2019

Colorectal Cancer Screening Quality Improvement: A FITKit Mailing Initiative

Isabella Kratzer

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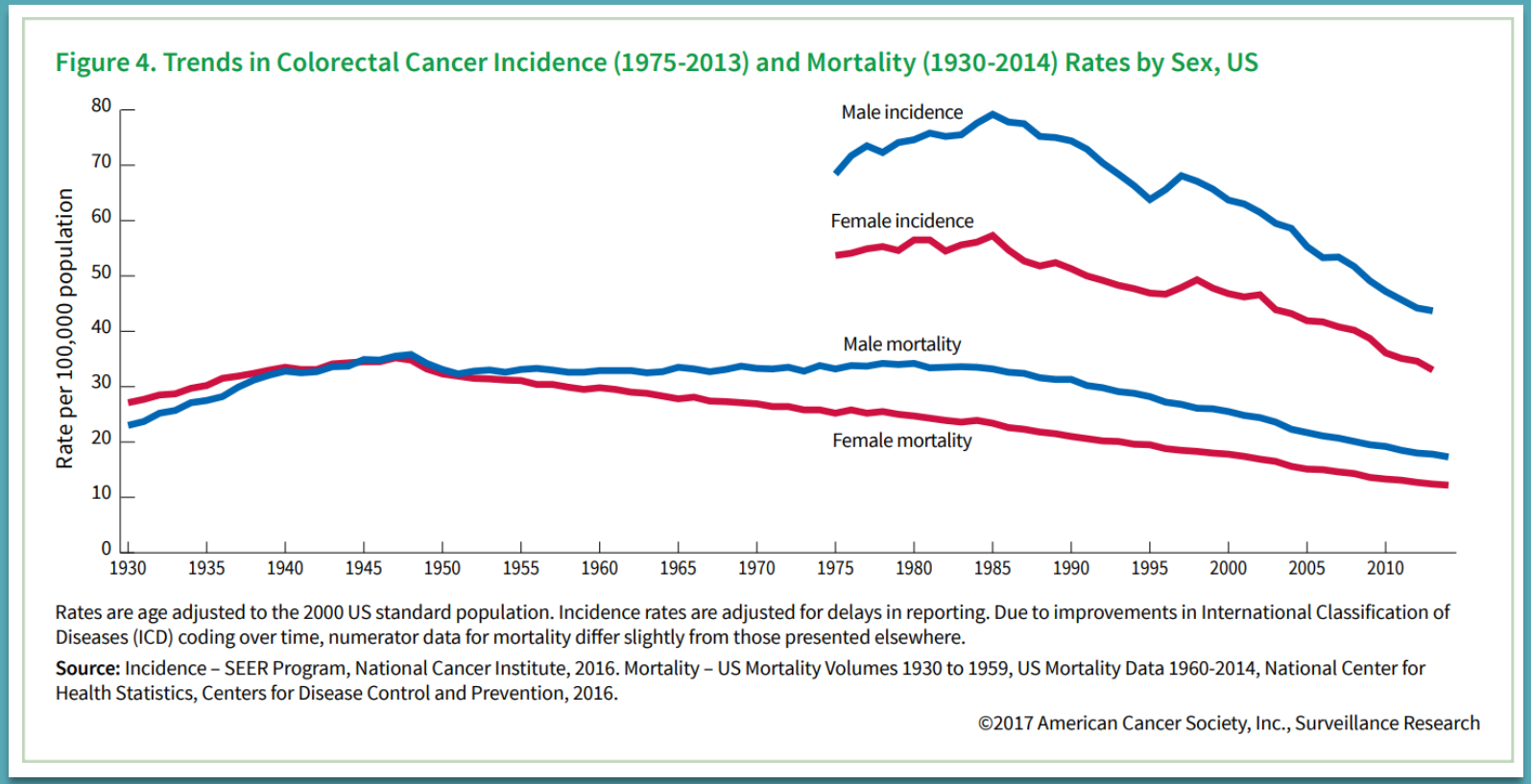
Isabella Kratzer
Hudson Headwaters LIC
Glens Falls, NY
2018-2019

The Problem: National Incidence Trends



American Cancer Society Colorectal Cancer Facts & Figures 2017-2019

Common Cancers

3rd

Colorectal cancers are the third most common cancers in both men and women in the US

