Project INOCULATED: Collaboration to End COVID-19 Vaccine Disparities

(Inland Empire of California United Local/Academic Team Ending Disparities)

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MANY STRENGTHS. ONE MISSION.

A Seventh-day Adventist Organization

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Disclosures

We have no conflicts of interest to report.

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Objectives

At the conclusion of this lecture participants should be able to:

- Describe the interrelationship of structural racism and health equity and relationship to COVID-19
- Understand aspects of community-engaged interventions
- List useful strategies involved in engaging racially and ethnically minoritized groups in COVID-19 vaccination efforts

Health Inequity

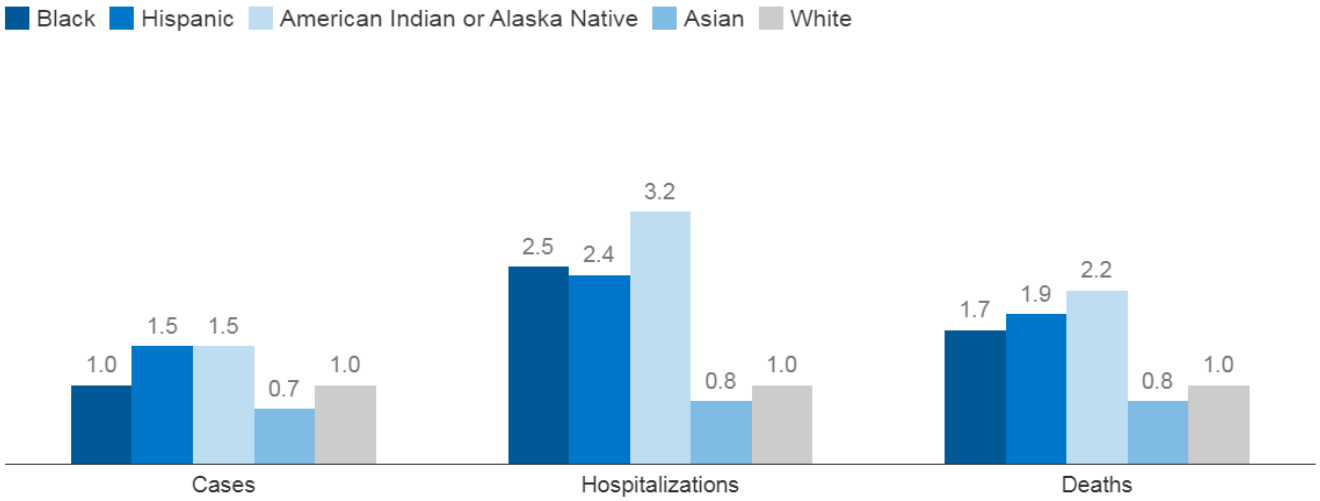
- Systematic and avoidable differences in health status between different groups[1,2]
  - Affects disadvantaged and historically oppressed groups
- Influential factors:
  - Structural racism and impact on minority physical and mental health
  - Healthcare access, treatment inequity, and distrust issues such as lack of insurance, transportation, childcare, time off; historical injustices and lower healthcare quality
  - Occupation and employment inequities are avoidable differences in work-related disease incidence

Perspective

» COVID-19 has affected racial and ethnic communities disproportionately

Figure 2

Age-Adjusted Risk of COVID-19 Infection, Hospitalization, and Death, Compared to White People in the United States



NOTE: Persons of Hispanic origin may be of any race but are categorized as Hispanic; other groups are non-Hispanic; data for Native Hawaiian or Other Pacific Islander (NHOPI) people are not reported.

SOURCE: CDC, Risk for COVID-19 Infection, Hospitalization, and Death By Race/Ethnicity, https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html. Data as of February 1, 2022, accessed February 8, 2022. • PNG

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Perspective[3,4]

- The COVID-19 vaccine created an opportunity to change these statistic, but additional barriers remain:
  - Political, historical, institutional distrust influences
  - Initial fears over testing and vaccination costs
  - Access limited based on allocation and where/how people can sign-up

COVID-19 Vaccination Landscape in SBC, CA [4]

- In California greater than 30 million individuals had been vaccinated against COVID-19
  - ~ 4.2% of those vaccinees were Black individuals

