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COVID-19 Youth Ambassador Corp, a Community-based Program to Address
Vaccine Hesitancy

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August 13, 2022

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Abstract

With over one million confirmed deaths from COVID-19, the United States (U.S.) continues to battle the public health crisis arising from the spread of the SARS-CoV-2 virus. The COVID-19 pandemic has had a devastating impact on our economic, social, and health systems. Social distancing efforts and other precautionary measures such as mask-wearing have not sufficiently reduced morbidity and mortality from COVID-19; thus, COVID-19 vaccinations are an important tool for substantially alleviating the effects of the pandemic. Although COVID-19 vaccines are available to all Americans aged six months and older, many individuals are hesitant to receive vaccines. The two most common reasons for vaccine hesitancy are some individuals do not think the vaccine is safe and some believe it's not effective. Vaccine hesitancy is more common among disadvantaged communities of color and Latinos. In order to decrease vaccine hesitancy, the government and larger healthcare agencies must invest in local community-based programs. These organizations play an important role in educating hard-to-reach and vulnerable communities to deliver factual and scientific information in a culturally appropriate manner. This capstone paper addresses the role of community based organizations to increase vaccine confidence. Specifically, a COVID-19 youth ambassador corps program is being implemented at Health Education Council (HEC), a non-profit organization based in South Sacramento, to recruit trainees from target communities to provide scientific and evidenced- based education on COVID-19 vaccination. HEC utilized funding from a local Medicaid Managed Care Plan, Partnership Health Plan's (PHP's) COVID19 Community Grant Incentives program to target the unvaccinated population in PHC's Medi-Cal service region. Using principles from HEC's Peers Helping Peers Program, HEC created and launched a "Youth Vaccine Ambassador Corps" which mobilized and trained local PHC/Medi-Cal youth ages 17-24 to develop and share pro-vaccine messages to educate their local community.

Introduction

With over 90 million confirmed coronavirus (COVID-19) cases and over one million deaths, the United States (U.S.) continues to battle the public health crisis arising from the pandemic spread of the SARS-CoV-2 virus (COVID-19 Dashboard, 2022). The COVID-19 pandemic has had a devastating impact on our medical, social, and economic systems in the United States (U.S.). Social distancing efforts and other precautionary measures such as mask-wearing have not sufficiently reduced morbidity and mortality from COVID-19; thus, COVID-19 vaccinations are an important tool for substantially alleviating the effects of the pandemic (Callaghan, 2021). COVID-19 vaccines are now available to all Americans ages 6 months and older. However, many Americans are hesitant to receive a COVID-19 vaccine (Chapman, 2022). A national sample of 5,009 Americans from May to June 2020 found that the odds of COVID-19 vaccine refusal were significantly higher for disadvantaged communities such as African-American and Latino. The two most common reasons for vaccine hesitancy or refusal were that individuals did not think the vaccine will be safe (17.8%) or effective (15.6%) (Harvard TH Chan, 2022). Vaccine hesitancy- among parents, among health care professionals and for particular diseases is one important factor that might drastically slow down the race to achieve herd immunity (Sreenath, 2022). Other reasons for vaccine hesitancy include people perception of vaccine inefficiency mostly through social media, vaccine campaigns of the past that used coercion/fraud, racial discrimination, and medical mistrust (Iwu, 2022). Most adults (98%) use social media and it only takes a few minutes of exposure to disinformation to influence vaccine hesitancy (Thaker, 2021).

The Centers for Disease Control and Prevention (CDC) reports that as of December 14, 2021 roughly 85% of adults ages 18 and over in the United States had received at least one dose of a COVID-19 vaccine but 15% remained unvaccinated (Al-Uqdah, 2022). About 75% of the unvaccinated were under age 50. Among the vaccinated, less than half were under age 50. Non-Hispanic Black adults were slightly more represented among the unvaccinated (13%) than the vaccinated (11%), a small but statistically significant difference. There were notable differences for the Asian population, however: 6% of the vaccinated were non-Hispanic Asian but only 1% of the unvaccinated were non-Hispanic Asian

(Ali, 2022). Vaccine hesitancy is a complex issue therefore, recommended methods and programs to decrease vaccine hesitancy will need a multilevel approach. Based on a comprehensive review of the literature, the approach to vaccine hesitancy requires public health agencies to collaborate with local communities to deliver factual information regarding vaccines creatively; healthcare providers must take the time and effort to educate patients about the importance of vaccines and their safety, and community-based organizations need to develop accurate programs that will be receptive to community members. By providing culturally appropriate vaccine information programs, community-based organizations can decrease vaccine hesitancy and increase vaccination confidence among community members. This paper will focus on using COVID-19 Youth Ambassador Corp, a community-based program, to address vaccine hesitancy.

Background and Literature Review

In January 2019, the World Health Organization (WHO) listed “vaccine hesitancy” as a top ten global health concern, sharing the distinction between known killers such as air pollution, climate change, and population displacement due to war or conflict (World Health Organization, 2019). WHO Strategic Advisory Group of Experts (SAGE) working group on vaccine hesitancy (WG) provides a more in-depth definition of vaccine hesitancy. During their early meetings, concerns were raised that hesitancy has a negative connotation (MacDonald, 2015). The most commonly offered alternative in the literature was confidence, the more positive term (Goldenburg 2021). While confidence covers a range of issues of trust in vaccines such as concerns about vaccine safety, and trust in health-care workers delivering the vaccine and in those making the decisions to approve vaccines for a population, confidence is still narrow in scope covering only one category of factors that affect vaccination acceptance decisions (McRee,2022) .

There is also a concept of vaccine hesitancy vs. vaccination hesitancy. The former implies that the core issue is vaccine related, but the latter covers a much wider range of factors such as immunization

services, time and place, fear of needles, lack of concern about vaccine-preventable diseases, etc (Noyman, 2021). In conclusion, SAGE chose to choose the term vaccine hesitancy and concluded that vaccine hesitancy refers to delay in acceptance or refusal of vaccination despite availability of vaccination services (Ellitorpe, 2022). Vaccine hesitancy is complex and context-specific, varying across time, place, and vaccines (Larson, 2014). An overview of vaccine hesitancy rates in the US found that a little more than a fourth of American adults were unwilling to obtain COVID-19 vaccines (26.3%). In contrast, when hesitancy rates were estimated for racial and ethnic minorities, 30.2% Hispanics and 41.6% African-Americans were unwilling or hesitant to obtain COVID-19 vaccines (Khubchandani, 2021). Another study by Coustasse et al., shows that only 25% of African- American and 37% of Hispanic/ Latinos would get a COVID-19 vaccine, compared to 56% of non-Hispanic Whites (Coustasse 2021).

There are major predictors of vaccine hesitancy among these groups include sociodemographic characteristics (e.g., age, gender, income, education, and household size); medical mistrust and history of racial discrimination; exposure to myths and misinformation, perceived risk of getting infected with COVID-19; beliefs about vaccines and past vaccine compliance, and concerns about the safety, efficacy, and side effects from the COVID-19 vaccines (Gatwood, 2021).

