



Partnering with Community Health Centers to Increase Colorectal Cancer Screening and Follow-up

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36th EDRN Steering Committee Meeting

October 27-28, 2020

DELIVERING
DISCOVERIES

UC San Diego
MOORE'S CANCER CENTER

Presentation Outline

- Main message: Addressing disparities and inequities requires fostering partnerships with communities and their providers.
- Outline
 - CRC screening guidelines and statistics
 - Challenges to screening uptake and follow-up
 - Regional solution for increasing CRC rates
 - COVID-19 impact on CRC screening
 - Potential opportunities for EDRN

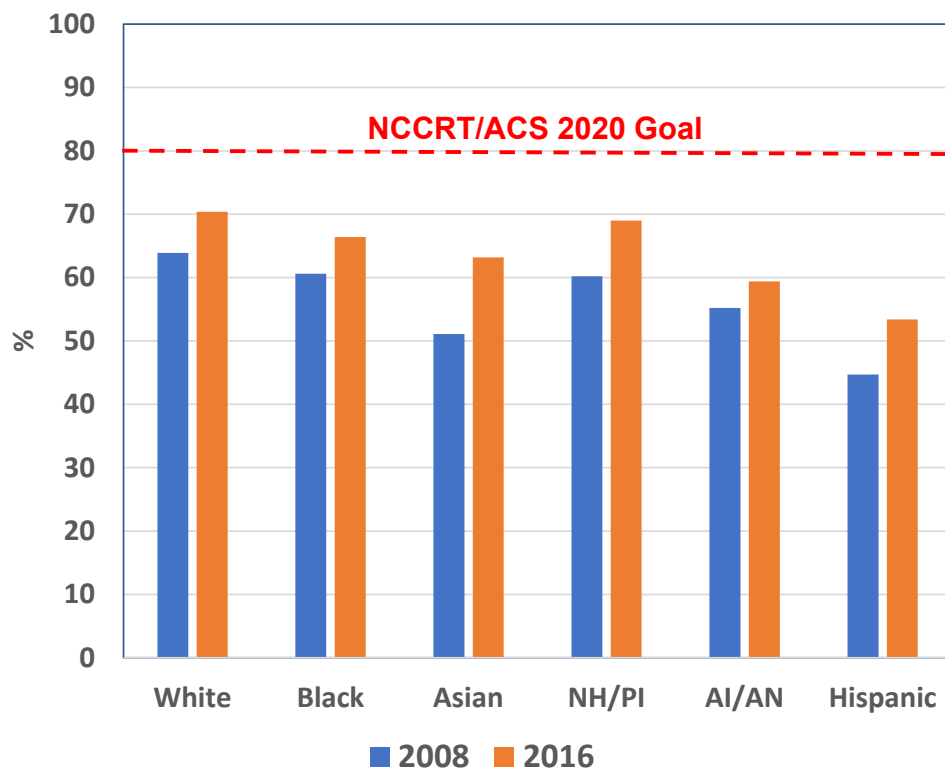
“The USPSTF recommends screening for colorectal cancer starting at age 50 years and continuing until age 75 years”

Table. Characteristics of Colorectal Cancer Screening Strategies^a

Screening Method	Frequency ^b	Evidence of Efficacy	Other Considerations
Stool-Based Tests			
gFOBT	Every year	RCTs with mortality end points: High-sensitivity versions (eg, Hemocult SENSA) have superior test performance characteristics than older tests (eg, Hemocult II)	Does not require bowel preparation, anesthesia, or transportation to and from the screening examination (test is performed at home)
FIT ^c	Every year	Test characteristic studies: Improved accuracy compared with gFOBT Can be done with a single specimen	Does not require bowel preparation, anesthesia, or transportation to and from the screening examination (test is performed at home)
FIT-DNA	Every 1 or 3 y ^d	Test characteristic studies: Specificity is lower than for FIT, resulting in more false-positive results, more diagnostic colonoscopies, and more associated adverse events per screening test Improved sensitivity compared with FIT per single screening test	There is insufficient evidence about appropriate longitudinal follow-up of abnormal findings after a negative diagnostic colonoscopy; may potentially lead to overly intensive surveillance due to provider and patient concerns over the genetic component of the test
Direct Visualization Tests			
Colonoscopy ^c	Every 10 y	Prospective cohort study with mortality end point	Requires less frequent screening Screening and diagnostic follow-up of positive findings can be performed during the same examination
CT colonography ^e	Every 5 y	Test characteristic studies	There is insufficient evidence about the potential harms of associated extracolonic findings, which are common
Flexible sigmoidoscopy	Every 5 y	RCTs with mortality end points: Modeling suggests it provides less benefit than when combined with FIT or compared with other strategies	Test availability has declined in the United States
Flexible sigmoidoscopy with FIT ^c	Flexible sigmoidoscopy every 10 y plus FIT every year	RCT with mortality end point (subgroup analysis)	Test availability has declined in the United States Potentially attractive option for patients who want endoscopic screening but want to limit exposure to colonoscopy