- Loma Linda University served as the largest mass vaccination site in San Bernardino County, CA
  - ~ 3.9% of the mass vaccination clinic site vaccinees were Black individuals

Black people represent **6.5%+** of CA population

Community-Engaged Research

Adapted from: http://www.copalm.org/cbpr.html

Academic/Clinical Community Engagement

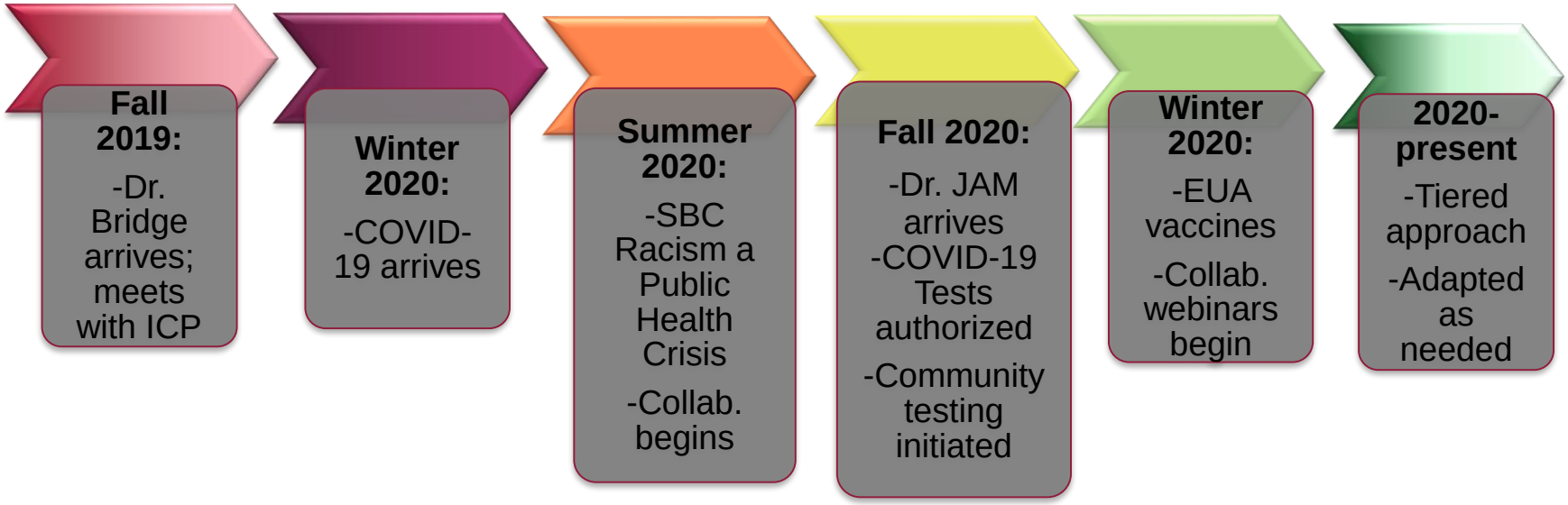
Commonly Reported Challenges:

- "Our population is too low"
- "Gold standard recruitment strategies don't work"
- "'They' don't want to participate"
- "Retention is too difficult"

Necessary Investments[5]:

- Commitment to LT engagement
- Culturally and linguistically adapted recruitment strategies
  - Venues
  - Topics of interest
- Culturally competent team members
- Culturally informed retention strategies
  - Ongoing collab
  - Team continuity

Partnership Timeline



Three-Tiered Approach For Creating Equitable COVID-19 Vaccination Access [6]

- The tiers utilized in our approach to promote equitable COVID-19 vaccine access include:

1. Engagement of Black faith leaders
2. Delivery of COVID-19 vaccination education from racially concordant health professionals
3. Low-barrier community vaccination clinics held within urban and rural Black communities

Engagement of Black Faith Leaders

The United States is a highly religious nation and faith leaders occupy large roles in minoritized communities

Leveraging existing relationships with two church organizations: Inland Empire of Concerned African American Churches (IECAAC) and Congregations Organized for Prophetic Engagement (COPE) we gained access to their Black membership

The faith leaders organized platforms to disseminate information, and orchestrated major processes necessary for the clinics

Feedback on content: surveys, community fears, key points, etc.

