



Implementation science models, methods, and strategies for meaningful community engagement in co-creation of culturally responsive public health solutions

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Working towards
Empowered community-driven
Approaches to increase
Vaccination & preventive care
Engagement

UC SAN DIEGO * GLOBAL ARC * SYH
EST 2023

UC San Diego



OBJECTIVES

1. Provide an overview of implementation science models, methods, and strategies to meaningfully engage community partners in the co-creation of culturally responsive public health solutions.
2. Present a case study from two public health implementation studies among underserved communities in San Diego using innovative study designs.

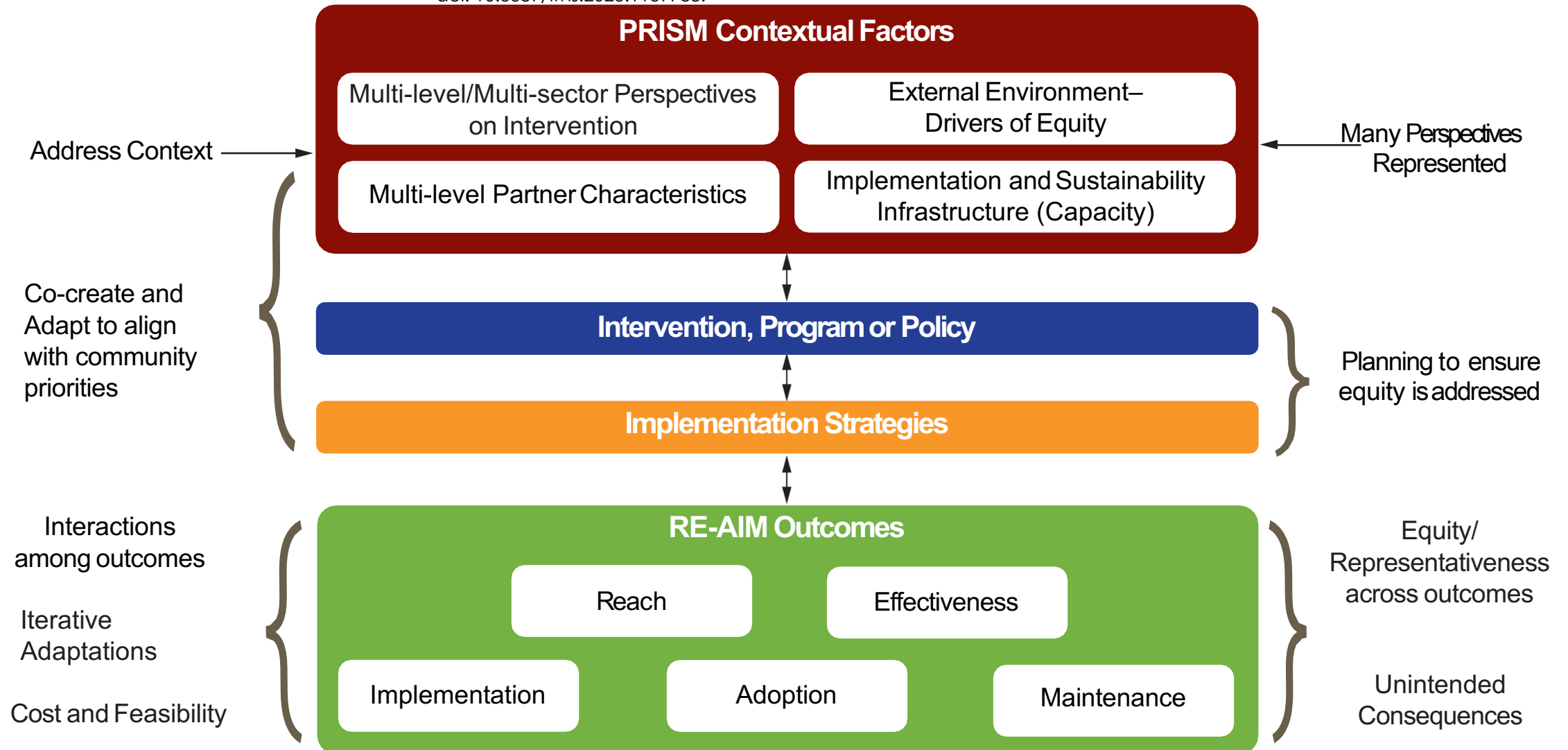
OUR PARTNERS

- The Global Action Research Center: Non-profit, social change organization committed to environmental, social, and health justice
- San Ysidro Health: Second largest Federally Qualified Health Center in San Diego County
- University of California San Diego: Researchers spanning across fields of public health, implementation science, health equity, child and maternal health, clinical psychology, data science, infectious disease