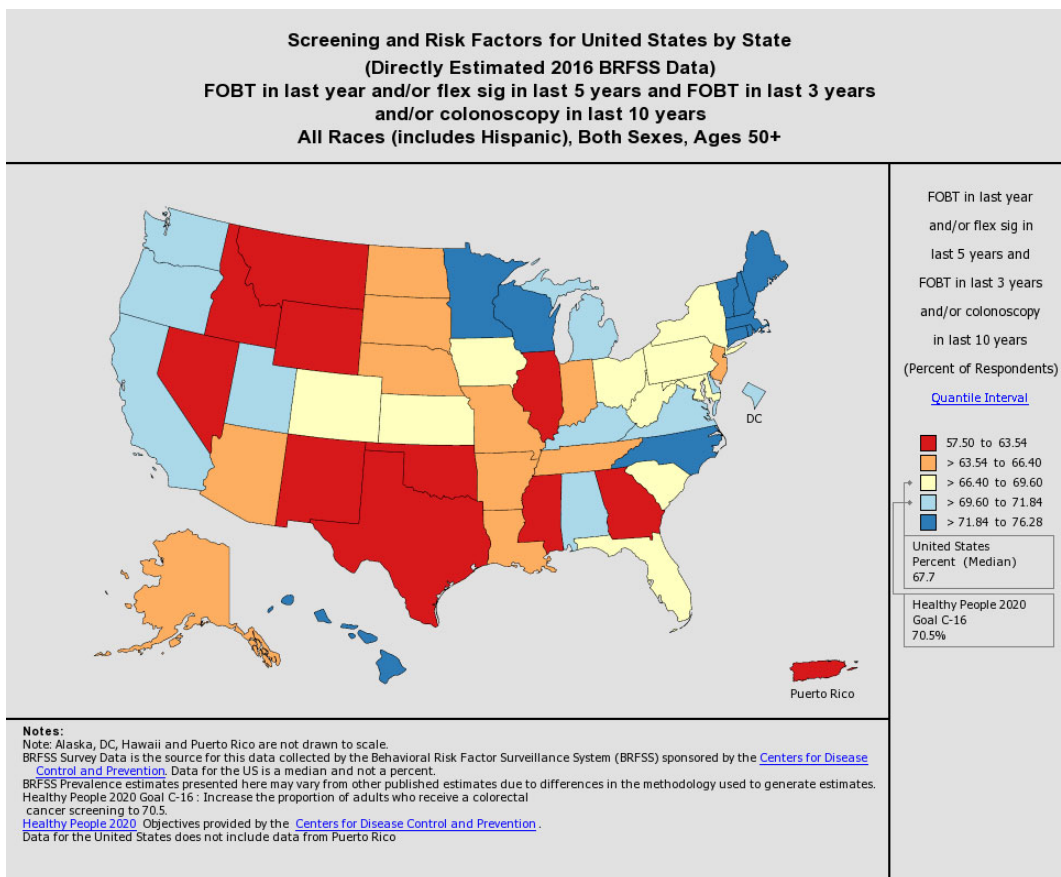
CRC Screening Trends

Change in CRC Screening from 2008 to 2016

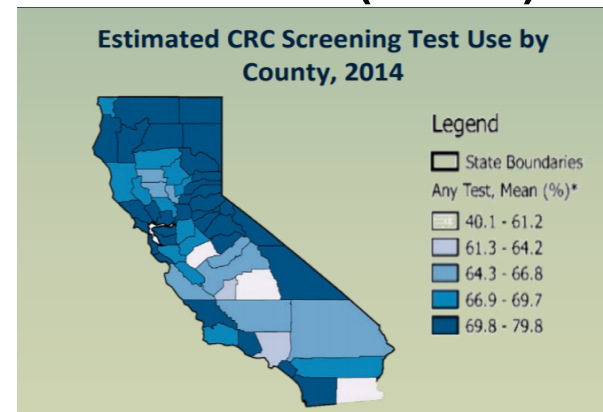


- CRC screening increased in all racial/ethnic groups but variation in gains exists:
 - 2016 highest prevalence in whites
 - 2016 lowest prevalence in Hispanics
- Screening rates are short of national goal of 80% screening by 2020

CRC Screening: Regional Differences



California (71.6%)



CRC screening test use, by race/ethnicity:

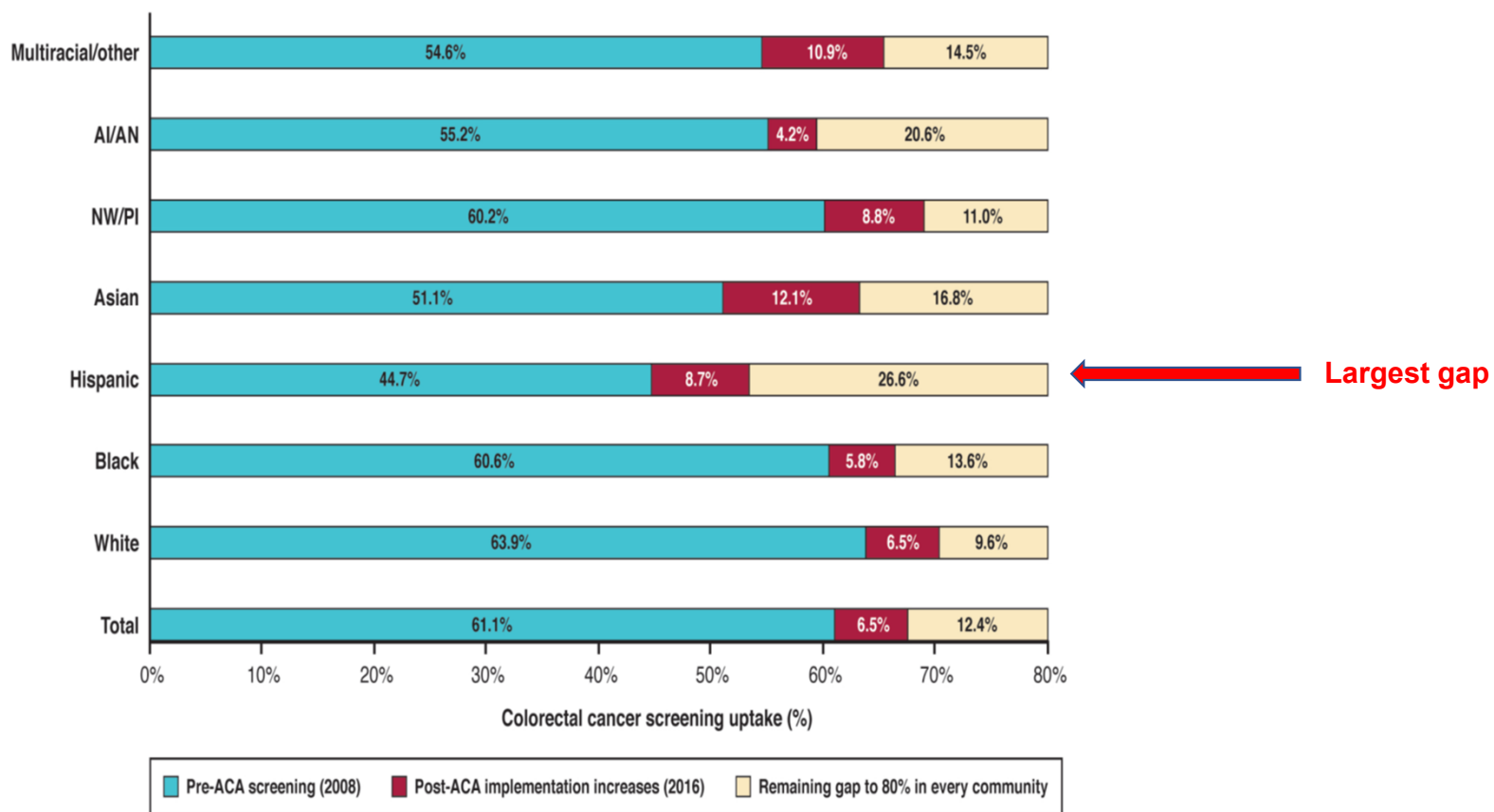


CRC screening test use, by insurance status:



Source: <https://www.cdc.gov/cancer/ncccp/screening-rates/pdf/colorectal-cancer-screening-california-508.pdf>

CRC Screening Pre- and Post-Affordable Care Act



Demb & Gupta, et al. Clin Gastroenterol Hepatol. 2019 Nov 28. pii: S1542-3565(19)31382-5. doi: 10.1016/j.cgh.2019.11.042.

Partnerships with Community Health Centers

Partnerships have been fostered over several years and cover the entire region

- **Health Center Partners**

- 17 FQHC systems serving ~895,000 patients annually in San Diego County
- Race/ethnicity: **60% Hispanic**; 5% API; 5% Black; 1% American Indian/Alaska Native
- Includes urban, rural, US-Mexico border, Native American and Pacific Islander Centers