The high prevalence of COVID-19 vaccination hesitancy in minority groups is disconcerting for several reasons. First, the COVID-19 pandemic has disproportionately affected racial and ethnic minorities, with greater hospitalizations and deaths among these populations (Karmakar, 2021). In Michigan, one of the first states to report COVID-19 data by race/ethnicity and demographic characteristics, African American individuals initially experienced 31% of the state's 57,397 cases of COVID-19 despite representing only 14% of the state's population. Mortality rates are also higher among African American, Hispanic, and Native American individuals with COVID-19 (Michigan data, 2022). In another example, in New York City, New York, the early epicenter of the US COVID-19 outbreak, rates of hospitalizations and deaths were highest in the Bronx, with the highest proportion of members of

racial/ethnic minority groups and households living in poverty. As of April 25, 2020, more than 150,000 COVID-19 cases had been reported in New York City, which is approximately 17% of total cases in the US. The number of patients with COVID-19 who were hospitalized per 100,000 population was highest in the Bronx (634) and lowest in Manhattan (331). Also, the number of deaths related to COVID-19 per 100,000 population was also highest in the Bronx (224) and lowest in Manhattan (122) (Wadhera, 2020). Therefore, the rate of hospitalization and death from COVID-19 is higher in the Bronx which has more underserved communities than Manhattan, a city with a lower rate of racial minority groups.

Second, even before the pandemic, chronic disease burden and poorer health outcomes were more prominent among minorities, not getting a COVID-19 vaccine may further increase the risk of morbidity and premature mortality in these populations (Karmakar, 2021). Third, racial and ethnic minorities are frequently engaged in low-wage and essential services with a risk of getting exposed to COVID-19 infections; vaccination should be a priority among these groups. According to December 2020 Kaiser Family Foundation (KFF) COVID-19 vaccination report, four in ten Hispanic adults (43%) are essential workers and required to work outside of their home during the Coronavirus outbreak (78% of all Hispanic adults compare to six in ten employed White and Black adults) (Kearney 2021). Fourth, while many of the factors associated with vaccine hesitancy in African-American and Hispanics (e.g., female gender, lower-income/education, etc.) have also been reported for Whites, the proportion of socially disadvantaged individuals is much higher among racial/ethnic minorities (Brown, S., 2020.) Fifth, there could be a higher confluence of factors associated with COVID-19 vaccination hesitancy in racial/ethnic minorities with many of these factors existing even before the pandemic such as lower education and vulnerability to myths and misinformation, lower income and greater perceived barriers for obtaining COVID-19 vaccines, neighborhood disadvantage, fewer opportunities to visit healthcare providers where vaccines can be recommended/offered; higher experiences of discrimination, and greater medical mistrust (Rosenheck 2022). Finally, recent reports have also suggested that minority-dominated socially deprived communities in the U.S. were not receiving proportionate allocations for COVID-19 vaccines or had

lower coverage. Lower allocation or higher barriers (e.g distance to vaccination sites, rurality, lack of facilities, digital divide, lower health literacy, etc.) are additional challenges in racial/ethnic minority communities that may impede mass vaccination with COVID-19 vaccines (Cecil, 2021).

Around the world with the current pandemic, COVID-19 Vaccines Global Access (COVAX) was established to accelerate the development and manufacture of COVID-19 vaccines and to guarantee fair and equitable access for every country in the world. At an early stage during this pandemic, it quickly became apparent that to end this global crisis we don't just need COVID-19 vaccines, we also need to ensure that everyone in the world has access to them. This triggered global leaders to call for a solution that would accelerate the development and manufacture of COVID-19 vaccines, as well as diagnostics and treatments, and guarantee rapid, fair and equitable access to them for people in all countries. Today COVAX the result of an extraordinary and unique global collaboration, with more than two-thirds of the world engaged has the world's largest and most diverse portfolio of COVID-19 vaccines, and as such represents the world's best hope of bringing the acute phase of this pandemic to a swift end. COVAX has access to enough COVID-19 vaccines to help protect 70% of the population in 91 lower income countries. Nearly 18 months after the first administration of COVID-19 vaccine, lower income countries administered billions of COVID-19 vaccines, an incredible progress in the historic global roll out that is unprecedented in terms of demographic, scale and speed (UNICEF, 2021). COVAX is one of three pillars of the Access to COVID-19 Tools (ACT) Accelerator, which was launched in April in response to this pandemic. Bringing together governments, global health organizations, manufacturers, scientists, private sector, civil society and philanthropy, with the aim of providing innovative and equitable access to COVID-19 diagnostics, treatments and vaccines. The COVAX pillar is the only truly global solution to this pandemic because it is the only effort to ensure that people in all corners of the world will get access to COVID-19 vaccines once they are available, regardless of their wealth (Okoro 2021).

In the U.S., community-based programs have shown improvement to COVID-19 vaccine access and increased vaccination rate. Examples of those programs are community-based vaccine access programs to seniors and homeless populations in California (Collins, 2021). Mobile health clinics can be used in a community to address vaccine hesitancy among low-income families (Iwu,2019). These clinics have shown success in reaching vulnerable populations by delivering services directly at the curbside in communities, as well as addressing medical and social determinants of health at a community level during high mortality emergencies such as the COVID-19 pandemic (Gillut-Wright 2022). Therefore, mobile health clinics are successful in delivering access and educating communities about vaccines. For example, a case study on COVID-19 vaccine distribution via mobile van to residents of almost 48,000 long-term care facilities across the United State, shows that more than 90% of vaccine supply was attributed in the minimum amount of time. This study shows the positive impact of the mobile clinic in efficiently distributing vaccines and other healthcare resources to the population in need (Shukla, 2022). By providing culturally appropriate vaccine information and educational materials, mobile health clinics are able to decrease vaccine hesitancy and increase vaccination confidence among community members. Community health care providers who collaborate with mobile health clinics, play an important role in achieving vaccine confidence (Mc Niesch, 2022).

For a long time, nurses have been instrumental in the success of vaccination programs across the nation through key engagement activities concerned with raising awareness, education, vaccine administration, and policy development (Stamps, 2022). Other examples include UC Davis Health's COVID-19 initiatives: ORALE (Organizations to Reduce, and Lead for Equity against COVID-19) and MOVE IT UP (Mobilizing Organizations Via Equitable Immunizations and Testing through Unified Partnerships) that are partnered with the Health Education Council (HEC) (a non-profit organization in South Sacramento) to promote vaccination and reduce vaccine hesitancy in low income communities in Sacramento and Yolo county. Community outreach nurses play a significant role in mobile health clinics such as MOVE IT UP vaccine clinics in Sacramento. Not only are they responsible for vaccine

administration and COVID-19 testing, they are a reliable source of information and vaccine education for minority populations in Sacramento and Yolo county.

In order to control the spread of COVID-19, public health departments need to utilize effective messaging to educate the diverse public. Public health departments intervention relied on partnership with community-based organizations such as HEC, that mainly work in marginalized communities. State and county departments can provide support to those organizations through communication, collaboration, financial support of clinics and community centers, and providing wraparound services (Hansotte, 2021). For example in response to the surge of COVID-19 cases in Arizona, local public health departments with collaboration with Maricopa County Department of Public Health, the Arizona State University, tribal and local community organizations such as churches, recruited and trained 218 case investigators, completed 5,000 case patient interviews, and closed 10,000 cases (Ledesma, 2022). In another example, Yolo and Sacramento counties continue to support HEC financially to support its work toward decreasing vaccine hesitancy by promoting COVID-19 ambassador programs.

