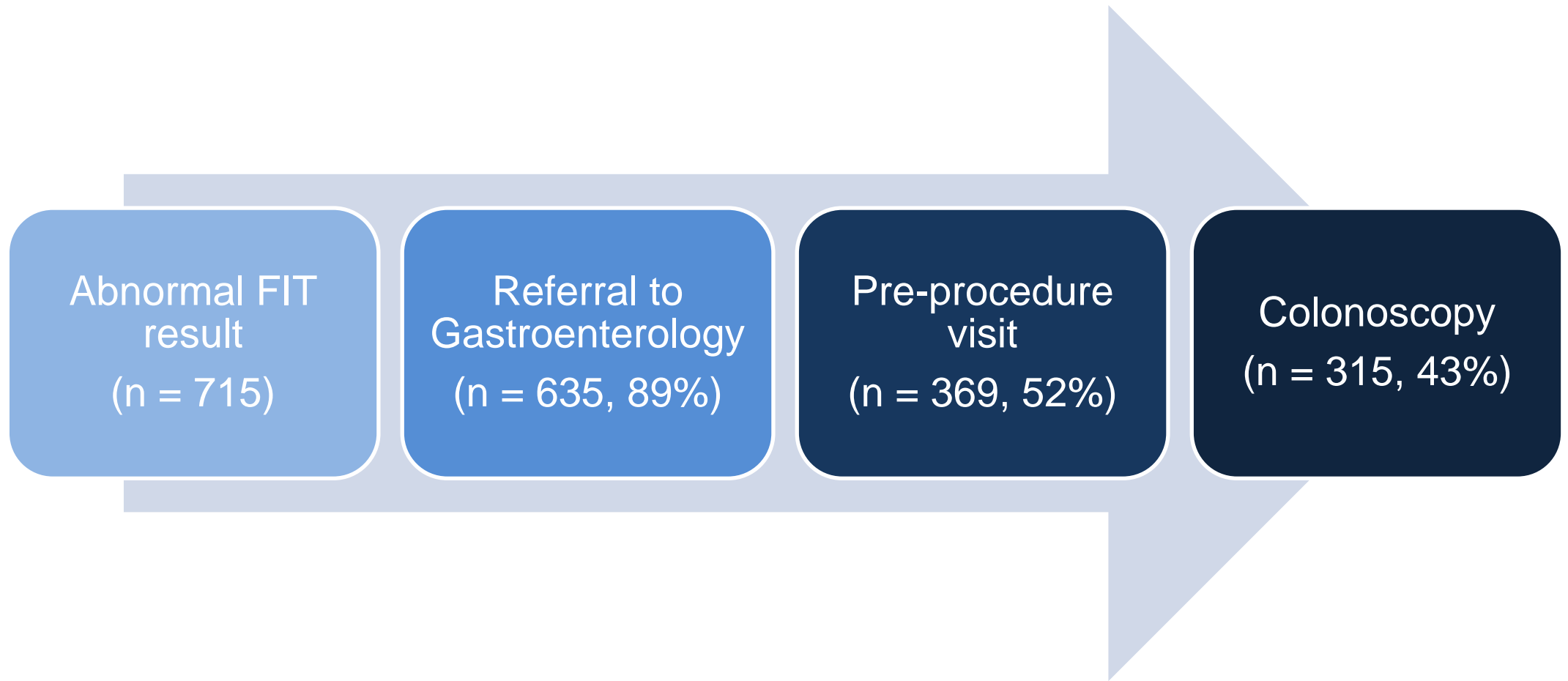


*among patients with a colonoscopy data in their medical record

Steps in obtaining a follow-up colonoscopy



Steps in obtaining a follow-up colonoscopy

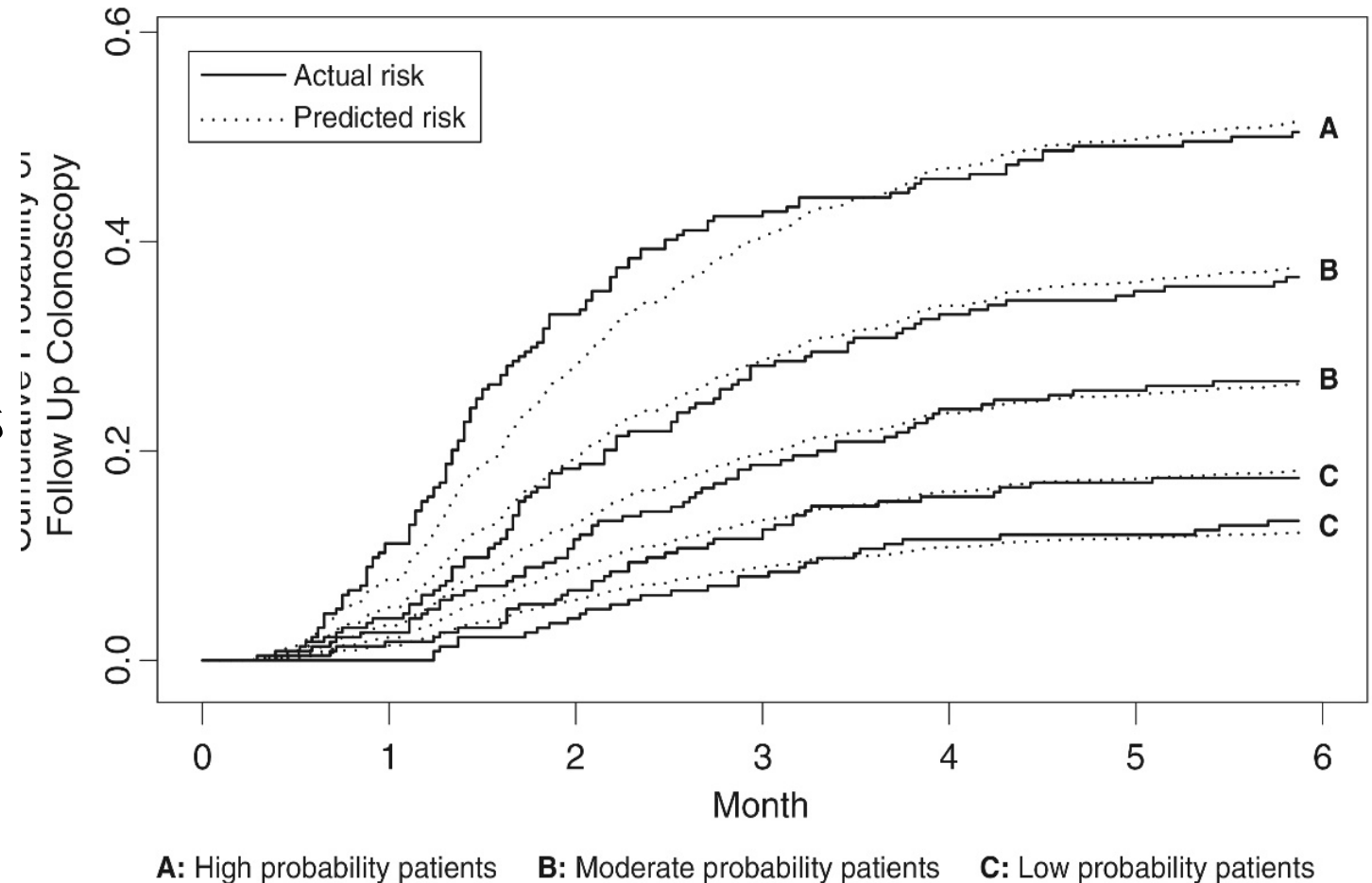


*Data from Sea Mar chart abstraction, Assumes that pre-procedure visits were required for all patients

Risk prediction model

Variables

- Age
- Race
- Insurance status
- N missed clinic appointments
- Gagne co-morbidity score
- Body mass index
- Marital status
- Prior CRC screening
- Gender, mammogram
- Language
- County



NH Colorectal Cancer Screening Program

- Timed, 6-topic area, phone-based patient navigation program delivered by a registered nurse
- Average 120 min. per patient of navigated time



NH Patient Navigation program outcomes

Results of the comparison study showed that the navigated patients were:



11 times
more likely
to complete
colonoscopy than
non-navigated patients.



40 times
less likely
to miss the
colonoscopy
appointment.