- **Family Health Centers of San Diego**

- Serves 190,000 patients in San Diego County



HEALTH CENTER PARTNERS
of Southern California



FAMILY HEALTH CENTERS
OF SAN DIEGO



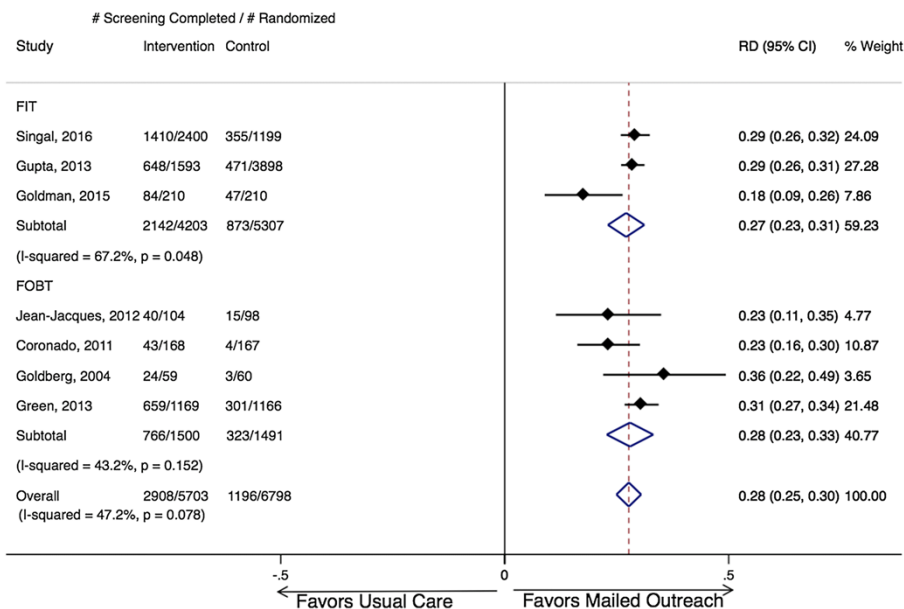
CHC Medical Directors/Leaders



Mailed FIT strategy for CRC Screening: It works!

Meta-analysis of 7 RCTs demonstrates absolute 28% increase in screening with mailed FIT

Jager et al., *Dig Dis Sci* 2019;64:2489-2496



Strategy	CRC screening completion vs. usual care	
	RR (95% CI)	% Point Difference
Mailed outreach	2.28 (1.74-2.97)	22%
Visit-based FIT distribution (e.g. FluFIT)	2.16 (1.72-2.70)	16%
Patient navigation without fecal test distribution (e.g. offering colonoscopy or choice)	1.62 (1.32-1.98)	10-11%
Patient education alone	1.20 (1.06-1.36)	4%
Patient reminders alone	1.20 (1.02-1.41)	3%

Dougherty MK et al. *JAMA Int Med* 2018; Issaka RB et al. *Prev Med* 2018; Gupta S et al. *CA Cancer J Clin* 2020

Next Steps

- Evidence-based interventions include mailed outreach offering FIT, one-on-one education, and others
- Unclear which is best for our regional US-Mexico border population
- Led to NCI U54 Academic-Community Partnership funded 4 arm RCT

Outreach and Inreach Strategies for Colorectal Cancer Screening Among Latinos at a Federally Qualified Health Center: A Randomized Controlled Trial, 2015–2018

Sheila F. Castañeda, PhD, Balambal Bharti, PhD, Marielena Rojas, BA, Silvia Mercado, BA, Adriana M. Bearse, MS, Jasmine Camacho, BS, Manuel Song Lopez, BA, Fatima Muñoz, MD, MPH, Shawne O'Connell, MSW, Lin Liu, PhD, Gregory A. Talavera, MD, MPH, and Samir Gupta, MD, MSCS

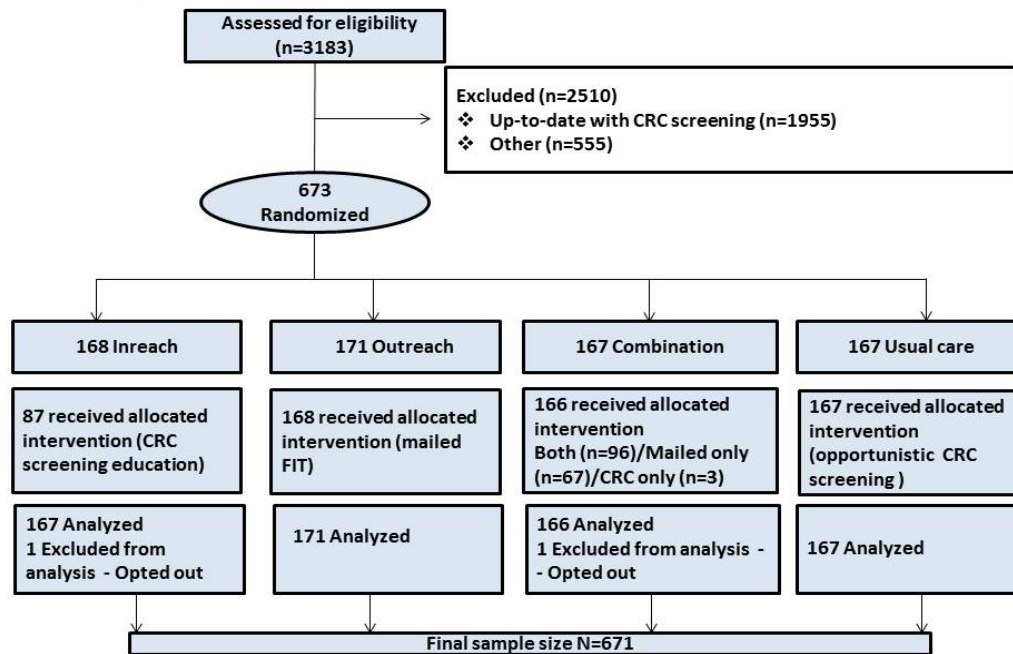
Objective:

To compare usual care, inreach consisting of one-on-one education, mailed outreach offering a fecal immunochemical test (FIT), and a combination of outreach and inreach for promoting CRC screening

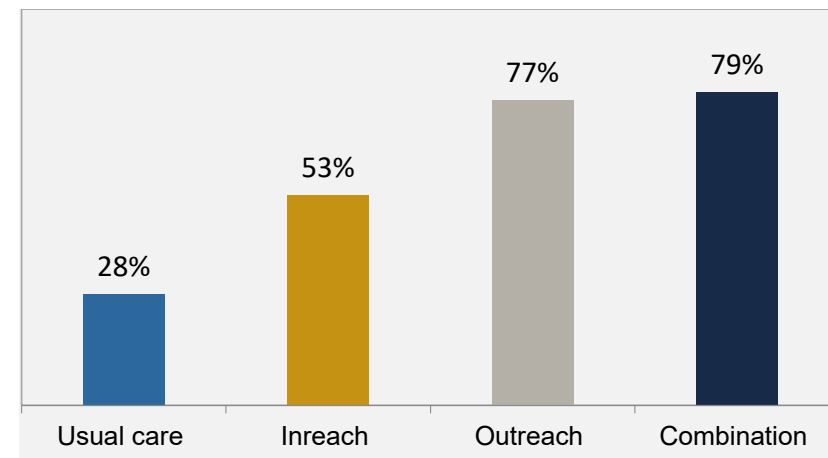
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doi:10.2105/AJPH.2019.305524