Community-based organizations play an important role in building healthy communities through education and research. Community organizations such as HEC can connect with the community in a way that governments and health systems cannot. These community-based organizations are able to provide health-related education to diverse communities through a youth ambassador program which is able to deliver education that has a culturally appropriate strategy. Training selected community members as COVID-19 Youth ambassadors who can deliver trusted COVID-19-related information within their own community, is vital to vaccine uptake, especially nowadays that information related to vaccines is complex and is often misunderstood (Pope, 2022). A study by Robertson et al. shows that health communication is critical not only to improve health for the overall population, but also for socially disadvantaged groups who face barriers to vaccination due to lack of information access, language barrier, cultural barrier, discrimination, geographic location, disability, social isolation and low healthcare access (Robertson, 2022). Through community organizations, youth ambassadors can build rapport with the

communities and deliver scientific education in a culturally respectful way (AHC Media, 2021).

Community collaboration of these ambassadors through education, research, and trust will lead to a higher rate of confidence which will result in an increase in vaccine uptake and better health outcomes for the community (Walker, 2021). A collaborative approach from the health system and government with community-based programs is necessary for vaccine confidence and vaccine uptake. Academic universities and government agencies can build and add resources to community organizations (Curran, 2022). This allows the community to participate in all aspects of the research and assist in determining the best principles for delivering the information in a culturally unbiased manner. Using a collaborative approach to assist in education on vaccines can also reach vulnerable populations and address the gaps in the health system and government (Goldenburg, 2021). COVID-19 Youth Ambassador programs are essential in delivering quality care to vulnerable and hard-to-reach populations (Morris,2020).

Ambassador programs are able to build rapport and trust by embracing their community's cultural background. As part of the ambassador's role, community engagement is recognized as an effective means of maximizing public health program impacts despite challenges such as power imbalances that can undermine efforts (Mc Neish 2022). A critical step to developing authentic community engagement is to invest the time and effort into building trust and establishing relationships with the community. Becoming informed about the community, such as learning about their norms and values, history, and culture prior to initiating any engagement efforts is another strategy considered essential for program success.

Ambassadors are selected from the target community and they are familiar with the structure and norm of their community members, therefore they are able to establish rapport with their target population (Hansotte 2021). The most important role of ambassadors is to collaborate with the community to determine priority needs, and identify and mobilize community assets and strengths. This role can also serve as a means for building trust and minimizing resistance during program implementation (Ekenga 2021). Community ambassadors have the opportunity to maximize the reach and impact of community engagement efforts by leveraging the influence of local community leaders or champions who can support the buy-in and diffusion of a program (Bonner, 2017). For instance through connection with church

leaders, Latino ambassadors are able to build trust with their community members in order to increase vaccination rates among Latinos. The COVID-19 Community Ambassador model is one of the community-based programs aim to develop models of COVID-19 vaccine outreach that address issues of access and mistrust, rather than assuming that low-income communities can easily access existing modalities of vaccine delivery (e.g., mass vaccination sites, pharmacies) (O'Mara-Eves 2015). COVID-19 ambassadors are trained to provide vaccine-related health education in low-resource areas, operating directly in the community outside of traditional health systems (Cliff, 2020). They are purposefully chosen from communities where they will be working to reflect community values, culture, and language and engender trust. Extending the emphasis on community trust in vaccine delivery models, ambassadors can offer peer support and shared experience in navigating vaccine hesitancy (Zelner 2021).

Being a health ambassador and having the ability to discuss and educate peers about vaccines, allows a person to make informed health decisions. This will ultimately help the community shield itself from widespread COVID-19 infection and its severe outcome. This paper explains COVID-19 Youth Ambassador program implementation, evaluation and its' benefit to minority community. This program conducted at HEC with the aim of reducing vaccine hesitancy among disadvantaged communities in Sacramento and Yolo county. HEC's COVID-19 ambassador program started after the California Department of Health Care Services (DHCS) recognized the disproportionate impact of COVID-19 on disadvantaged communities, including many communities of color, which account for a large share of the Medi-Cal beneficiary population. While Medi-Cal COVID-19 vaccination rates are gradually improving across the state, the percentage of Medi-Cal beneficiaries with at least one dose lags behind the population-at-large rate. DHCS allocated up to \$350 million to incentivize COVID-19 vaccination efforts in the Medi-Cal managed care delivery system for the service period of September 1, 2021 through February 28, 2022 ("performance period") for the entire state of California. Partnership HealthPlan of California (PHC), one of HEC's partners, has developed a Vaccination Response Plan to improve vaccine access and to develop the infrastructure to support this work. Three million dollars has been allocated

towards grants to support HEC's community partners' efforts to increase access to COVID-19 vaccinations for identified vulnerable populations within 14 county network: Del Norte, Humboldt, Lake, Lassen, Marin, Mendocino, Modoc, Napa, Shasta, Siskiyou, Solano, Sonoma, Trinity, and Yolo counties. HEC utilized funding from PHP's COVID-19 Community Grant Incentives program to reach the unvaccinated population in PHC's Medi-Cal service region. Youth ambassadors aim to increase vaccination rates in their communities by designing special community projects in which they can serve as trusted messengers for their peers and as local leaders, conveying educational messages about the vaccine and directing community members to local vaccination clinics.

Methods:

PubMed, Fusion, Science Direct and Google were the primary journals and search engines used to obtain the peer-reviewed literature and statistical information. The following keywords were searched: vaccine hesitancy, COVID-19, social media, ambassador program, community-based organizations, community strategies, public health, outreach, health care, hesitancy determinants, World Health Organization, Public Health Department, mortality rate, community-based programs.

Program analysis:

Using principles from HEC's Peers Helping Peers Program, HEC created and launched a "Youth Vaccine Ambassador Corps" which mobilized and trained local PHC/Medi-Cal youth ages 17-24 to develop and share pro-vaccine messages to educate their local community. Youth activity is mostly in low income communities and there is no age limitation to the community they are going to address the issue. As a program coordinator for this project, I worked with HEC's communications coordinator to develop the youth ambassador promotional flier (Figure.2) and social media recruitment graphics. The flier provided a QR code that directed community members to the HEC website where prospective applicants were able to complete their application online. Applicants were asked demographic information as well as some short answer questions including how COVID-19 has impacted their lives as well as outcomes they

hoped to achieve by participating in the youth ambassador program. Responses to the online application questions allowed HEC's project team to select candidates to participate in the program. HEC widely recruited participants three to four weeks prior to the launch of each cohort which began in November 2021 for cohort 1 and January 2022 for cohort 2, respectively. The program was shared with community members during outreach events and successfully engaged over 350 partners and/or HEC affiliates to help promote the youth ambassador training program. PHP also promoted HEC with their own networks in the respective counties, as well as coordinated two one-on-one introductory meetings with the Solano County Public Health Department and Northern Valley Indian Health. Recruitment for the program resulted in 29 applications from local youth across PHP service counties in Yolo, Solano, and Napa counties.

Summary of Activities:

The staff members designed training materials with four educational modules for virtual program delivery. Training modules included up-to-date and accurate education drafted by HEC staff members and reviewed in real time with the support of Dr. Colleen Townsend, Regional Medical Director from PHP. The Youth Ambassador Corps program held its first cohort over a four-week period on November 11th, November 18th, December 2nd, and December 9th of 2021 on zoom video communication platform. Cohort 1 resulted in 6 participants successfully completing the training program and community projects. After the holidays, HEC held a second cohort that included an orientation session over a two-week time frame on January 25th -27th and February 2nd –3rd 2022 on the zoom platform and received 30 applications for the program, and 17 were accepted into the program. The ideal goal of the community projects was to increase the number of individuals vaccinated. However, because most of the youth's projects were conducted through their social media platforms such as Facebook or Instagram, it was not clear if vaccination rate increased after implementation of those community projects. Although in most cases, the number of followers of the social media posts increased dramatically. In one example, one of our ambassadors had 500 people follow his post about vaccine myths and in another example most of the

followers shared the post about vaccine hesitancy and vaccination hesitancy, on their own social media accounts.