Prevalence

1 in 22

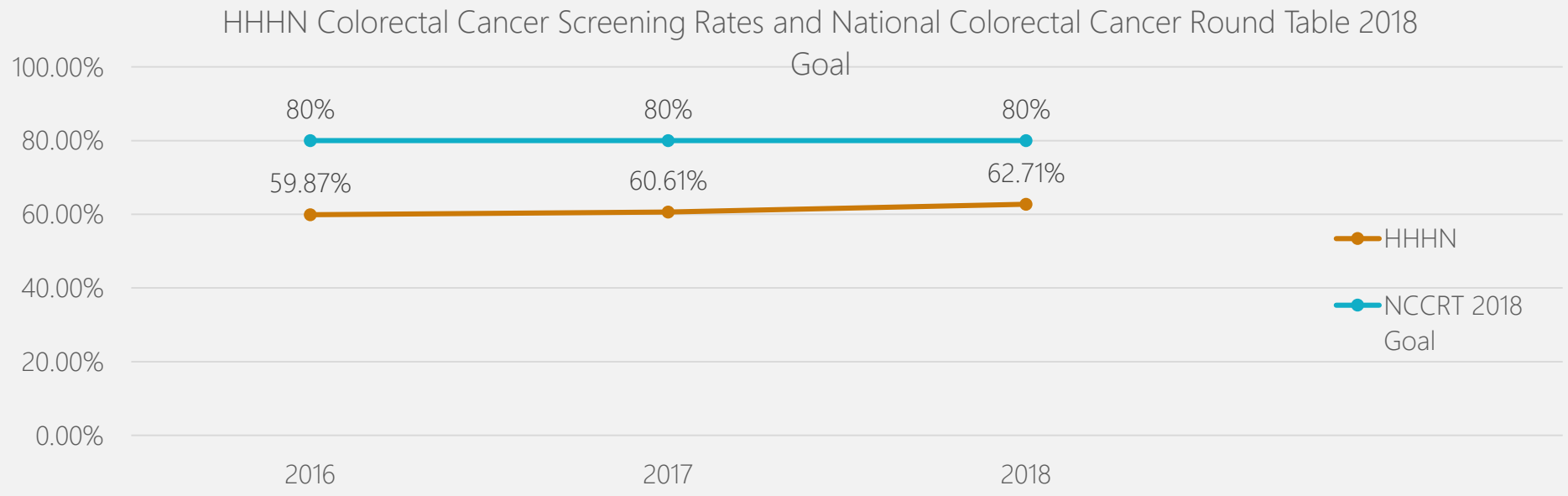
One in 22 men and one in 24 women will receive a colorectal cancer diagnosis in their lifetime

National Trends

2004-present

Trends show a recent accelerated decline in colorectal cancer incidence, attributed to increased screening and subsequent intervention

The Problem: Local Screening Trends



Hudson Headwaters

Primary Care

HHHN is one of the largest providers of primary care in Upstate New York

Federally Qualified Health Center

Safety Net

This network provides care to a large geographic area that is otherwise largely medically underserved