Primary Outcome: CRC Screening at 6 months



p<0.001 for all between-group comparisons except outreach vs. combination

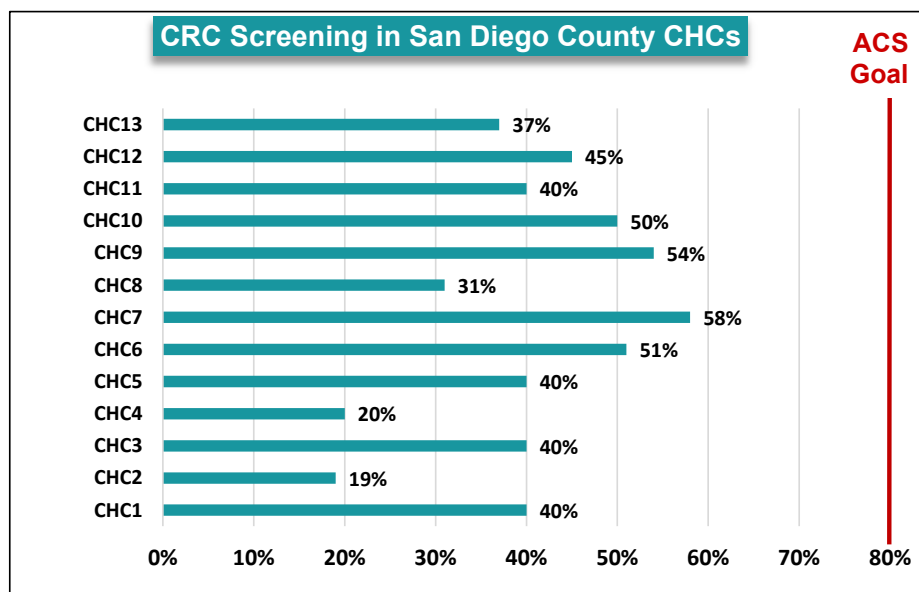
Demographic Characteristics

- All Hispanic/Latino
- 86% preferred Spanish; 49% men; 67% Medicaid

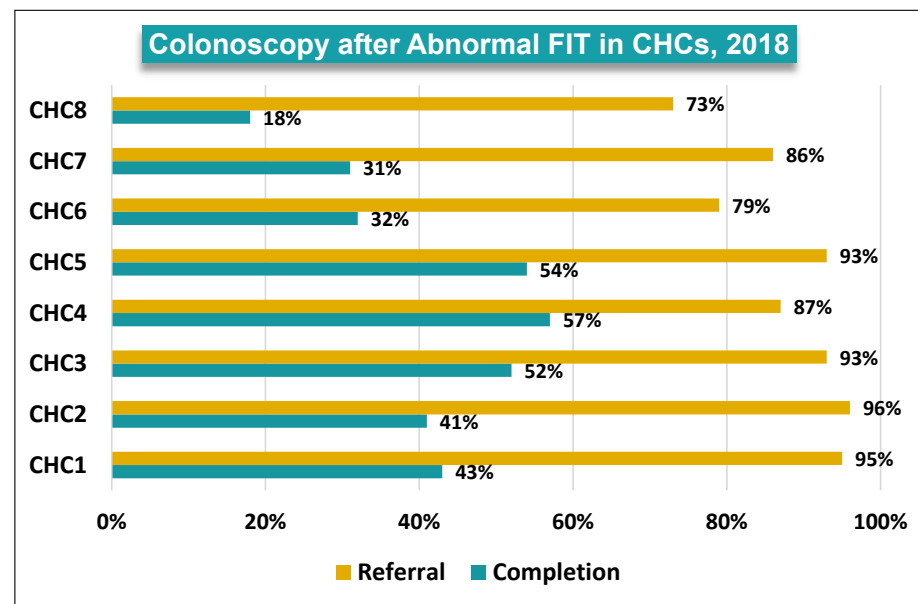


Helping FQHCS Understand their CRC Screening and Follow-up Rates

Effectiveness of stool-based testing (e.g., FIT) is contingent upon successful colonoscopy completion for those with positive test results. Evaluation must consider the entire process.



Ref: HRSA, UDS 2017



Ref: Bharti et al, Cancer 2019. doi: 10.1002/cncr.32440.

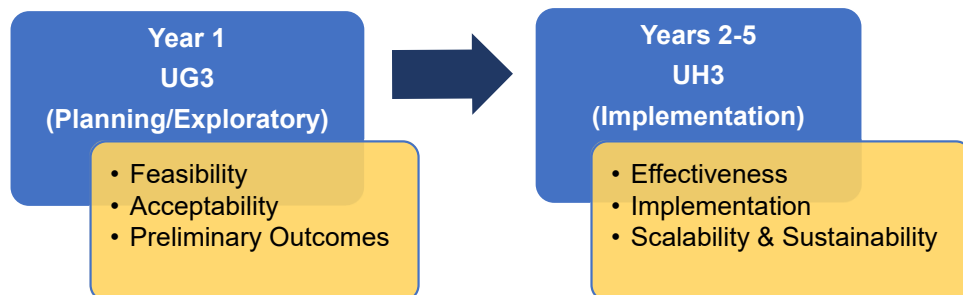
Key Unanswered Questions

- Can these interventions be implemented regionally?
- How can the interventions be improved and scaled up?
- What are effective strategies for abnormal FIT follow-up?



ACCSIS

To assess the implementation and effectiveness of a multilevel intervention to increase colorectal cancer screening, follow-up, and referral-to-care in San Diego County