Each training session took place over 1.5 hour sessions on zoom led by HEC staff members who delivered the modules and technical support. The sessions were held during an afternoon time slot to accommodate youth who were students or had other work/family obligations. Training was held virtually to adhere to COVID-19 safety precautions. The COVID-19 Youth Ambassador Corps training sessions consisted of four training sessions conducted for both cohorts. The first session focused on COVID-19 basics, signs/symptoms, testing, the tiers, healthcare system impacts, and community development. Youth learned what COVID-19 is, how it differs from the flu and common cold, and how to prevent transmission of COVID-19. The second session focused on COVID-19 vaccination, myths, cultural vaccine hesitancy, and eligibility for the vaccine. In this module, youth gained knowledge on addressing sources of Russian, Black, and Latino population hesitancy. They also learned about vaccination eligibility, and how the mRNA vaccine differs from other vaccines. The third session covered outreach messaging including strategies on how to promote the vaccine on social media and a discussion of the mental health impacts of the pandemic. During the mental health sessions, HEC invited guest speakers from UC Davis Health to share their expertise, including Dr. Sergio Aguilar-Gaxiola and a medical student with experience as a peer mental health counselor. Youth also learned strategies on how to engage with individuals who are hostile and hesitant against vaccines. In the fourth and final session, youth got together to discuss their project proposals and round out the training course. The project proposals entailed a detailed description of what focus areas youth addressed in the projects including:

- 1) Increase access and/or awareness of local vaccination clinics.
- 2) Provide education about COVID-19 vaccines (HEC to provide and/or approve educational materials).
- 3) Increase referrals to HEC programs and/or other community programs.
- 4) Help people overcome barriers to COVID-19 vaccines and/or testing.

Cohort 2 resulted in 13 participants successfully completing the training modules and execution of community projects. In cohort 2, HEC initially accepted 17 youth, however, there was

participant turnover from the start of the training program through the community project element. In addition to HEC staff, cohort 2 featured two UC Davis School of Medicine medical students who supported module facilitation and provided education to the youth including mental health and wellbeing. A total of 15 projects were completed in cohort one and 22 completed in cohort two, for a total of 37 completed.

Data Analysis:

Since staff didn't have clear data of how much vaccination rate increased after they implemented this program, they used internal evaluation, meaning evaluating ambassadors before and after the program, to assess our program. Before beginning the COVID-19 Youth Ambassadors Program, youth completed a pre-survey. HEC utilized Google Forms as the distribution platform. Twenty-eight youth completed the pre-survey. The results were as follows:

1. 85.7% strongly agreed they are passionate about preventing COVID-19 spread (14.3% agreed)
2. 78.6% agreed their mental health has been impacted by the pandemic
3. Before the Program, 67.9% strongly agreed that they were very comfortable discussing COVID-19 and vaccination with others (32.1% were moderately comfortable)
4. 78.6% of the youth felt socially connected to peers, friends, and family before the program
5. All agreed they were close to at least one person they could confide in

After the training program ended, youth were asked to complete a final survey to assess their knowledge and share experience participating in the training program prior to starting their community projects. Twenty-four youths completed the final course evaluation. The results indicated:

1. 54.2% made new social connections in the program
2. Compared to 67.9% comfortability, before the program, upon completion of the COVID-19 training 79.2% of the youth strongly agreed that they were comfortable discussing COVID-19

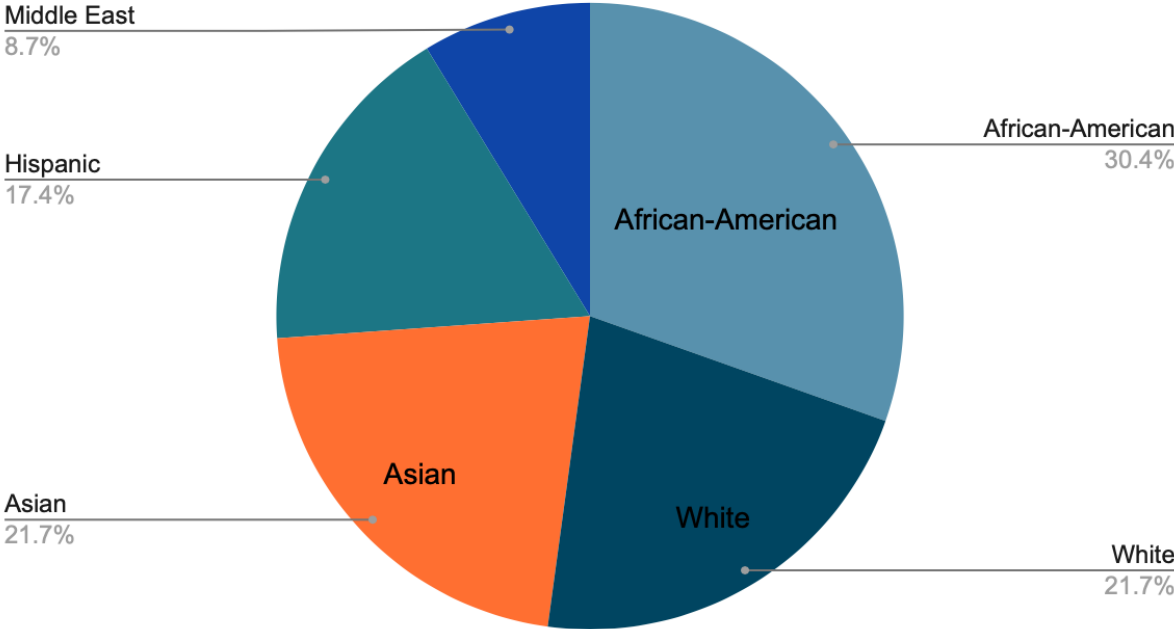
and vaccination with others. One highlight to note is that the amount of youth who felt more comfortable discussing COVID-19 increased after their participation in the program

3. 100% of youth felt safe, comfortable, and respected with program facilitators and peers
4. 70.8% (strongly agreed) while 29.2% (agreed) they would recommend this program to others

COVID-19 Youth Ambassador program cohort II demographic data includes as follows: 30.4% African-American, 21.7% Asian, 21.7 white, 17.4% Hispanic, and 8.7% Middle Eastern/Arab. 83.3% females and 16.7% male (Figure.1).

Figure.1. Youth ambassador demographic data

Youth Ambassador Demographic data



Implication & Discussion:

The goal of this training was to provide holistic education to youth on COVID-19 basics, prevention methods (social distancing, testing), and managing the socio-emotional toll of the pandemic. Youth ambassadors aim to increase vaccination awareness in their communities by designing special projects in which they can serve as trusted messengers for their peers and as local leaders, conveying educational messages about vaccine hesitancy and directing community members to local vaccination clinics (Figure.2). For example, ambassadors were able to conduct zoom trivia and social media campaigns for their high school classmates and they shared vaccine facts and benefits with them in the hope that they would talk to their network about vaccination. Of the projects completed, ambassadors collectively reached over 2,093 individuals in their communities. One of the notable projects was called “Community Trivia Event”, in which the youth ambassador led an interactive virtual trivia event that successfully reached 15 youth. This same individual also created a social media platform, reaching 200-250 high school student peers, also receiving over 700 viewers on their Instagram posts. Another impressive project called “Hygiene Kits”- one of our youth conducted a social media campaign in order to raise funding to create 50 hygiene kits to distribute to homeless individuals in Napa County. Partnership Health Plan also donated some incentives for the youth to include in the kits as well as helped make the connection with Adobe Services who provided the youth with feedback on their educational materials that were also included in the kits related to COVID-19 prevention methods.