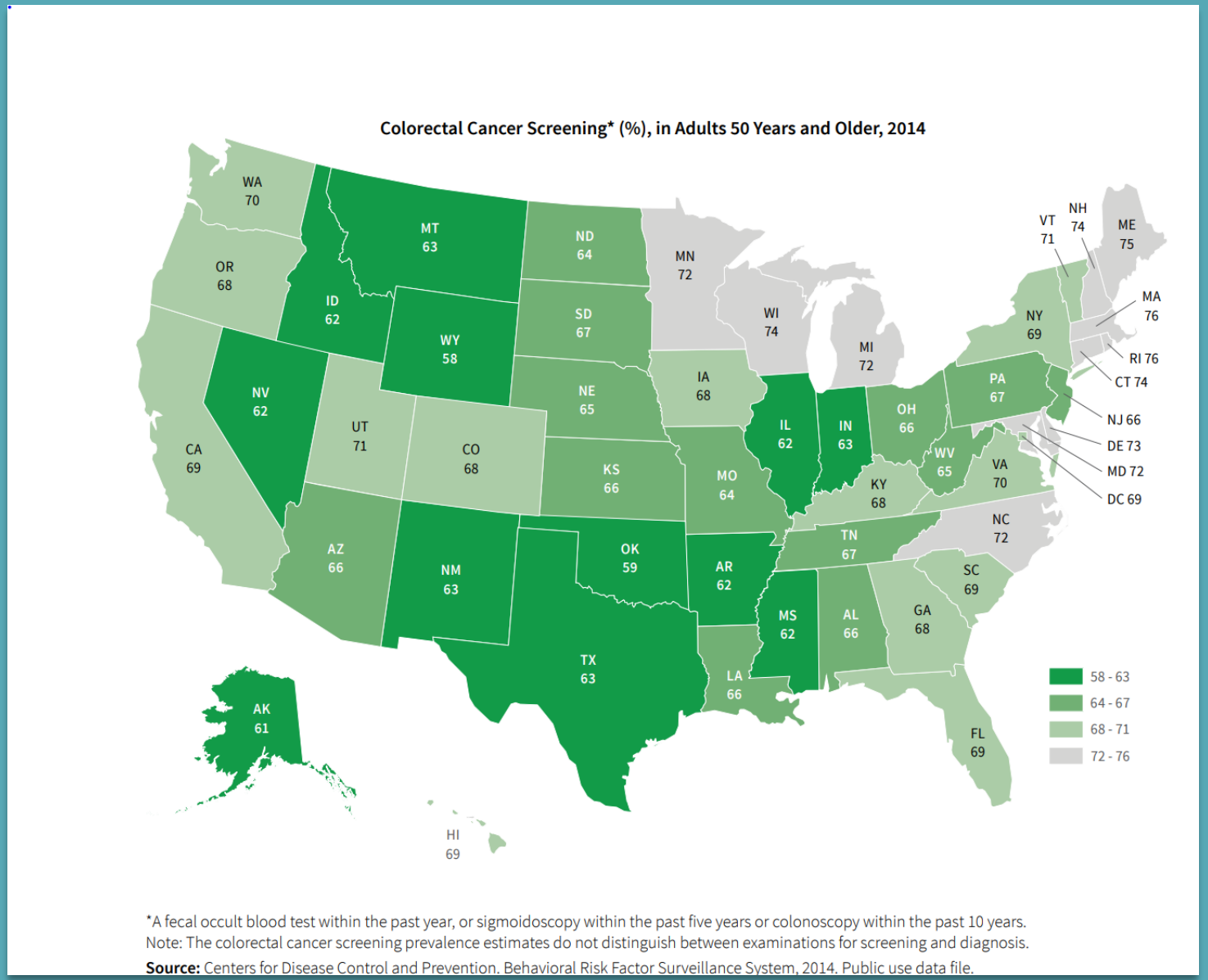
The Data

Under Goal

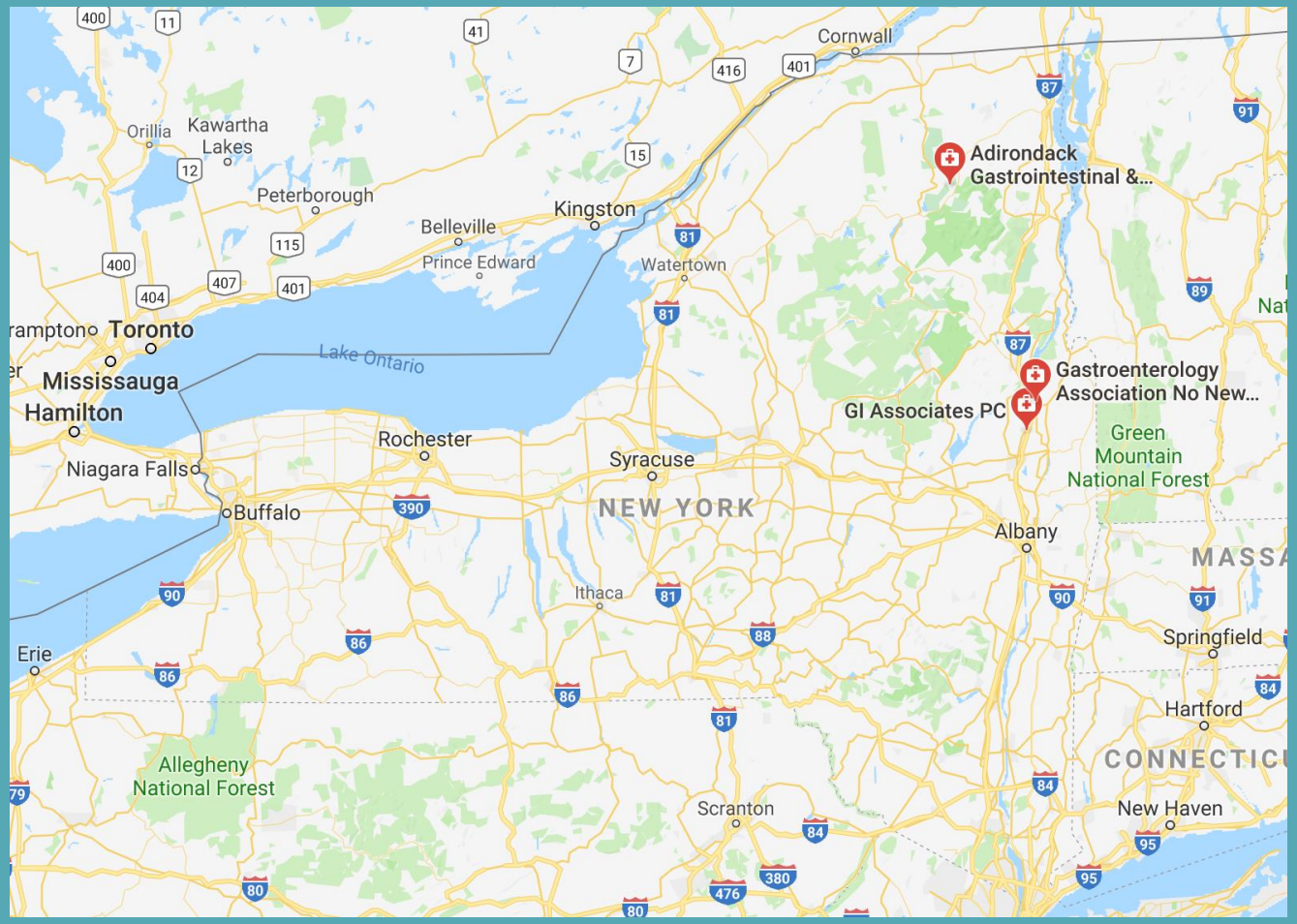
The screening rates show little trend from health center to health center and little improvement

Comparison at the State and National Level

- As a network, our best screening rates in recent years are below 63%
- While the state of New York is in the second-highest bracket for screening rates, HHHN still sits in the lowest
- This is complicated by our role as an FQHC, with a large catchment area and socioeconomically diverse patient population