Inclusion in research publications and presentations

COVID-19 Faith Summits (Town Halls)[6]

- Faith summits are conducted prior to community vaccination clinics (monthly)
- Facilitated by Faith Leaders
- Moderated by the University's Vice President of Institute for Community Partnership
- Health education presentations from culturally competent and racially congruent health professionals
- Number of Attendees: 50-200 per summit
  - ~ 7,000+ social media live steams

FAITH, Fear, & Facts

Facilitators

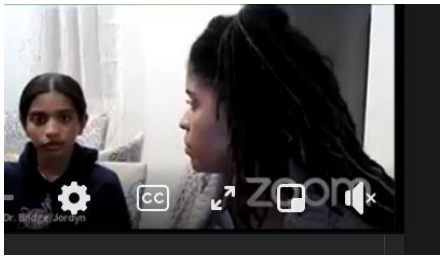
- Faith leaders' introductions
- Q&A with panelists
- Monitoring the chat

Integrated Faith Elements

- Faith leader endorsement to build trust
- Opening and closing prayers
- Panelists using congruent language; self-disclosure of faith where appropriate
- Relevant scriptures
  - 2 Tim 1:7 *For God hath not given us the spirit of fear; but of power, and of love, and of a sound mind.*

Faith, FEAR, & Facts

- Panelist: Dr. Bridgette Peteet
- Highlighted role as LCP
- Tailored approach
  - ~ Childhood vaccines: Modeling discussions with children
  - ~ Boosters



- Key components of pro-vaccine interventions[7, 8]:
  - ~ Empathy for fears of participants
  - ~ Personal connections and self-disclosure
  - ~ Avoid reinforcing conspiracies
  - ~ Non-confrontational delivery of facts

Faith, FEAR, & Facts

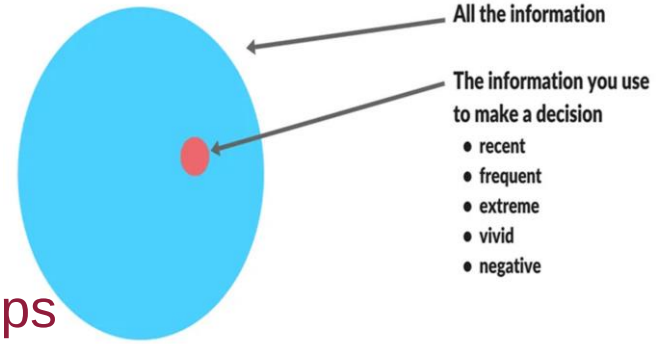
» Key components of pro-vaccine interventions[6, 7]:

~ Empathy for fears of participants

- Sharing re: fears in chat
- Normalizing fear

~ Personal connections and self-disclosure

- Dedication to grandmother
- Describing personal decision-making steps



~ Avoid reinforcing conspiracies

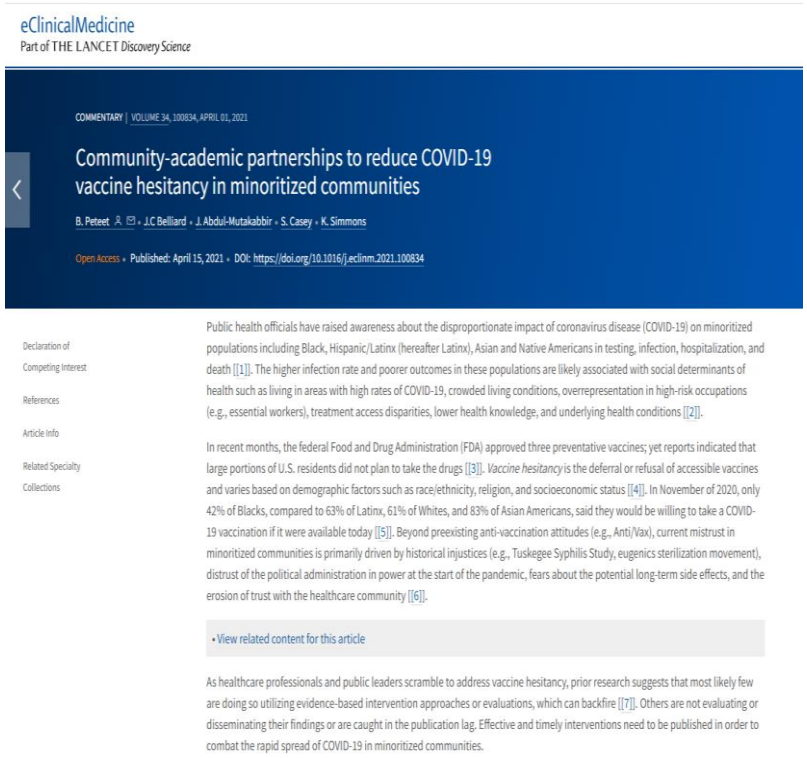
- Note influence of politics and historical mistrust
- Provide basics of current scientific research process