Although staff were not able to gather information about the number of vaccinations in ambassadors' target communities, since most of the community projects included social media campaigns, we were able to assess ambassadors' experience from this program. This program helps ambassadors to prompt vaccination through their social media platform (increase the number of their followers and the fact that people try to share those vaccine-related posts on social media and with others), increase their knowledge and confidence to do the community project, and finally, this program helps them to have more social interactions. About 70% of youth indicated they made one or more new social bonds within the cohort. Therefore, as a byproduct of this program, staff were able to provide social support for ambassadors at the time of pandemic and self-isolation. The evaluation also found that the cohorts were very diverse, attracting youth from different communities and counties. Youth were very engaged and open to share their social experiences during the pandemic. They also shared how a lack of social engagement has affected their health and their families. HEC felt that it was critical to discuss coping strategies and mechanisms for healing and taking care of yourself to manage stress as part of the learning modules. For example, youth in each cohort established collective community agreements at the start of each cohort to follow throughout the training sessions. Youth also enjoyed the interaction during the breakout room activities and the "check-ins" and reflection times that were incorporated into the sessions. At the end of each cohort youth provided staff with constructive recommendations and feedback. One youth discussed stigma as a takeaway, "It is important to take into consideration a community's historical context and relationship with medicine/ vaccines when creating medical interventions. Also, it is important to present information to people in a digestible format so that it is best received." Another youth shared, "I learned a lot about how the pandemic and vaccine misinformation disproportionately affects communities of color. I also learned a lot about how to address misinformation in a much more educated way." Community-based programs have shown great benefits in reaching populations that have been missed by the health system and the government. Education and health communication is a key strategy to convert scientific findings into actionable items (Gil, 2019). Being a health ambassador and having the ability to discuss and educate peers about vaccines can allow a person

to make informed health decisions, and can ultimately help the community shield itself from widespread COVID-19 infection and its severe outcome. With the community being vaccinated, it can reach herd immunity leading to better health outcomes, longer lives, and the prevention of spreading the disease (Biswas, 2019).

Limitations:

There are limitations when it comes to community programs that provide ambassador training . One of them is building relationships with the health system that is difficult particularly when relationships include both small and large organizations and governments (Jones, 2020). Due to the complexity of businesses and government agencies, finding larger organizations to partner with community-based organizations is challenging (Marketing weekly news, 2021). One of the reasons is that institutions and government agencies have limited budgets and community organizations must compete against other nonprofits. It also takes time and resources to determine which foundations or government agencies may already have maxed their involvement in community-based clinics for that budgeted year. Moreover, some potential stakeholders may not want to be involved in a controversial topic such as that of vaccines (Gronowski, 2022). Another major limitation when trying to collaborate with larger organizations as well as community leaders is time constraints. It takes time and energy to build relationships and trust with community members and organizations in order to drive more local involvement (Adjzen, 2021). It also takes time to perform research in order to apply the best implementations regarding education platforms for vaccine hesitancy. Infrastructure, research, implementation, and evaluation are costly, and funding is not consistent. Funding options may not always be available and may be hard to get, or may require a significant amount of time in writing proposals rather than actually undertaking research (Barbosa 2019). Environmental challenges, such as the coronavirus, can add to the difficulty of securing funding and grants. Other challenges include competing for limited funding and finding a funding source that aligns with the mission, vision, and goals of the community-based program. Difficulty in finding funding sources can affect the sustainability of the program (Talan, 2011).

Beside general limitations that every community program might have, there are limitations specific to HEC COVID-19 youth ambassador program. For example executing a successful training program in a short time frame was a challenge and HEC project staff learned a lot about what worked/didn't work well from the first cohort including length of training sessions and time to complete projects. Another limitation of this program was both cohorts experienced a drop in participation from individuals who had originally committed to the program due to time constraints or personal matters. Although the training cohort started strong, three youths dropped off mid-way through the program's first cohort. Various reasons included passing of family members, inability to fully commit to the training and the final project, and school finals that were taking place around the same time the deadline for the project outlines were due. This impacted the overall engagement during the sessions as there were fewer youth in each session as the weeks went on and some who felt more comfortable speaking up or sharing thoughts without being called on.

Recommendations:

To achieve the best health outcomes, it is important to utilize the ambassador program by collaborating with stakeholders, government agencies and academics. For states and counties, more financial support and resources are needed to support these types of programs. Funding options may not always be available and may be hard to get, or may require a significant amount of time in writing proposals rather than actually undertaking research. This COVID-19 Youth ambassador program is modeled from HEC's successful six cohorts of Peers Helping peers program funded by Kaiser Permanente for three years. Therefore, HEC's staff had enough experience writing grant proposals for COVID-19 youth ambassadors. HEC is pleased to have been funded for this opportunity through Partnership HealthPlan of California (Appendix 1). HEC has a long term collaboration with this agency and that helped the organization to receive funding for this project. This funding provided an opportunity to collaborate with other local grantees such as the Communicare organization. This organization

provided helpful roundtable sessions to learn more about what other organizations were doing to improve vaccination rates across the state.

Another recommendation is about implementing effective training methods in order to have a successful outcome. For example for cohort 2, HEC hosted sessions over a 2-week time span instead of 4 weeks that was applied in cohort 1. This allowed more time for youth to work on their project outlines and 1-1 technical assistance from HEC project staff. Moreover, HEC project staff learned that flexibility is important in youth engagement programs. A number of youth ambassadors experienced personal hardships, due to loss of a family member, or issues at home. Extension of the due date to complete assignments and provide alternative makeup assignments implemented in cohort 2, made a positive difference. Regarding the collaboration with other agencies, having academic and health system partners increased the credibility of the training and boosted the trust community needs to approach vaccine hesitancy. Recruiting medical students who are also relatively young ‘innovative thinkers’ and can speak to what they are exposed to in the field, was very enriching for the youth ambassadors. The additional support from the medical students provided balance to the training program workload for HEC staff internally. Sharing responsibilities included the facilitation of the sessions as well as content development for the sessions.