6 times
more likely
to have adequate
bowel prep than
non-navigated patients.

Centers for Disease Control and Prevention (CDC). (2016). New Hampshire Colorectal Cancer Screening Program: Patient Navigation Model for Increasing Colonoscopy Quality and Completion: A Replication Manual. Atlanta, GA: National Center for Chronic Disease and Health Promotion, Division of Cancer Prevention and Control, CDC. https://www.cdc.gov/cancer/crccp/pdf/nhcrisp_pn_manual.pdf Accessed March 8th, 2019.

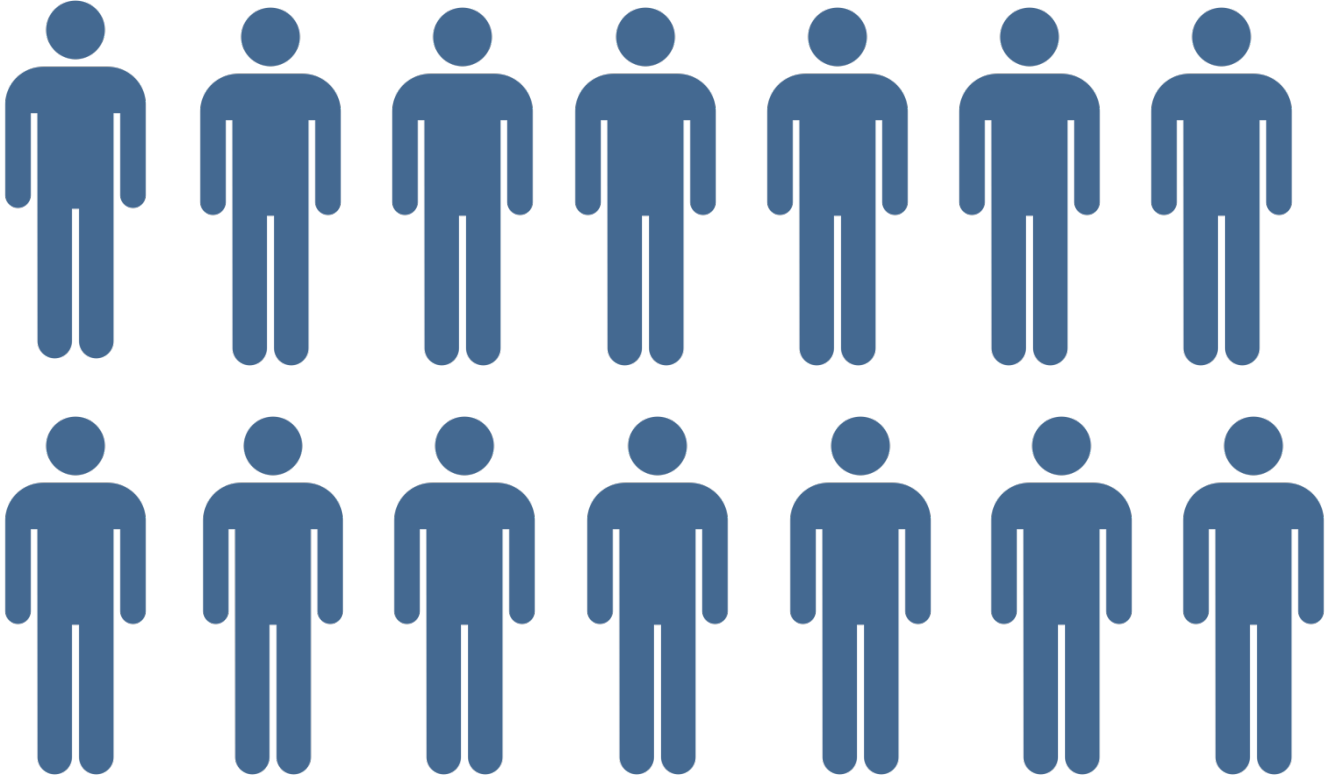
NH Patient Navigation program outcomes

Outcome	Navigated (n = 131) %	Control group (n = 75) %
Colonoscopy completed	97.3	69.3
Adequate bowel preparation quality	99.1	87.5
Missed appt/no-show without prior cancellation	0.0	15.6
Cancellation <24 hours prior to appt	0.7	16
Results communicated to patient	100	96.2
Results communicated to provider	100	48.1

Conclusion and next steps

- Risk prediction modeling shows promise for selecting patients for navigation;
- Upcoming changes to USPSTF guidelines underscore need for precision tools.