ACCSIS 2019 Annual Meeting

UCSD: E Martinez, S Gupta, J Nodora

SDSU: S Castañeda

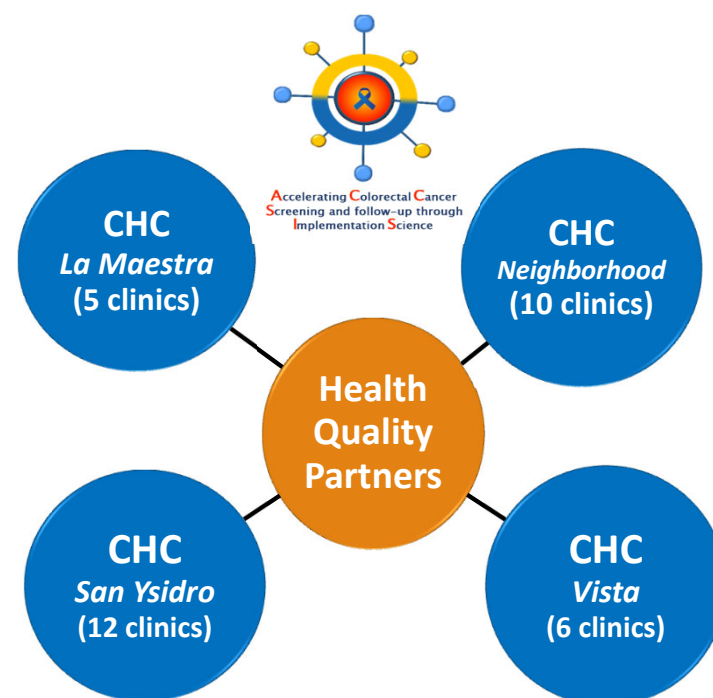
HQP: J Covin, K Ortwine

Funding: UG3CA233314 & 4UH3CA233314-02
Martinez, Gupta, Castañeda, MPis



UG3 (Planning) Phase

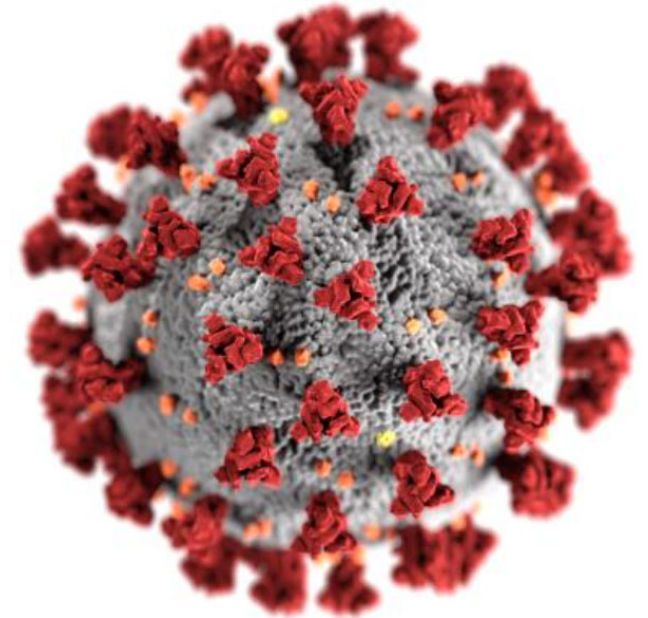
- **AIM:** Use mixed methods to pilot test the *feasibility, acceptability, and preliminary outcomes* of a multilevel intervention for CRC screening, follow-up, and referral-to-care among CHC patients.
- HQP, the Hub, provides centralized team to:
 - Deliver mailed FIT outreach and reminders;
 - Coordinate navigation for abnormal FIT follow-up and referral-to-care;
 - Provide expert advice on implementation of evidence-based interventions to member CHC organizations, the spokes.



Timeline: 2019-2020

COVID-19 Pandemic

- Regional level
 - Stay-at-home mandates
- System- and clinic level
 - Clinic shut-downs
 - Consults switching to telemedicine
 - Staff layoffs and furloughs
- Patient level
 - Fear
 - Anxiety
 - Economic
 - Exacerbated inequities, disparities, racism



Impact of COVID-19 Pandemic: Lessons Learned & Call to Action

Nodora et al., JNCI 2020 <https://doi.org/10.1093/jnci/djaa117>

Strategy	Lessons Learned	COVID-19 Adaptations
Mailed FIT Screening	CHCs can deliver mailed FIT	Assess & accommodate real-world experiences
Patient Navigation for Abnormal FIT Follow up	Uniform delivery is possible by telehealth.	Shift activities to virtual. Adopt train-the-trainer model.
Colonoscopy Completion	Colonoscopy capacity challenge. Patients may not be willing to undergo colonoscopy.	Survey community gastroenterologists. Grassroots advocacy to gastroenterologists Patient prioritization based on signs and symptoms.
Telehealth Capability & Capacity	Visits largely phone based, few video calls.	Enhance telemedicine capacity and capability. Support change in policies for telehealth reimbursement.

Conclusion:

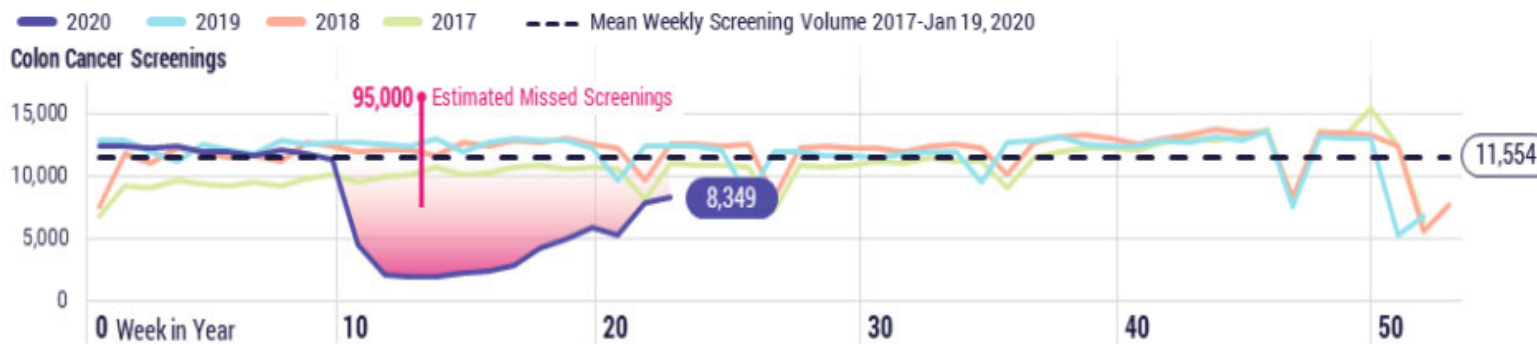
Mailed FIT is a pandemic-adaptable method for delivering CRC screening

Call to Action

- Establish COVID-adapted Best Practices for Implementing Mailed FIT Programs in CHCs
- Implement Grassroots Advocacy to Identify Community Gastroenterologists who Commit to Performing Colonoscopies for CHC Patients
- Assess Cancer Prevention Priorities Among Individuals in Underserved Communities
- Assess Regional CRC Screening and Follow-up Barriers and Solutions

Mailed FIT: An ideal COVID-adapted approach for maintaining CRC screening

Cancer Screenings in the U.S.