PRACTICAL, ROBUST IMPLEMENTATION AND SUSTAINABILITY MODEL

Fort MP, Manson SM, Glasgow RE. Applying an equity lens to assess context and implementation in public health and health services research and practice using the PRISM framework. Front Health Serv. 2023 Apr 13;3:1139788. doi: 10.3389/frhs.2023.1139788.





CO-CREATE/EX

Community-driven optimization of COVID-19 testing to reach and engage underserved areas for testing equity

- Overarching goal: To co-create a sustainable, community-engaged COVID-19 testing program that is flexible to address emerging public health guidance/priorities.
- Phase 1-2 (CO-CREATE)—*completed*
 - Prospective, non-randomized intervention (co-created testing program) design offered at 1 clinic
 - Primarily Latino/a/x, Spanish-speaking community near the US-Mexico border
 - >24,000 tests performed (>13,000 unique participants)
 - Trusted sources of public health information and social determinants of health were significant contributors
 - Top reasons for testing: getting early treatment; knowing I will not spread COVID-19 to friends, family and others

CO-CREATE-EX STUDY AIMS

To refine strategies and outcome metrics for COVID-19 testing.

To evaluate the impact of co-created strategies to optimize COVID-19 testing among underserved communities in San Diego.

- Phase III (CO-CREATE-Ex)—*ongoing*
 - Roll-out optimization implementation (ROIO) of 3 strategies across 4 clinics
 1. Phase 1 walk-up testing
 2. Vend-a-kit (self-service vending machines)
 3. Promotora-guided health counseling
 - 3 strategies prioritized using implementation mapping with the study's Community and Scientific Advisory Board



COMMUNITY AND SCIENTIFIC ADVISORY BOARD

- 13 members who are:
 - Patient advocates
 - Clinical staff and administrators
 - Public health researchers
 - Policy partners
 - County Public Health Department ambassador
- Meet every 2-3 months
- Guided by Appreciative Inquiry, facilitated by the Global ARC
- Members are compensated \$100 for each meeting




STUDY PROTOCOL

Open Access

Community-engaged optimization of COVID-19 rapid evaluation and testing experiences: roll-out implementation optimization trial



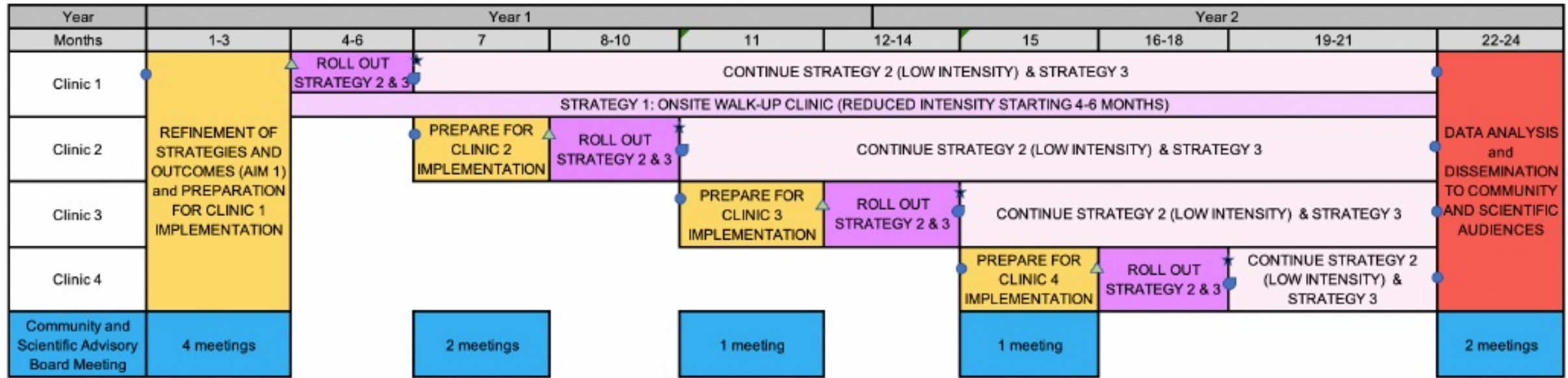
Nicole A. Stadnick^{1,2,3*} , Louise C. Laurent⁴, Kelli L. Cain⁵, Marva Seifert⁶, Maria Linda Burola⁴, Linda Salgin^{7,8}, Paul Watson⁹, William Oswald⁹, Fatima A. Munoz⁷, Sharon F. Velasquez⁷, Justin D. Smith¹⁰, Jingjing Zou⁵ and Borsika A. Rabin^{1,5}