~ Non-confrontational delivery of facts

- Psychology of decision-making
- Steps in effective decision-making

Results

Method Paper[8]:



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COMMENTARY | VOLUME 34, 100834, APRIL 01, 2021

Community-academic partnerships to reduce COVID-19 vaccine hesitancy in minoritized communities

B. Peteet • J.C Belliard • J. Abdul-Mutakabbir • S. Casey • K. Simmons

Open Access • Published: April 15, 2021 • DOI: https://doi.org/10.1016/j.eclinm.2021.100834

Declaration of Competing Interest

References

Article Info

Related Specialty Collections

Public health officials have raised awareness about the disproportionate impact of coronavirus disease (COVID-19) on minoritized populations including Black, Hispanic/Latinx (hereafter Latinx), Asian and Native Americans in testing, infection, hospitalization, and death [[1]]. The higher infection rate and poorer outcomes in these populations are likely associated with social determinants of health such as living in areas with high rates of COVID-19, crowded living conditions, overrepresentation in high-risk occupations (e.g., essential workers), treatment access disparities, lower health knowledge, and underlying health conditions [[2]].

In recent months, the federal Food and Drug Administration (FDA) approved three preventative vaccines; yet reports indicated that large portions of U.S. residents did not plan to take the drugs [[3]]. *Vaccine hesitancy* is the deferral or refusal of accessible vaccines and varies based on demographic factors such as race/ethnicity, religion, and socioeconomic status [[4]]. In November of 2020, only 42% of Blacks, compared to 63% of Latinx, 61% of Whites, and 83% of Asian Americans, said they would be willing to take a COVID-19 vaccination if it were available today [[5]]. Beyond preexisting anti-vaccination attitudes (e.g., Anti/Vax), current mistrust in minoritized communities is primarily driven by historical injustices (e.g., Tuskegee Syphilis Study, eugenics sterilization movement), distrust of the political administration in power at the start of the pandemic, fears about the potential long-term side effects, and the erosion of trust with the healthcare community [[6]].

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As healthcare professionals and public leaders scramble to address vaccine hesitancy, prior research suggests that most likely few are doing so utilizing evidence-based intervention approaches or evaluations, which can backfire [[7]]. Others are not evaluating or disseminating their findings or are caught in the publication lag. Effective and timely interventions need to be published in order to combat the rapid spread of COVID-19 in minoritized communities.

Rapid Results (under review) :

- »2 webinars (*N* = 225)
- »*n* = 106 surveyed
- »4-items: demographics, vaccine attitudes
- »Gender differences: women > hesitant
- »Pre-post survey:
  - ~ 12% increase in vaccine willingness
  - ~ Significant change $t(25) = -3.08$, $p = 0.005$

Faith, Fear, & FACTS

- The United States has a long medical history of discrimination and wrong doings against Black individuals
- Cultural representation amongst practitioners has been shown to lead to improved communication
- The propagation of misinformation related to the COVID-19 vaccines presented the necessity of a trusted, culturally representative, messenger to deliver accurate information
- Delivery of COVID-19 vaccination education from a Black pharmacist