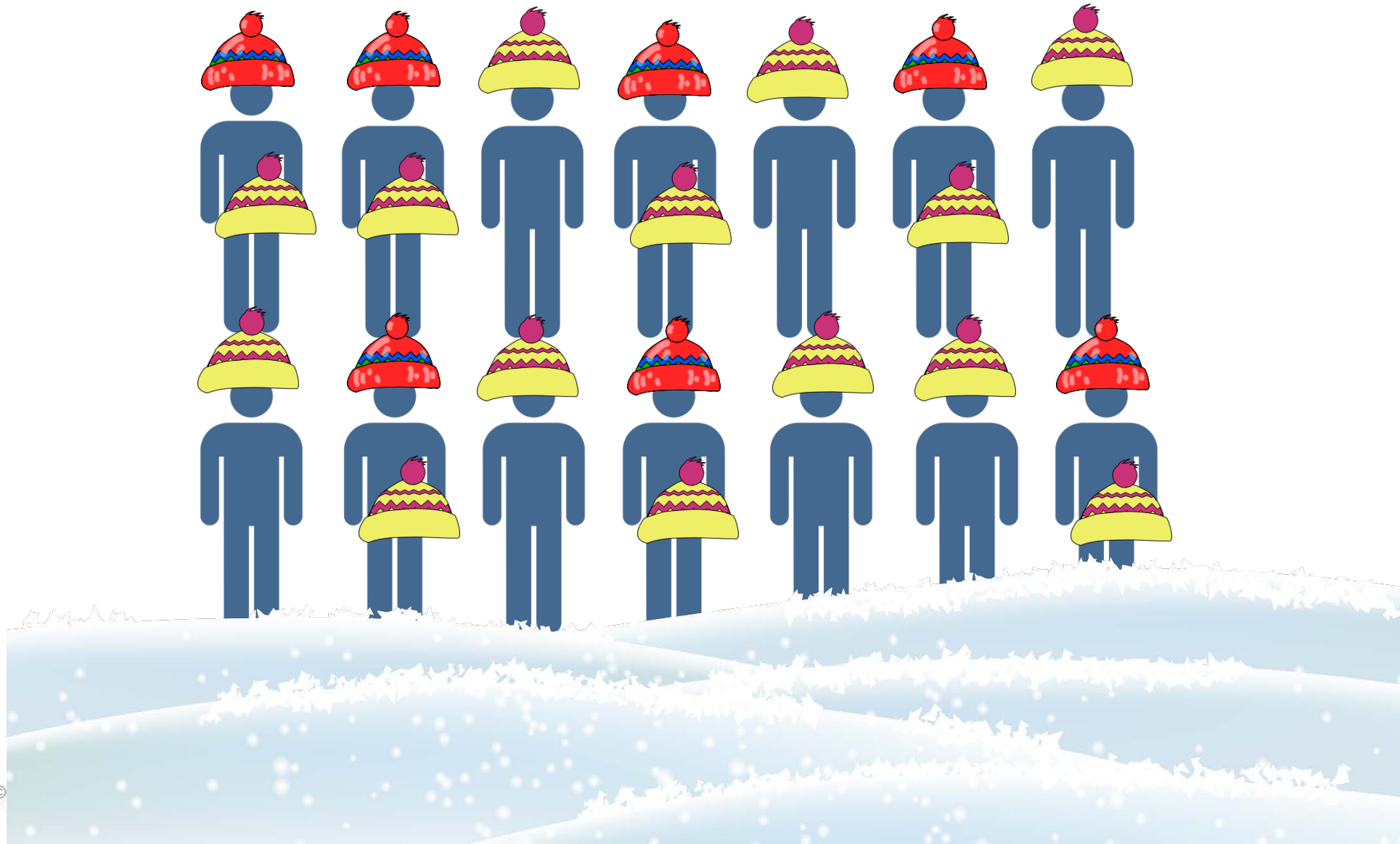
Who would you give a hat to...