CLINIC SITES

| Table 1. Clinic Characteristics (3/21-3/22) | San Ysidro 92173 | Chula Vista 91911 | Lincoln Park 92114 | Logan Heights 92113 |
|--|-----------------------------|------------------------------|-------------------------------|------------------------------------|
| Total # Patients | 18,124 | 20,102 | 8,328 | 8,120 |
| Patient Race/Ethnicity | | | | |
| Latino | 91.6% | 79.0% | 61.2% | 74.3% |
| Black | 1.3% | 3.0% | 16.9% | 12.1% |
| Asian | 1.5% | 4.7% | 4.7% | 2.2% |
| White | 14.4% | 15.0% | 29.4% | 15.3% |
| Patient Preferred Language | | | | |
| Spanish | 70.1% | 56.7% | 36.0% | 48.8% |
| Adult Preventive Health Services (% of “active” patients who completed a medical visit and had a preventive health service in the past 18 months) | | | | |
| Blood Pressure Screening | 55.4% | 62.3% | 58.2% | 66.3% |
| HbA1c Screening | 78.9% | 79.3% | 72.8% | 81.6% |
| Flu Immunization | 25.0% | 15.5% | 16.2% | 24.9% |
| COVID-19 Cases/100,000 (2/20-4/22) | 48,219 | 31,623 | 34,209 | 35,716 |
| RATs distributed since 1/22 | 785 (M=196/month) | 499 (M=125/month) | 244 (M=61/month) | 192 (M=48/month) |

PROPOSED ROIO

Figure 1: CO-CREATE-Ex participatory (Aim 1) and ROIO (Aim 2) design and timeline



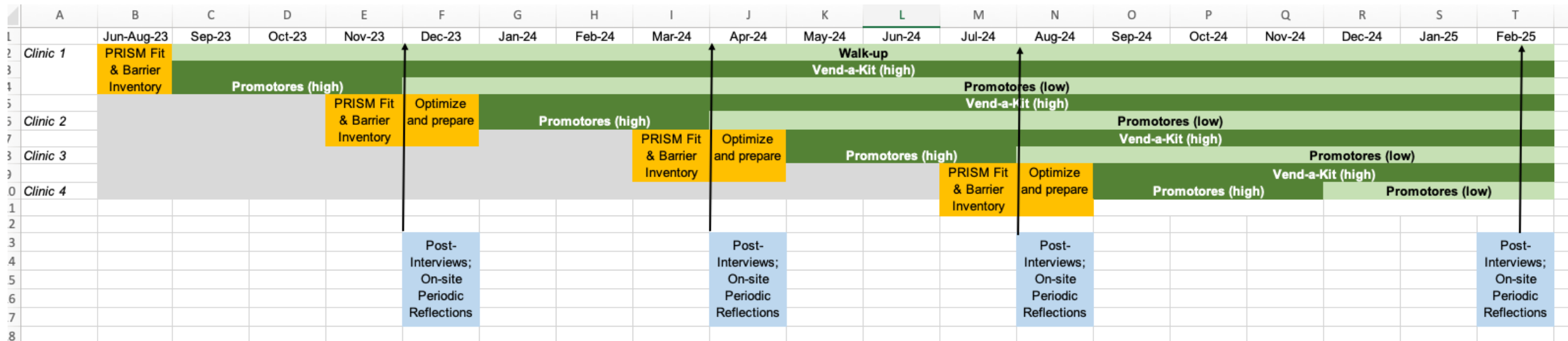
STRATEGY 1: CURRENT, WALK-UP TESTING PROTOCOL

STRATEGY 2: PROMOTORA LED TESTING NAVIGATION AND GENERAL PREVENTIVE CARE REMINDERS

STRATEGY 3: NO COST SELF-TESTING KIT VENDING MACHINES

- PRISM Fit Assessment with SYH operational leader, clinic providers/staff, and promotore
- ★ Patient/community member and provider/staff interviews
- ▲ Initiate ongoing data collection on testing strategies (promotore database, REDCap database, vending machine log)
- Peridoc reflections with promotores, medical assistant, and onsite testing staff