Additionally, mental health experts from UC Davis health system provided reliable information to be incorporated into the training modules. Moreover, they provide social and emotional support for youth ambassadors. As part of the learning modules, HEC felt that it was critical to discuss coping strategies and mechanisms for healing and taking care of yourself to manage stress . For example, youth in each cohort established collective community agreements at the start of the cohort to follow throughout the training sessions. Youth also really enjoyed the interaction during the breakout room activities, the “check-ins” , and reflection times that were incorporated into the sessions. This “check-ins” sessions provided youth with an opportunity to elaborate on timelines needed to complete projects, the support they feel is needed from HEC (ex: supplies printing), and additional project specifics, and finally helped them to have more social interactions that was beneficiary at this time of pandemic and isolation. HEC project staff also made sure to provide a space for youth to meet each other and get comfortable for more communication and engagement during the program. In cohort 2, a separate required orientation day was held in order for youth to meet each other and the project staff, discuss expectations, community agreements for how to navigate in the virtual space and introduce project instructions. All sessions were recorded, and youth ambassadors were provided with the recording and educational slides for review, if they missed a session or needed to leave early had the opportunity to review the session materials and complete a make-up assignment. Staff that attended the training attempted to actively engage with the youth, encouraging them to participate in ice breakers, trivia, and to share any experiences they may have encountered during the pandemic. To reach HEC’s project goal of training at least 15 youth, HEC hosted a second training cohort in January 2022 further expanded outreach efforts which includes the current ambassadors to help promote and recruit more youth to apply for the program. After completing the first training cohort, focus was on adding more staff to support facilitation of the sessions and creating a training module content, and adopting new policies to increase participant retention.

Conclusion

Addressing vaccine hesitancy through community-based programs such as COVID-19 Youth ambassador Corp. can reach diverse and vulnerable populations that have been missed by the health system and government (Teasdale, 2022). This program is dedicated to train individuals from the community for educating their community on scientific evidence-based information about vaccines and delivering in a culturally appropriate manner (Venegas, 2022). To achieve the best health outcomes, it is important to utilize this program by collaborating with stakeholders, government agencies and academics. For states and counties, more financial support and resources are needed to support these types of programs. Additionally, the academic health system will provide reliable information to be incorporated into the training modules. Also they will provide social and emotional support for youth ambassadors. HEC's next step with this program is to implement more ambassador programs that go beyond the jurisdiction of interest. For cohort one and two staff recruited ambassadors from Napa, Solano, and Yolo county. Depending on the COVID-19 current rates and distribution, HEC would like to develop this work with Placer and Sacramento county to help more individuals being aware of the benefits of vaccination against COVID-19. Vaccination and booster is the best way to protect people from COVID-19 and youth ambassadors could have a great impact of improving vaccination hesitancy among communities especially low income and minority populations. HEC's youth ambassadors continue sharing their social media posts, social media campaigns, and their participation in HEC vaccine events. HEC is committed to ongoing engagement with youth ambassadors in future activities including opportunities to support outreach and community events.

References

- Ajzen, M., & Taskin, L. (2021). The re-regulation of working communities and relationships in the context of flexwork: A spacing identity approach. *Information and Organization*, 31(4) doi:10.1016/j.infoandorg.2021.100364
- Ali, M., Proma, T. S., Tasnim, Z., Islam, M. A., Urmi, T. A., Ahmed, S., . . . Khan, U. S. (2022). Parental COVID-19 vaccine hesitancy for children with neurodevelopmental disorders: A cross-sectional survey. *Tropical Medicine & Health*, 50(1), 1-9. doi:10.1186/s41182-022-00415-6
- Al-Uqdah, L., Franklin, F. A., Chiu, C., & Boyd, B. N. (2022a). Associations between social media engagement and vaccine hesitancy. *Journal of Community Health: The Publication for Health Promotion and Disease Prevention*, , 1-11. doi:10.1007/s10900-022-01081-9
- Barbosa-Leiker, C., Holliday, C., Burduli, E., Howell, D., Wynne, M., Numkena, N., . . . Katz, J. (2019). Development and psychometric evaluation of a community program capacity scale for a rural american indian tribe. *Journal of Nursing Measurement*, 27(2), E95-E106. doi:10.1891/1061-3749.27.2.E95
- Biswas, N., Mustapha, T., Khubchandani, J., & Price, J. H. (2021). The nature and extent of COVID-19 vaccination hesitancy in healthcare workers. *Journal of Community Health*, 46(6), 1244-1251. doi:10.1007/s10900-021-00984-3
- Bonner, G., Williams, S., Wilkie, D., Hart, A., Burnett, G., & Peacock, G. (2017). Trust building recruitment strategies for researchers conducting studies in african american (AA) churches: Lessons learned. *American Journal of Hospice and Palliative Medicine®*, 34(10), 912-917. doi:10.1177/1049909116666799
- Bonner, S. M., & Chittooran, M. M. (2017). Program administration scale, second edition. *The Twentieth Mental Measurements Yearbook*, Retrieved from

<https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=mmt&AN=test.8068&authtype=shib&site=eds-live&scope=site&custid=s3818721>

Callaghan, T., Moghtaderi, A. (., Lueck, J. A. (., Hotez, P. J. (., Strych, U. (., Dor, A. (., . . . Motta, M. (., (2021). *Correlates and disparities of COVID-19 vaccine hesitancy S.I.*.
doi:10.2139/ssrn.3667971

Carson, B., Isaacs, J., & Carilli, T. (2022). Jabbing together? the complementarity between social capital, formal public health rules, and COVID-19 vaccine rates in the United states. *Vaccine*, 40(27), 3781-3787. doi:10.1016/j.vaccine.2022.05.027

Chapman, L., Hu, J., & Seidel, S. (2022). Factors associated with COVID-19 vaccine hesitancy among texas households. *Texas Public Health Journal*, 74(3), 14-21. Retrieved from
<https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=a9h&AN=157808174&authtype=shib&site=eds-live&scope=site&custid=s3818721>

Choi, K., Romero, R., Guha, P., Sixx, G., Rosen, A. D., Frederes, A., . . . Shover, C. L. (2022). Community health worker perspectives on engaging unhoused peer ambassadors for COVID-19 vaccine outreach in homeless encampments and shelters. *Journal of General Internal Medicine* , 1-7. doi:10.1007/s11606-022-07563-9

Clift, A. K., Coupland, C. A. C., Keogh, R. H., Diaz-Ordaz, K., Williamson, E., Harrison, E. M., . . . Hippisley-Cox, J. (2020). Living risk prediction algorithm (COVID) for risk of hospital admission and mortality from coronavirus 19 in adults: National derivation and validation cohort study. *Bmj*, 371, m3731. doi:10.1136/bmj.m3731

Collins, K., & Layne, K. (2021). Exploring the opportunities and challenges of a virtual community-based older adult fall prevention program during COVID-19. *Topics in Geriatric Rehabilitation*, 37(3), 145-151. doi:10.1097/TGR.0000000000000320

- Curran, S., Gormally, S., & Smith, C. (2022). Re-imagining approaches to learning and teaching: Youth and community work education post COVID-19. *Education Sciences*, 12(3), 201. doi:10.3390/educsci12030201
- Ekenga, C. C., & Sprague, N. (2021). The impact of nature-based education on health-related quality of life among low-income youth: Results from an intervention study. *Journal of Public Health*, Retrieved from <https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=edsair&AN=edsair.doi.....c264af7899803388a08aac2d73ffb0a2&authtype=shib&site=eds-live&scope=site&custid=s3818721>
- Ellithorpe, M. E., Adams, R., & Aladé, F. (2022). Parents' behaviors and experiences associated with four vaccination behavior groups for childhood vaccine hesitancy. *Maternal and Child Health Journal*, 26(2), 280-288. doi:10.1007/s10995-021-03336-8
- Findings from university of houston provide new insights into public relations (relationship matters: How government organization-public relationship impacts disaster recovery outcomes among multiethnic communities*)*(2021). NewsRX LLC. Retrieved from <https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=edsbig&AN=edsbig.A674394952&authtype=shib&site=eds-live&scope=site&custid=s3818721>
- Gil, E. (2019). Leadership for youth empowerment within a family-based community program. *Journal of School Leadership*, 29(6), 515-537. Retrieved from <https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=eric&AN=EJ1282278&authtype=shib&site=eds-live&scope=site&custid=s3818721> <http://dx.doi.org/10.1177/1052684619870470>
- Goldenberg, M. J. (2021a). *Vaccine hesitancy : Public trust, expertise, and the war on science* University of Pittsburgh Press. Retrieved from

<https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=cat00548a&AN=iusf.b5191449&authtype=shib&site=eds-live&scope=site&custid=s3818721>
<http://search.ebscohost.com/login.aspx?direct=true&custid=s3818721&authtype=shib&scope=site&db=nlebk&AN=2752466>

Goldenberg, M. J. (2021b). *Vaccine hesitancy : Public trust, expertise, and the war on science*.