American Cancer Society Colorectal Cancer Facts & Figures 2017-2019

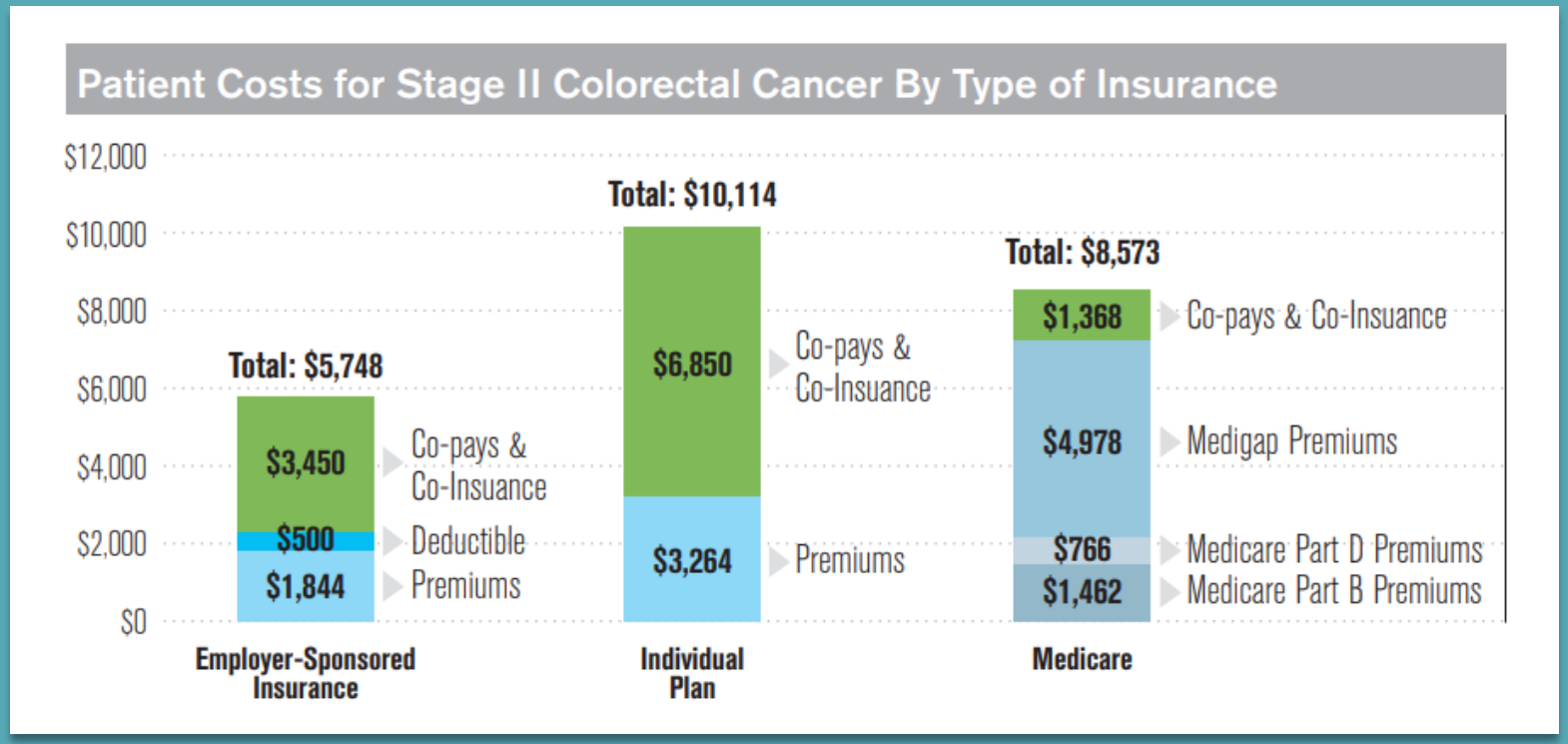


"Gastroenterology Adirondacks" searched in Google Maps

The Need

- We serve a largely rural population
- Few available GI centers capable of colonoscopy
- Large need for screening options with greater availability, accessibility, and geographic flexibility

The Public Health Cost



"The Costs of Cancer," American Cancer Society Cancer Action Network, 2017.

National Expenditure for CRC

$16.3 Billion

By cancer type, national expenditure on colorectal cancer is second only to female breast cancer

Typical Stage IIb Case Study

$124,425

American Cancer Society case study reports care for a typical Stage IIb CRC patient costing $124,425 in the first year of treatment alone

Local Coverage

51.5% Commercial

HHHN patient population eligible for CRC screening (with insurance on file for search): 51.5% commercial, 38.7% Medicare, 9.7% Medicaid

The Community Perspective: An Interview with HHHN Care Manager, Debra Shay

Financial Barriers to Access:

- Large copays for screening services, particularly colonoscopy
- Expense of return postage for at-home screening options
- Need to pay no-show fees at local GI offices before scheduling new procedures

Social Support Barriers to Access:

- Availability of family/friends to escort patients to and from colonoscopy (required if using sedation)
- Availability of family/friends to observe and remain available to patients after colonoscopy in case of complications

Personal Barriers to Access:

- Fear of significant screening procedures
- Potential embarrassment of returning at-home samples in-person

The Community Perspective: An Interview with the Cancer Services Program

"It's the people who are disenfranchised, people who don't get to go to their well care checks, who need to be engaged."

Kathryn Cramer

Gail Infante

"I'm so happy the medical community is looking beyond colonoscopy, because we meet with so many people who are not up to date on screening and have no intention of getting a colonoscopy."