ROIO IN THE WILD



CHALLENGES & SALVAGE STRATEGIES

Challenges

1. Randomization of clinics to order of implementation
2. Collecting and using data as co-variates in modeling
3. Understanding how much change is too much change

Salvage Strategies

1. Use analytic techniques to adjust for the lack of random assignment to order of implementation
2. Expanded data collection and developed a barrier inventory
3. Explore core functions and forms and prospective collection of adaptation information

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WEAVE

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STUDY PROTOCOL

Rabin et al. *Implementation Science* (2023) 18:28
<https://doi.org/10.1186/s13012-023-01283-2>

Implementation Science

STUDY PROTOCOL

Open Access

Scaling and sustaining COVID-19 vaccination through meaningful community engagement and care coordination for underserved communities: hybrid type 3 effectiveness-implementation sequential multiple assignment randomized trial



Borsika A. Rabin^{1,2*} , Kelli L. Cain¹, Paul Watson Jr.³, William Oswald³, Louise C. Laurent⁴, Audra R. Meadows^{4,5}, Marva Seifert⁵, Fatima A. Munoz⁶, Linda Salgin⁶, Jeannette Aldous⁶, Edgar A. Diaz⁶, Miguel Villodas^{7,8}, Santosh Vijaykumar⁹, Sean T. O'Leary¹⁰ and Nicole A. Stadnick^{2,8,11}

STUDY AIMS

1

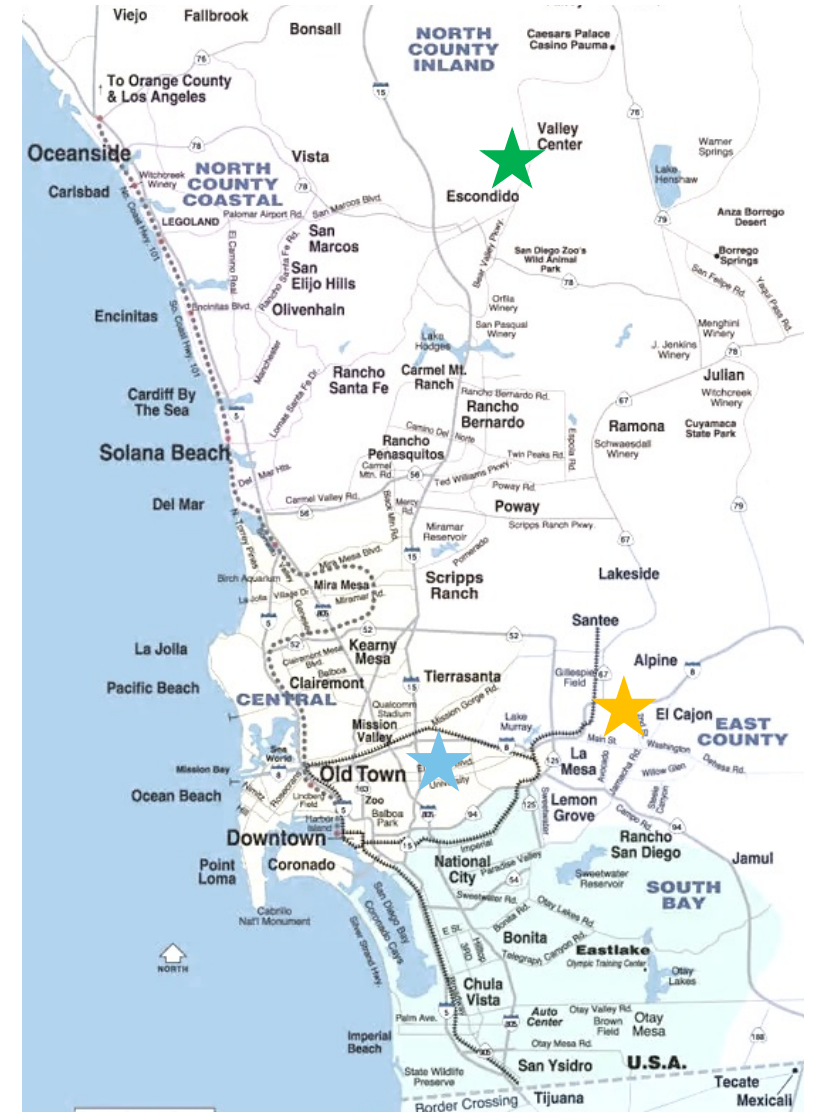
Optimize a multicomponent health program to promote COVID-19 vaccine uptake and engagement in preventive healthcare using our established co-creation approach to address multi-level barriers to vaccine uptake and preventive care engagement.