Who would you give a hat to?



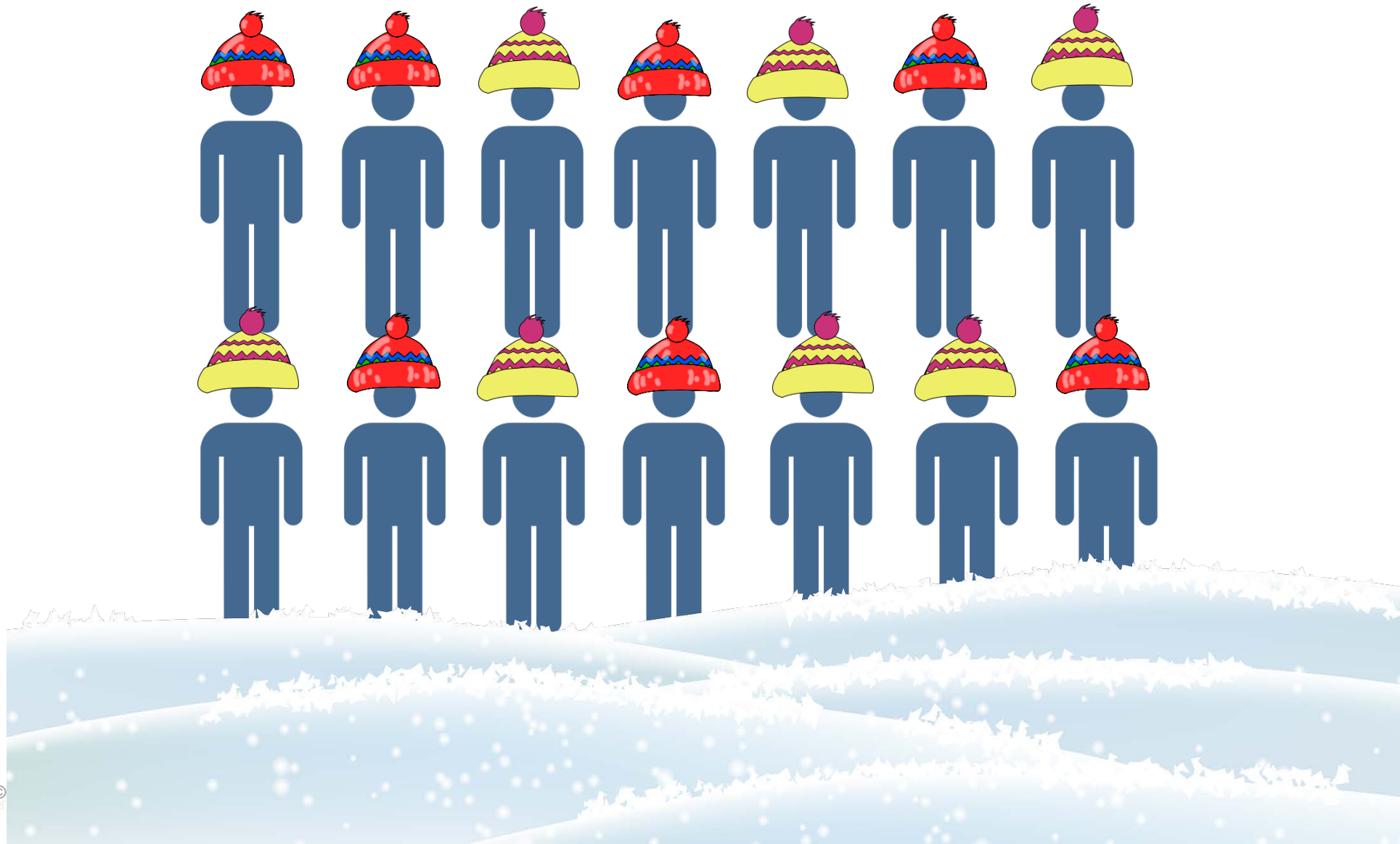
Give a hat to all...



Some programs give hats to those who already have one...



Give a hat to those who need one...