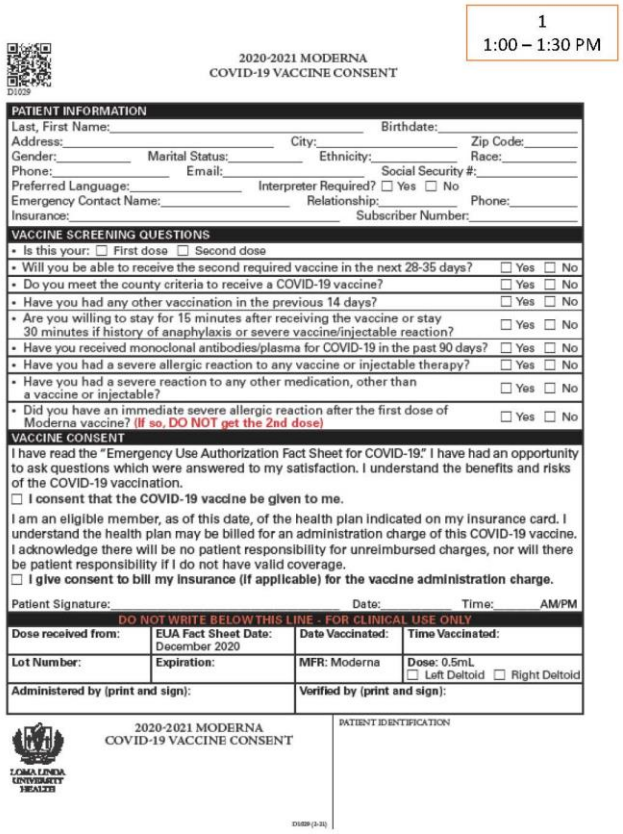
Role of Trusted Healthcare Professional in COVID-19 Community Vaccination Clinic[6]

- The Black pharmacist, with infectious diseases training, manages the transport of the vaccines
- The pharmacist also ensures that each of the vaccines are accurately prepared

Low-Barrier Community Vaccination Clinic [6]

- Several barriers to vaccination include:
  - Misinformation
  - Allocation
  - Transportation and Internet Access

  To overcome these barriers, we instituted the following:
  - Paper-based registration
  - Community vaccination clinic at a church located in a Black community



1
1:00 – 1:30 PM

2020-2021 MODERNA
COVID-19 VACCINE CONSENT

PATIENT INFORMATION

Last, First Name:_____ Birthdate:_____
Address:_____ City:_____ Zip Code:_____
Gender:_____ Marital Status:_____ Ethnicity:_____ Race:_____
Phone:_____ Email:_____ Social Security #:_____
Preferred Language:_____ Interpreter Required? ☐ Yes ☐ No
Emergency Contact Name:_____ Relationship:_____ Phone:_____
Insurance:_____ Subscriber Number:_____

VACCINE SCREENING QUESTIONS

- Is this your: ☐ First dose ☐ Second dose
- Will you be able to receive the second required vaccine in the next 28-35 days? ☐ Yes ☐ No
- Do you meet the county criteria to receive a COVID-19 vaccine? ☐ Yes ☐ No
- Have you had any other vaccination in the previous 14 days? ☐ Yes ☐ No
- Are you willing to stay for 15 minutes after receiving the vaccine or stay 30 minutes if history of anaphylaxis or severe vaccine/injectable reaction? ☐ Yes ☐ No
- Have you received monoclonal antibodies/plasma for COVID-19 in the past 90 days? ☐ Yes ☐ No
- Have you had a severe allergic reaction to any vaccine or injectable therapy? ☐ Yes ☐ No
- Have you had a severe reaction to any other medication, other than a vaccine or injectable? ☐ Yes ☐ No
- Did you have an immediate severe allergic reaction after the first dose of Moderna vaccine? (If so, DO NOT get the 2nd dose) ☐ Yes ☐ No

VACCINE CONSENT

I have read the "Emergency Use Authorization Fact Sheet for COVID-19." I have had an opportunity to ask questions which were answered to my satisfaction. I understand the benefits and risks of the COVID-19 vaccination.

☐ **I consent that the COVID-19 vaccine be given to me.**

I am an eligible member, as of this date, of the health plan indicated on my insurance card. I understand the health plan may be billed for an administration charge of this COVID-19 vaccine. I acknowledge there will be no patient responsibility for unreimbursed charges, nor will there be patient responsibility if I do not have valid coverage.