Network EHR. Delayed Cancer Screenings. A Second Look. <https://ehr.org/delayed-cancer-screenings-a-second-look/>. Accessed September 28, 2020

- Screening rates have plummeted
- Predicted to result in increased CRC incidence and mortality
 - 4,500 excess CRC deaths between 2020 and 2030 (Science 2020;368(6497):1290-1290)
 - 15.3–16.6% increase in CRC deaths over 5 years (doi.org/10.1016/S1470-2045(20)30388-0S)
- Patients may continue to be reluctant to attend in person visits
- Mailed FIT can mitigate impacts of COVID-19
 - No visit required for invitation, FIT distribution/return, reminders
 - No visit required for initial colonoscopy coordination for abnormal FIT

Case for Quantitative FIT

- FIT screening reduces CRC mortality.
- Effectiveness is contingent upon successful colonoscopy completion for those with positive test results.
- Rates of colonoscopy follow up after abnormal FIT are low, especially among underserved populations.
- Could a system be developed to target colonoscopy completion on individuals with the highest risk of developing CRC based on quantitative FIT?
- **Could we do better?**

Lee et al., JNCI J Natl Cancer Inst (2017) 109(5): djw269

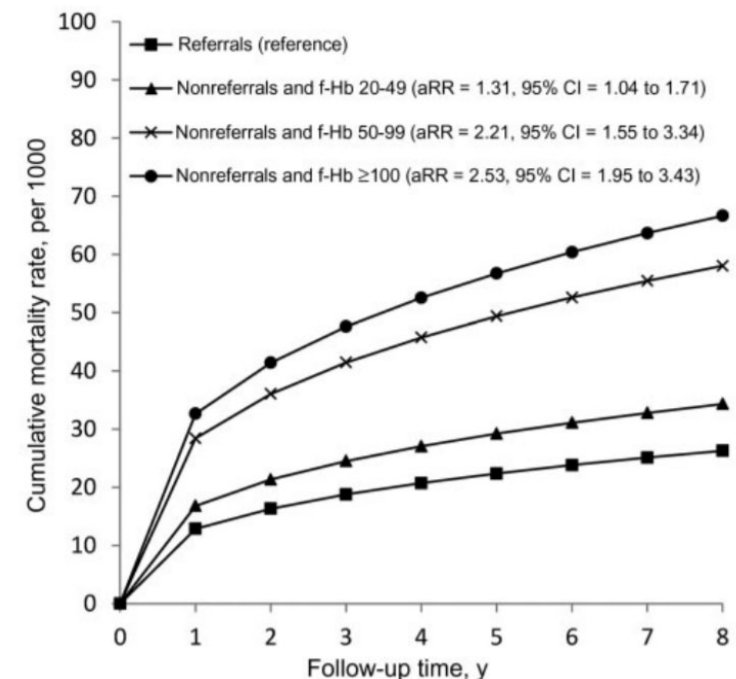


Figure 4. Cumulative mortality rates of the nonreferral group, stratified by risk score. Based on age- and sex-adjusted f-Hb, the noncolonoscopy group was categorized into three risk groups of f-Hb 20-49 (n = 5361), f-Hb 50-99 (n = 2149), and f-Hb 100+ (n = 3268). The data was analyzed using the Cox proportional hazards regression model.

Discussion for EDRN

- **Addressing disparities and inequities in CRC screening and early detection**
 - To make impact, regional challenges and solutions need to be identified
 - Engaging with and involving regional communities and their providers is essential
 - Identify and implement sustainable solutions
 - Identify and implement solutions during challenging times (i.e., COVID-19)
 - Consider blood-based biomarkers, perhaps partnering with biotech companies
 - Must ensure that testing of these involves underserved, racial/ethnic diverse populations (e.g., oversample certain groups)
 - Test must be affordable and accessible to all individuals
 - Assess implementation of the biomarker in diverse populations

Acknowledgements

- UC San Diego Partnership & ACCSIS
 - Investigators: Samir Gupta, Sheila Castañeda, Elva Arredondo, Jesse Nodora, Borsika Rabin, Scott Roesch
 - Staff: Valesca Largaespada, Bilge Pakiz, Jill Nery, L Hinton
- Health Quality Partners
 - Nicole Howard, Jennifer Covin
- Community Health Centers
 - San Ysidro Health, La Maestra, Neighborhood Healthcare, Vista Community Clinic, Family Health Centers
- Partnership Community Advisory Board
- Funding:
 - CA023100-29; CA132379; CA132384; UG3CA233314, UH3CA233314
 - RSG-17-232-01-CPPB (Nodora); CA222866 (Gupta)

Thank you!