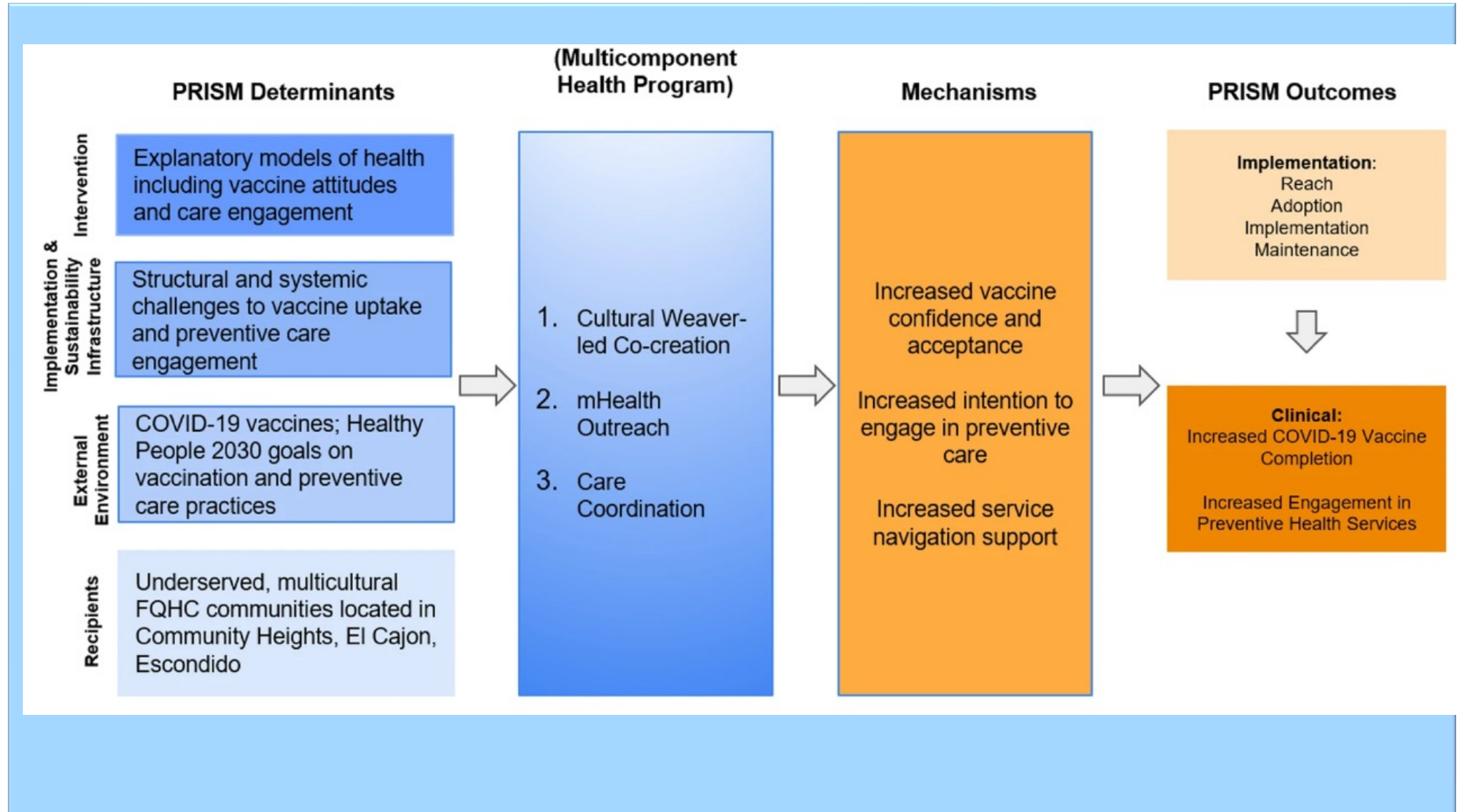
2

Evaluate the implementation, effectiveness, and sustainment of the multicomponent COVID-19 vaccine and preventive care engagement program using a hybrid type 3 SMART design across communities of color.