"Some people don't want to be found, it's not exactly safe right now, but we're trying to find trusting relationships with gatekeepers in the community, so hopefully we can reach that [New American/Immigrant] group."

Kathryn Cramer

Methods: Data and Design

- Data Acquisition: with massive support from Erin Dunn and Kelly Piotrowski from HHHN's Population Health department, we pulled three years' data from Athena Health records to identify trends in successful and failed CRC screening measures
- Data Analysis: looked at age, insurance type, income, geography, individual health centers, individual providers, and risk factors and comorbidities (e.g. obesity, homelessness, asthma, COPD, diabetes, hypertension, osteoporosis) to determine most at-risk populations
- Literature Review: underwent a literature search to find evidence-based interventions in similar populations
- Project Approval: devised and approved a pilot FITKit mailing program including cost estimates/approval, written outreach reviewed by HHHN's marketing department, and presentation of the pilot plan itself to the network

Methods: Intervention

We mailed FITkits to a cohort of HHHN primary care patients who:

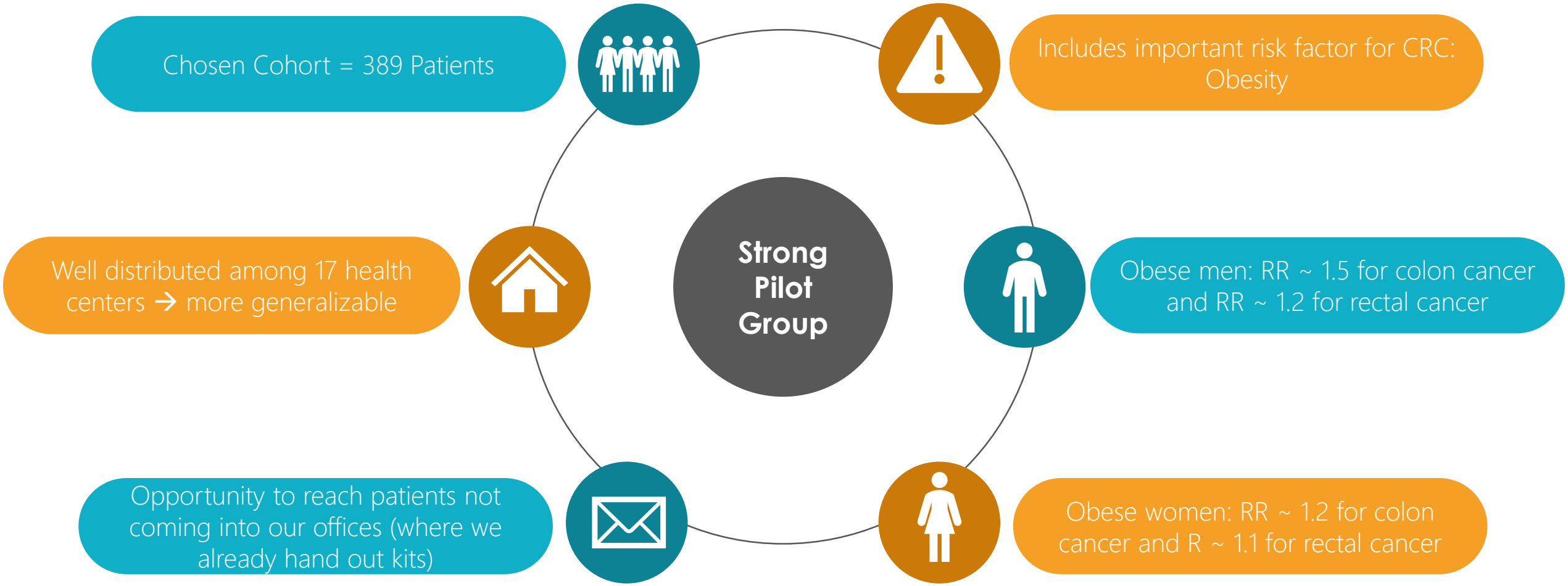
- Are currently failing the CRC screening measure
- Haven't seen a provider in 2018
- Are age 50-75
- Have a BMI greater than or equal to 30 (obese)
- Have 0-5 comorbidities

This mailing was preceded by an introduction email for the initiative (1 week prior)

Kits included a second introductory letter for the initiative, health center call-back numbers, the existing fact sheet included with FITkits in-office, and pre-stamped, pre-addressed return envelopes for samples

Two automated phone reminders were released, at ~ 1.5 and 3 weeks after the kit mailing, encouraging patients to complete the screening

Why this Cohort?