Acknowledgements

- **KP CHR** research team:

- Eric Johnson, PhD
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- Deedra Torres
- Michael Kwon
- Leslie Mosso
- Cindy Pullido
- Eddie Perez

gracias

MailedFIT.org



Partnership with Lyft...

- On-demand transportation service



Fact Sheet | PRECISE Patient Navigation

Sea Mar Community Health Centers
Caring for the Community
Exceptional service. Every person. Every time.

SUPPORTING YOU IN GETTING A COLONOSCOPY

Hi! I'm DeeDee. Sea Mar wants you to have a successful colonoscopy. To help make that happen, I am going to check in with you by phone several times. Below are typical conversations we will have over the phone throughout this process:

- 1 INTRODUCTION AND SCHEDULING**
We will talk about what a colonoscopy is, why it is important, and what to expect. I can help you schedule the appointment if you have not done it yet.
- 2 CARE AND SUPPORT**
We will talk about getting to and from your appointment and other details. I will help guide you through the process or address any concerns you may have.
- 3 BOWEL PREPARATION**
Bowel prep can be confusing, but it's important for a successful procedure! We will review the instructions and I will answer questions you may have.
- 4 PRE-COLONOSCOPY CHECK IN**
I will check in to see how bowel prep is going.
- 5 COLONOSCOPY**
I will check in to make sure your colonoscopy went well and see how you're feeling.
- 6 RESULTS**
I will make sure that you received the results from your procedure and will answer any questions you may have.

Your Colonoscopy Appointment:

Date: _____
Time: _____
Location: _____

Questions?
My name is: **DeeDee Torres**
I am a: **Navigator/Coordinator**
Contact me: _____



Sea Mar Community Health Centers
Caring for the Community
Exceptional service. Every person. Every time.

COLON CANCER CAN BE PREVENTED!

1,000,000 people in the United States die from colon cancer this year.

How do I get tested?
You need to get tested for colon cancer starting at age 45. You can get tested at home or find a doctor that can test you.

How do I get tested?
A simple at-home test, called a FIT, looks for hidden blood in your stool (poop). If blood is found your doctor will recommend a colonoscopy.

During a colonoscopy, your doctor inserts a flexible, lighted tube into your rectum to check for problems.



COLON (LARGE INTESTINE)
RECTUM

The colonoscopy can find and remove growths called polyps.

Take control of your health.
Get tested today!

Sea Mar Community Health Centers
Caring for the Community
Exceptional service. Every person. Every time.

How Do I Prepare For My Colonoscopy?

To prepare for your colonoscopy, you will need to take steps to make sure your colon is clean. This is called **bowel prep**. Bowel prep can be time consuming and a little uncomfortable, but it is necessary for a successful colonoscopy. This is a general guide of the steps to take for your bowel prep. The instructions can be different for each person. Please talk to your doctor.

5-7 DAYS BEFORE
Find someone who can go with you and drive you home from your procedure. **STOP taking iron supplements.** You may also need to adjust your medications. Talk to your doctor.

STOP eating foods like nuts and seeds, raw vegetables, popcorn and high fiber foods.

STOP

- Nuts & Seeds
- Raw Vegetables
- Popcorn
- Berries
- Corn
- Beans
- Peas

HIGH FIBER FOODS

4 DAYS BEFORE
Get your bowel prep supplies. Make sure you have your bowel prep prescription, then shop for your clear liquid diet.

3 DAYS BEFORE
Follow an extended bowel prep if recommended by your doctor.

2 DAYS BEFORE
Follow a clear liquid diet. No solid foods. No **RED** or **PURPLE** foods or drinks.

EAT/DRINK

- Ice Cream
- Tea
- Broth
- Jello
- Popsicles
- Sports Drinks

1 DAY BEFORE
Follow your bowel prep prescription as instructed by your doctor, usually 4-6 hours before the procedure. Stay home since you will need to use the bathroom often. This bowel prep is to get to this stool color.

NO (Red stool) → **ALMOST THERE!** (Yellow stool)

1 DAY BEFORE
Follow your bowel prep prescription as instructed by your doctor, usually 4-6 hours before the procedure. Stay home since you will need to use the bathroom often. This bowel prep is to get to this stool color.

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