SAMPLE & SETTING

- San Ysidro Health Clinics
 - Escondido (Spanish) ★
 - El Cajon (Arabic) ★
 - City Heights (Vietnamese) ★
- Community Advisory Board for each community led by a Cultural Weaver





PREVENTIVE HEALTH BEHAVIORS AND RECOMMENDATIONS

| | Flu Vaccine | COVID Vaccine | Colorectal Cancer Screening | Depression | Mammogram | Cervical Cancer Screening (Pap test) |
|------------------|-----------------------------------|---------------------------------------|--|---|--|--|
| Recommended for: | All, vaccinated in last 12 months | All, received both doses plus booster | 45-75 years, received screening in last 12 months, or a colonoscopy in the last 10 years | 18+ years, received screening in last 12 months | 50-74 years, received every 2 years [FEMALE ONLY] | 21-64 years, received every 3 years [FEMALE ONLY] |

MEET OUR WEAVERS!

Men Nguyen



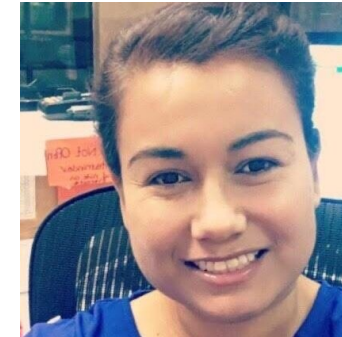
- 14 years working as an ESL lecturer and interpreter in Vietnam and 7 years working as an RA at Texas Tech.
- M.A. in English linguistics (Vietnam National University) and PhD in Curriculum and Instruction for ESL (Texas Tech).
- Loves working for the Vietnamese community development and has a great passion for work related to education, research, communication, and interpretation.

Zainab Altemimi



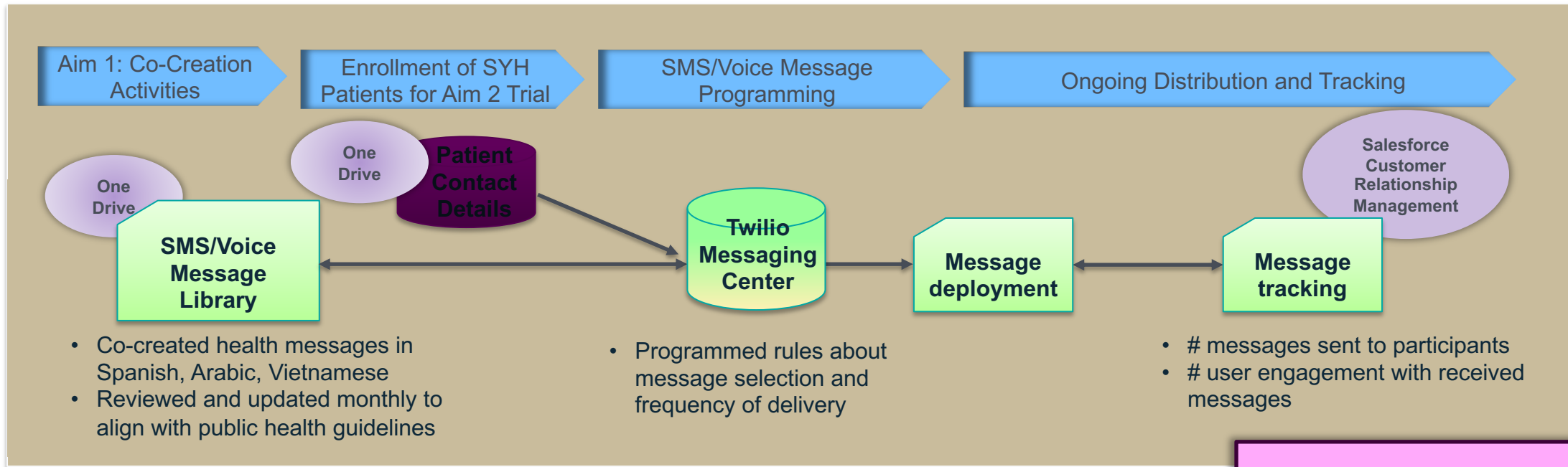
- Mother of three who is very active in her El Cajon community.
- Worked with the Islamic Center of San Diego-East County and volunteered with Somali Family Services to help educate and talk to the community about COVID-19 vaccinations.
- Community Health Worker with experience helping her community become educated about vaccines and booster shots.