☐ **I give consent to bill my insurance (if applicable) for the vaccine administration charge.**

Patient Signature:_____ Date:_____ Time:_____ AM/PM

DO NOT WRITE BELOW THIS LINE - FOR CLINICAL USE ONLY

Dose received from:	**EUA Fact Sheet Date:** December 2020	**Date Vaccinated:**	**Time Vaccinated:**
Lot Number:	**Expiration:**	**MFR:** Moderna	**Dose:** 0.5mL ☐ Left Deltoid ☐ Right Deltoid
Administered by (print and sign):		**Verified by (print and sign):**	

LOMA LINDA UNIVERSITY HEALTH

2020-2021 MODERNA
COVID-19 VACCINE CONSENT

PATIENT IDENTIFICATION

Stakeholders in Community Vaccination Clinics

The important stakeholders in the community vaccination clinics include:	Faith Leaders
	Pharmacists
	Additional Pharmacy Staff (students, technicians, interns)
	Medical professionals (physicians, nurses, dentists, etc.)
	Community Health Workers, Church Volunteers
	Administration Personnel
	Supply Chain Management

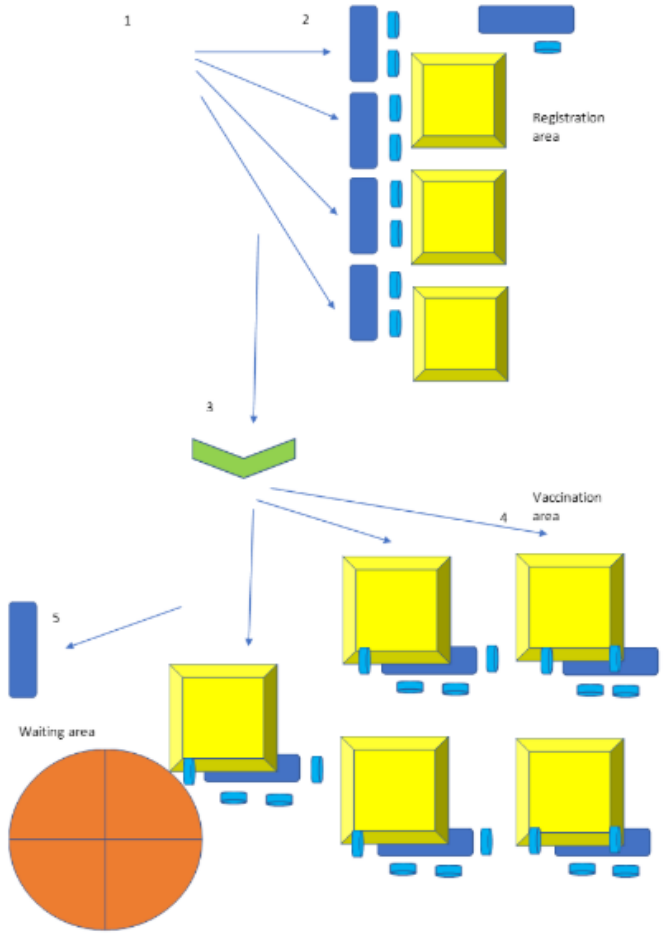
Low-Barrier Clinic Workflow

» The clinics are conducted either indoors or outdoors

» The format is consistent irrespective of location

» The personnel includes:

- Registration: 4 individuals (church personnel, CHWs)
- Vaccinators: 6-8 individuals (professional students, licensed professionals as preceptors)
- Vaccine draw area: 1 licensed pharmacist and 4 professional students or non-clinical faculty
- Checkout: 4 individuals(3 CHWs) plus one physician for observations



Measurable Outcomes From Community Vaccination Clinics[6]

- Number of Moderna first-dose community vaccination clinics in the Black community: 2 (673 individuals vaccinated)
- Number of Moderna second-dose community vaccination clinics in the Black community: 1 (366 individuals vaccinated; 87% return rate)
- Number of Johnson & Johnson community vaccination clinics in the Black community: 1 (314 individuals vaccinated)
- 0.6% increase in Black vaccinees at mass vaccination site following community vaccination clinic