Pittsburgh, Pa: University of Pittsburgh Press. Retrieved from

<https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=nlebk&AN=2752466&authtype=shib&site=eds-live&scope=site&custid=s3818721>

Gronowski, B., Roth, S. E., Woodson, T. T., Cohen-Cline, H., & Kenton, N. (2022). The role of community health workers in developing multidimensional organizational relationships.

Journal of Ambulatory Care Management, 45(3), 242-251.

doi:10.1097/JAC.0000000000000423

Guillot-Wright, S., Farr, N. M., & Cherryhomes, E. (2022). A community-led mobile health clinic to improve structural and social determinants of health among (im)migrant workers.

International Journal for Equity in Health, 21(1), 1-7. doi:10.1186/s12939-022-01630-7

Hansotte, E., Bowman, E., Gibson, P. J., Dixon, B. E., Madden, V. R., & Caine, V. A. (2021).

Supporting health equity through data-driven decision-making: A local health department response to COVID-19. *American Journal of Public Health*, 111, S197-S200.

doi:10.2105/ajph.2021.306421

Holland, C., Chappel-Aiken, L., Tyson, T., & Sherrod, D. (2021). COVID-19 challenges: Lessons

learned in an HBCU nursing education program. *Journal of Best Practices in Health*

Professions Diversity: Education, Research & Policy, 14(1), 82-92. Retrieved from

<https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=bth&AN=154936159&authtype=shib&site=eds-live&scope=site&custid=s3818721>

Iwu, C. A., Ositadinma, P., Chibiko, V., Madubueze, U., Uwakwe, K., & Oluoha, U. (2022a).

Prevalence and predictors of COVID-19 vaccine hesitancy among health care workers in tertiary health care institutions in a developing country: A cross-sectional analytical study. *Advances in Public Health* , 1-9. doi:10.1155/2022/7299092

Jones, C. M., & Vogl, C. H. (2020). *Building brand communities : How organizations succeed by creating belonging*(First edition. ed.) Berrett-Koehler Publishers. Retrieved from

<https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=cat00548a&AN=iusf.b5161730&authtype=shib&site=eds-live&scope=site&custid=s3818721>

<https://go.oreilly.com/university-of-san-francisco/library/view/-/9781523086634/?ar>

Khubchandani, J., & Macias, Y. (2021). COVID-19 vaccination hesitancy in hispanics and african-americans: A review and recommendations for practice. *Brain, Behavior, & Immunity - Health*, 15, 100277. doi:<https://doi.org/10.1016/j.bbih.2021.100277>

The latest on the CORONA-virus. Retrieved from

<https://www.hsph.harvard.edu/news/hsph-in-the-news/the-latest-on-the-coronavirus/>

Ledesma, D., Maroofi, H., Sabin, S., Dennehy, T. J., Truong, J. M., Meyer, L. G., . . . Jehn, M.

(2022). Design and implementation of a COVID-19 case investigation program: An Academic–Public health partnership, Arizona, 2020.*Public Health Reports*, 137(2), 213-219. doi:10.1177/00333549211068495

MacDonald, N. E. (2015). Vaccine hesitancy: Definition, scope and determinants. *Vaccine*, 33(34), 4161-4164. doi:10.1016/j.vaccine.2015.04.036

Malek, J. A., Tahir, Z., Hanafi, N., & Baharudin, R. A. (2020). Assessing the impact of the university ambassador program through social innovation for rural community development in malaysia. *International Journal of Humanities, Arts & Social Sciences*, 6(5), 186-194. doi:10.20469/ijhss.6.20002-5

- McNeish, R., Albizu-Jacob, A., & Memmoli, C. (2022). Engaging the community to effectively plan and implement community-based mental health programs. *Journal of Behavioral Health Services & Research*, 49(2), 149-161. doi:10.1007/s11414-021-09767-z
- McRee, A., Gower, A. L., Kiss, D. E., & Reiter, P. L. (2022). Has the COVID-19 pandemic affected general vaccination hesitancy? findings from a national study. *Journal of Behavioral Medicine*, 1-6. doi:10.1007/s10865-022-00298-2
- MEDIA, A. (2021). Reproductive health organizations help vaccinate patients, communities: Planned parenthood targets minority populations. *Contraceptive Technology Update*, 42(8), 1-4. Retrieved from <https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=edo&AN=151347993&authtype=shib&site=eds-live&scope=site&custid=s3818721>
- Noyman-Veksler, G., Greenberg, D., Grotto, I., & Shahar, G. (2021). Parents' malevolent personification of mass vaccination solidifies vaccine hesitancy. *Journal of Health Psychology*, 26(12), 2164-2172. doi:10.1177/1359105320903475
- O'Mara-Eves, A., Brunton, G., Oliver, S., Kavanagh, J., Jamal, F., & Thomas, J. (2015). *The effectiveness of community engagement in public health interventions for disadvantaged groups: A meta-analysis* Retrieved from <https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=edsair&AN=edsair.doi.dedup.....135cd8d3bf3beafdb5375f9e103c3b50&authtype=shib&site=eds-live&scope=site&custid=s3818721>
- Okoro, O., Kennedy, J., Simmons, J., Glenn, Vosen, E. C., Allen, K., Singer, D., . . . Roberts, R. (2021). Exploring the scope and dimensions of vaccine hesitancy and resistance to enhance COVID-19 vaccination in black communities. *Journal of Racial and Ethnic Health Disparities*, 1-14. doi:10.1007/s40615-021-01150-0

- Pamela Campbell-Morris, Khunti, K., Harrison, J., Rohit, S., Ekezie, W., Barbara, M. C., & Miah, N. (2020). The views of ethnic minority and vulnerable communities towards participation in COVID-19 vaccine trials. *Journal of Public Health, 43*, e258-e260. Retrieved from <https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=edsair&AN=edsair.doi.dedup.....d88f5cb46c5bd97b26d325c30dbdd5a2&authtype=shib&site=eds-live&scope=site&custid=s3818721>
- Pope, S., Rader, A., & Stansifer, S. (2022). Assessing vaccine hesitancy among pediatric healthcare providers. *Journal of Doctoral Nursing Practice, 15*(1), 65-71. doi:10.1891/JDNP-2021-0033
- Robertson, D. A., Mohr, K. S., Barjaková, M., & Lunn, P. D. (2022). Experimental pre-tests of public health communications on the COVID-19 vaccine: A null finding for medical endorsement, risk and altruism. *Vaccine, 40*(27), 3788-3796. doi:10.1016/j.vaccine.2022.05.029
- Rosenheck, M. (2022). Risk, benefit, and social value in covid-19 human challenge studies: Pandemic decision making in historical context. *Monash Bioethics Review*, 1-26. doi:10.1007/s40592-022-00156-6
- Roy, D. N., Biswas, M., Islam, E., & Azam, M. S. (2022). Potential factors influencing COVID-19 vaccine acceptance and hesitancy: A systematic review. *PLoS ONE, 17*(3), 1-20. doi:10.1371/journal.pone.0265496
- S., S., R, N., S., V., Arul Rajamurugan, P. S., & Tamilselvam, T. N. (2022). COVID-19 vaccine hesitancy in systemic lupus erythematosus – experience from a tertiary care rheumatology centre in south india. *International Archives of Integrated Medicine, 9*(6), 12-20. Retrieved from <https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=a9h&AN=157804571&authtype=shib&site=eds-live&scope=site&custid=s3818721>