Marina Ibarra



- Community Engagement Coordinator at the Global Action Research Center.
- Serves on the board of directors for Latinos y Latinas En Acción promoting the immigrant vote, filling out immigration forms, providing citizenship classes, and more.
- Long time advocate in her community teaching residents about community organizing, urban gardens, and how to advocate for their children's education.

SMS/Voice Messaging Delivery System



- Text and voice messages in priority languages
- Voice messages recorded by the weavers and/or members of the CABs
- Messages will change over time and focus on the missing preventive care behaviors

"Protect your loved ones by getting the COVID-19 vaccine. / Proteja a sus seres queridos con vacunarse contra el COVID-19."

"Remember to ask for your flu shot. / Recuerde pedir su vacuna contra la influenza."

SMART DESIGN

| Pre-Randomization | 1st Stage Intervention | Intermediate Outcome | 2nd Stage Intervention | Sustainment |
|-------------------|------------------------|----------------------|------------------------|-------------|
| 6 months | 4 months | 4 months | 24 months | 1 year |

1) Eligibility pre-screening

- 18+ years of age
- FQHC clinic patient
- Have incomplete COVID-19 vaccination series/bivalent booster AND missing at least 1 recommended preventive service based on age and gender
- Fluent in one of the priority languages (Spanish, Arabic, Vietnamese)

2) Recruitment

- Eligibility verification and recruitment of 100 individuals per clinic with roughly equal numbers in each language group