Support from the Literature

Effectiveness and Cost of Multilayered Colorectal Cancer Screening Promotion Interventions…

Kemper et al, 2018

- This study showed a 31% return rate in their mailed FIT kits at involved FQHC's in Washington State
- Study used additional mailed/telephone reminders
- Found cost per completed screening to be just under $40

Effect of Colonoscopy Outreach vs Fecal Immunochemical Test Outreach on Colorectal Cancer Screening Completion

Signal et al, 2017

- This RCT compared colonoscopy mailed outreach and FIT kit mailed outreach with usual care among individuals 50-64 years old, receiving primary care at a safety-net institution.
- Found colonoscopy outreach to have higher rates of process completion (38.4%) than FITkit outreach/mailing (28.0%), but maintained a stringent definition of process completion
- Required FITkit patients to follow up on abnormal test results with colonoscopy to be considered 'complete'

Evaluation of Interventions Intended to Increase Colorectal Cancer Screening Rates in the United States

Dougherty et al, 2018

- This meta-analysis looked at many RCT's investigating different interventions intended to increase CRC screening rates and found that FBT outreach had the best advantage over usual care
- RR (of completing screening) of 2.26 and CI of 1.81-2.81 (better than patient navigation, patient education, and patient reminders)

The Results

In mid-January, 2019, FITKits were mailed out to nearly 400 HHHN patients who were out of date with screening recommendations and subsequently at risk of having undetected colorectal cancer

We plan to track FITKit returns within this cohort over the coming months, sending out additional reminders accordingly

The data we collect will direct future efforts for this pilot quality improvement project

Evaluating Effectiveness

Strengths

Reached a population that was not receiving regular preventative care

Equally effective for even the most rural patients in population

Provided a quick, simple cancer screening option without need to schedule appointment or procedure

Eliminated travel time and cost, hopefully improving accessibility

Worked with population generalizable to much of HHHN

Limitations

High financial cost, price per completed screening still to be determined

Time-consuming mailing assembly process

Size of cohort limited by financial and time burden

Potential issues with follow-up for inaccessible patients with positive test results

Visual/language demands of included kit instructions

Workflow of retroactively ordering screening

Future Directions

DATA ANALYSIS

Evaluate effectiveness by collecting data on FITKit returns, consider analysis of cost per returned screening

COMPARISON

Consider comparing returns on mailed kits to those handed out in-office

REPETITION

Explore annual mailings for any patients receptive to this mailed screening option

ASSESSMENT

Assess any barriers to follow-up and continued workup for any positive screening results

EXPANSION

Based on collected data, consider expanding pilot to broader HHHN population

Recommendations

Streamline

Consider streamlining mailing process:

- Estimated person-hours for mailing assembly for current cohort ~21
- Eliminate need to disassemble and reassemble every FITKit by printing patient ID stickers and including postage and return label as loose components with backing paper intact

Consider

Consider measures to increase accessibility and inclusivity:

- Consider picture-based instructions, eliminating need to read small font or have English language proficiency

Learn

Learn from our neighbors at the Cancer Services Program:

- Consider small rewards (e.g. $5 Stewart's giftcard) included with completed FITKit results
- Consider radio ads for outreach
- Establish method for individuals who are out-of-date with screening to request FITKit mailing, without need for in-person communication

Where do we stand today?

26 Kits Returned

Just under a month after mailing FITKits to a pilot group of Hudson Headwaters patients, we have seen 26 mailed kits returned to our offices for processing

7.14% Completion

With most recent literature suggesting ~30% screening completion on similar FITKit mailing initiatives, 7.14% returns is a promising start near the one-month mark

$427 in FITKits

New FITKit purchasing for the entire cohort cost the network nearly $427, with additional costs of the initiative attributable to mailing envelopes, postage, and printing

16% of Kit Cost

FITKit purchasing for this QI project represented only 16% of the networks total FITKit purchasing expenses in 2018 (with record lowest FITKit spending this year)

Citations

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