Patients Vaccinated in Mass Vaccination Clinic		**Patients Vaccinated in Mobile Vaccination Community Clinic**	
Black	579 (3%)	Black	351 (83.5%)
American Indian or Alaskan Native	63 (0.4%)	American Indian or Alaskan Native	1 (0.2%)
Native Hawaiian	22 (0.13%)	Native Hawaiian	1 (0.2%)
Asian	2,687 (15.6%)	Asian	3 (0.7%)
White	11,483 (66.4%)	White	19 (4.5%)
Other	611 (3.5%)	Other	10 (2.4%)
Unknown	1,815 (10.5%)	Unknown	35 (8.3%)
Total Number Vaccinated	17,212	Total Number Vaccinated	420

Integration of Professional Students in COVID-19 Community Vaccination Clinic

- Professional students are often taught about illness without the context of social determinant of health inequities
- Volunteer opportunities in community vaccination clinics provide them with tangible experiences
- This could potentially translate to their provision of better healthcare

Reproducibility of Community Vaccination Clinics

- We have conducted a total of three community vaccination clinics in primarily LatinX communities
- These clinics include the following:
  - First-dose Moderna Pop-up clinic: 258 individuals vaccinated
  - Second-dose Moderna Pop-up clinic: 253 individuals vaccinated (97% return rate)

Differences Amongst Minoritized Groups

Community Vaccination Clinic in Targeted Black Community:

Patient Race Grouping	First Dose Clinic-Moderna Vaccine
Black	351
American Indian or Alaskan Native	1
Native Hawaiian	1
Asian	4
LatinX	31
White	14
Other	10
Unknown	5
Grand Total	417

Patient Race Grouping	Single Dose Clinic – Johnson and Johnson Vaccine
Black	143
Pacific Islander	1
Asian	18
LatinX	99
White	19
Unknown	31
Other	3
Grand total	314

Community Vaccination Clinic in Targeted LatinX Community:

Patient Race Grouping	First Dose Clinic-Moderna Vaccine
Black	5
Pacific Islander	0
Asian	3
LatinX	239
White	12
Unknown	1
Other	0
Grand total	260

Next Steps…..

Original Intervention

-- Community collaborations with faith leaders only

-- Rapidly-developed educational town halls and low-barrier clinics

-- Pilot assessment of vaccine uptake and attitudes

Proposed RCT

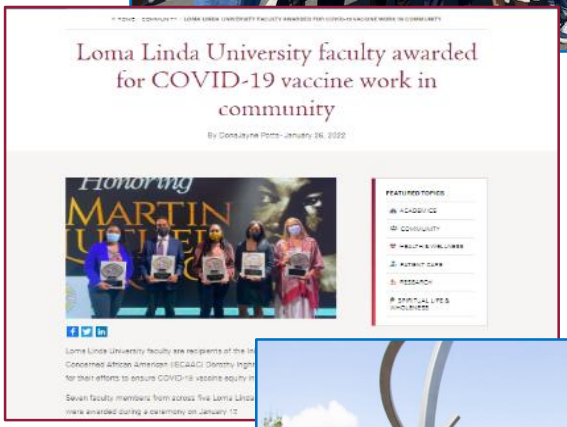
-- Expanded, community supportive, incentivized collaborations with inclusion of triangulated focus groups and CAB oversight

-- Standardized intervention manual

-- Rigorous measurement of vaccine attitudes and uptake

Future Directions

- Vaccine hesitancy among healthcare workers
  - Dubov, A., Distelberg, B., Abdul-Mutakkabir, J., Beeson, L., Loo. L., Montgomery, S., Oyoyo, U., Patel, P., Peteet, B…..& Chrissan, A. (2021). Predictors of COVID-19 Vaccine Acceptance and Hesitancy among Healthcare Workers in Southern California: Not Just “Anti” vs. “Pro” Vaccine. *Vaccines, 9*, 1428.
- Providing information related to human immunodeficiency virus (HIV) pre-exposure (PREP) in the waiting area of the COVID-19 community vaccination clinics
- Continue to conduct the faith summits and integrate information pertaining to other disease states (influenza, shingles, human papillomavirus (HPV), etc.)
- Providing other health services in formats like the community vaccination clinic setting



Conclusions

- Health inequities are a product of structural and systemic racism
- Equitable processes are essential to ensuring positive patient outcomes in minoritized groups
- Providing these equitable approaches require interdisciplinary support and collaboration

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