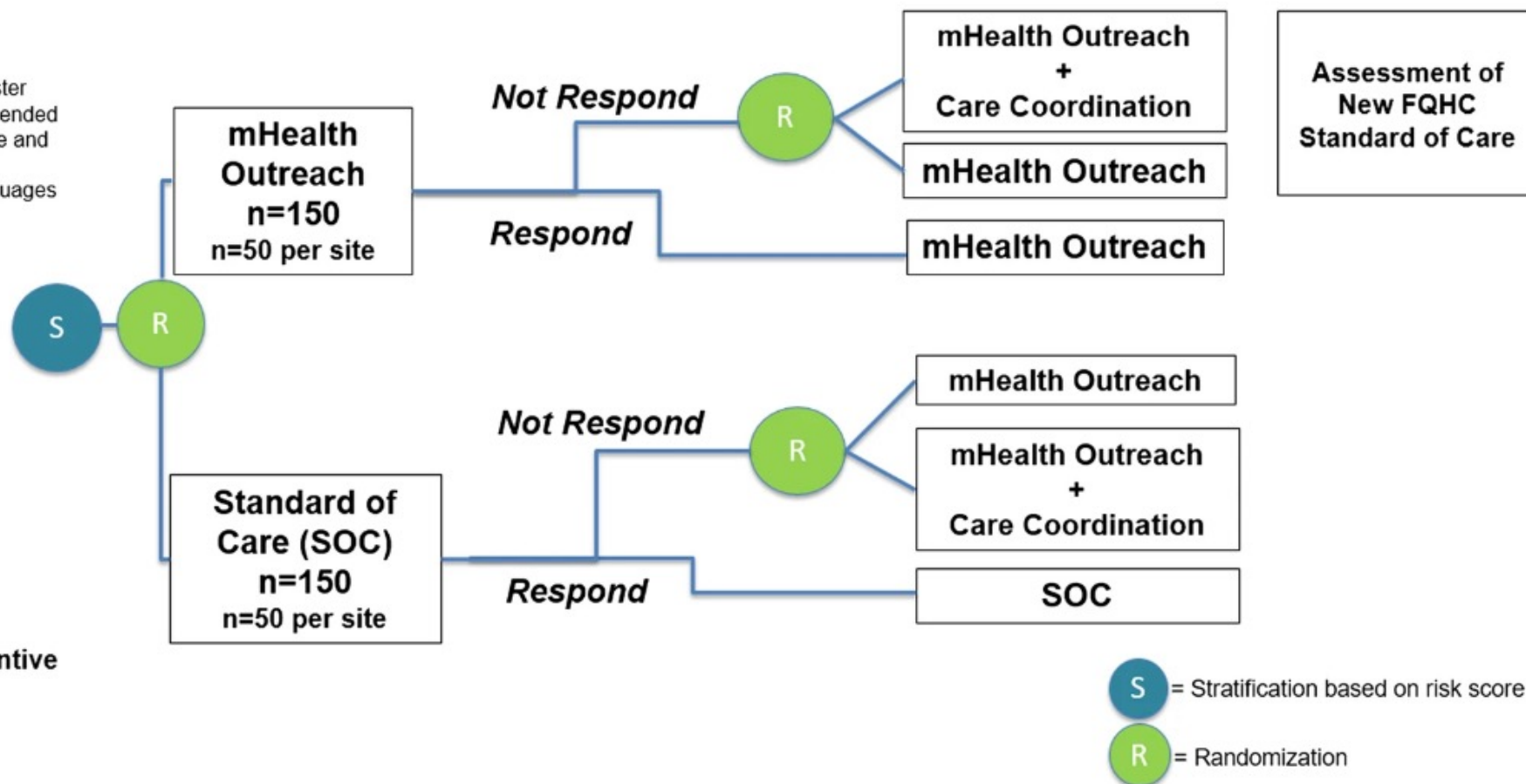
3) Consent

4) Baseline Survey

- Collect cell phone information
- Paper (self administered)
- Online
- Interview (phone or in person)

5) Stratify by COVID/Preventive Services Risk Score

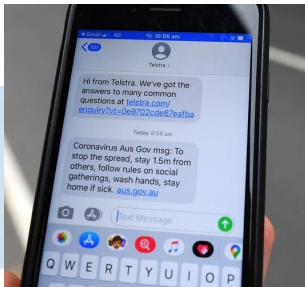
6) Randomize



MESSAGING FORMAT

Text

Words sent in a text message



Text (voice)

Voice recording
sent in text
message



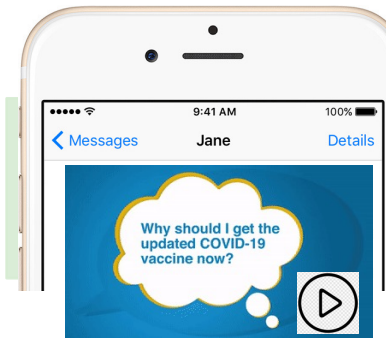
Text (image)

Images sent in
text message
with no words



Text (video)

Video message
sent through text



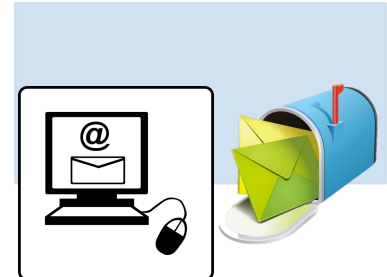
Email

Computer or
phone



Printed materials

- Emailed
- Handed out at clinic or community gathering
- Mailed



CHALLENGES & SALVAGE STRATEGIES

Challenges

1. Prioritizing preventive behaviors; risk and sequelae are not equal
2. Tailoring versus general content for mHealth messages
3. Language and access needs for our distinct communities engaged

Salvage Strategies

1. Consult with clinicians, statisticians, and design experts; no correct answer; weigh pros/cons
2. In development, planning to expand message vehicles and tailor thoughtfully
3. CAB meetings are conducted in non-English language of community's preference; invested in multilingual translation devices



SUMMARY & DISCUSSION

- Both studies build on meaningful and ongoing community engagement:
 - Partnership with FQHC and community partners
 - Assessment of engagement and ongoing adjustments
- Common IS methodological themes:
 - Use of shared implementation science model
 - Practical, robust implementation and sustainability model
 - Use of designs that allow for iterative adaptations and assignments to accommodate learning and change in context
 - Documentation of adaptations systematically
 - Use of mixed methods approaches to guide adaptations, fit with context, etc



SUMMARY & DISCUSSION

- Key challenges to consider:
 - “Moving at the pace of trust.”
 - Working in multiple languages
 - Incorporating community priorities
 - On the ground changes (e.g., change in EHR system, change in vaccine schedule for COVID-19)
 - Design ideals versus feasibility (e.g., can we randomize sites for starting time, can we wait the exact number of months for the cycle to end, can we collect data)



THANK YOU!

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