Shukla, S., Fressin, F., Un, M., Coetzer, H., & Chaguturu, S. K. (2022a). Optimizing vaccine distribution via mobile clinics: A case study on COVID-19 vaccine distribution to long-term care facilities. *Vaccine*, *40*(5), 734-741. doi:10.1016/j.vaccine.2021.12.049

Stamps, D. C., & Caldwell, E. D. (2022). Multisite integrated health systems utilizes proactive community strategies to address vaccine hesitancy and create positive change. *Nurse Leader*, doi:10.1016/j.mnl.2022.01.010

Teasdale, C. A., Ratzan, S., Rauh, L., Lathan, H. S., Kimball, S., & El-Mohandes, A. (2022). COVID-19 vaccine coverage and hesitancy among new york city parents of children aged 5–11 years. *American Journal of Public Health*, *112*(6), 931-936. Retrieved from <https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=bth&AN=157068702&authtype=shib&site=eds-live&scope=site&custid=s3818721>

Thaker, J., & Subramanian, A. (2021). Exposure to COVID-19 vaccine hesitancy is as impactful as vaccine misinformation in inducing a decline in vaccination intentions in new zealand: Results from pre-post between-groups randomized block experiment. *Frontiers in Communication*, *6* doi:10.3389/fcomm.2021.721982

Venegas-Murillo, A., Bazargan, M., Grace, S., Cobb, S., Vargas, R., Givens, S., . . . Assari, S. (2022). Mitigating COVID-19 risk and vaccine hesitancy among underserved african american and latinx individuals with mental illness through mental health Therapist–Facilitated discussions. *Journal of Racial and Ethnic Health Disparities* , 1-13. doi:10.1007/s40615-022-01321-7

Walker, A., Mercer, J., & Freeman, L. (2021). The doors of opportunity: How do community partners experience working as co educators in a service-learning collaboration? *Journal of University Teaching & Learning Practice*, *18*(7), 56-70. doi:10.53761/1.18.7.05

- Wang, X., Du, Z., Johnson, K. E., Pasco, R. F., Fox, S. J., Lachmann, M., . . . Du, Z. (2021). Effects of COVID-19 vaccination timing and risk prioritization on mortality rates, United states. *Emerging Infectious Diseases, 27*(7), 1976-1979. doi:10.3201/eid2707.210118
- Wells, K., Moore, K. L., & Bednarczyk, R. (2022). Supporting immunization programs to address COVID-19 vaccine hesitancy: Recommendations for national and community-based stakeholders. *Vaccine, 40*(20), 2819-2822. doi:10.1016/j.vaccine.2022.03.039
- Willis, D. E., Andersen, J. A., Bryant-Moore, K., Selig, J. P., Long, C. R., Felix, H. C., . . . McElfish, P. A. (2021). COVID-19 vaccine hesitancy: Race/ethnicity, trust, and fear. *CTS: Clinical & Translational Science, 14*(6), 2200-2207. doi:10.1111/cts.13077

Appendices

Table 1. MPH competencies

MPH Foundational Competencies

Foundational Competency	Description of how used for Capstone
Evidence-based Approaches to Public Health	
1. Apply epidemiological methods to the breadth of settings and situations in public health practice	
2. Select quantitative and qualitative data collection methods appropriate for a given public health context	
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software as appropriate	
4. Interpret results of data analysis for public health research, policy and practice	
Public Health & Health Care Systems	
5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings	
6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels	
Planning & Management to Promote Health	
7. Assess population needs, assets and capacities that affect communities' health	This program assess the populations need for COVID-19 vaccines and discuss about barriers to vaccination and the issue of vaccine hesitancy
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs	The training modules for this program focused on cultural values and norms of low-income communities of African-American and Latinos
9. Design a population-based policy, program, project or intervention	Design and implement COVID-19 Youth Ambassador Coprs program that address vaccine hesitancy in the low-income communities
10. Explain basic principles and tools of budget and resource management	Provide budget analysis and allocate budget for each process within this program
11. Select methods to evaluate public health programs	Provide pre and post training survey to youth ambassadors in order to analyze their needs, challenges and satisfactions from the program
Policy in Public Health	

12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence	
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes	
14. Advocate for political, social and economic policies and programs that will improve health in diverse populations	
15. Evaluate policies for their impact on public health and health equity	
Leadership	
16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making	
17. Apply negotiation and mediation skills to address organizational or community challenges	
Communication	
18. Select communication strategies for different audiences and sectors	The training modules focus on culturally appropriate concept that address different communities including African American and Latino
19. Communicate audience-appropriate public health content, both in writing and through oral presentation	Outlined, drafted and finalized Capstone paper including a literature review, recommendations and implications on a current public health problem. Created a slide deck based on the Capstone paper and delivered an oral presentation at Health Professions Day in front of an interprofessional audience.
20. Describe the importance of cultural competence in communicating public health content	This program applied the cultural competency in covi-19 youth ambassador training program as participants were from different background with different cultural values
Interprofessional Practice*	
21. Perform effectively on interprofessional teams	Collaboration with UCD medical students and faculty
Systems Thinking	
22. Apply systems thinking tools to a public health issue	

Health Policy Leadership Concentration Competencies

Competency	Description of how Capstone used
1. Apply economic concepts to understand the effect of changes in policies at the government, health systems, and public health sectors	

2. Synthesize economic concepts to assess equity and efficiency in making health policy recommendations in underserved communities	
3. Formulate efficient health policy change recommendations through the analysis of proposed health policy initiatives that could affect health outcomes of vulnerable populations	
4. Develop recommendations to improve organizational strategies and capacity to implement health policy	Reviewed the literature to identify best practices and existing strategies for youth ambassador training in other organizations. Made recommendation to Health Education Council for future youth programs such as expand the program to Sacramento county
5. Analyze policy options to address environmental health needs at the local, state, and federal levels	

Appendix 1: Estimated budget allocation for the reporting period (Oct 2021-Feb 2022) (Total: \$74,796)

Overhead (15% of total grant for oversight, HR functions, grant-writing, reporting)	\$9,756
Staffing	\$30,480
Marketing/Education (office equipment, supplies, printing)	\$3,500
Other : Youth Vaccine Ambassador Corp Stipends	\$30,000
Other : Travel	\$560
Other: Non-Member incentives	\$500

Figure.1 COVID-19 Youth Ambassador Corps flyer

COVID-19 YOUTH AMBASSADOR CORPS



ARE YOU INTERESTED IN GETTING PAID \$250-500 TO LEARN AND SUPPORT VACCINATION EFFORTS IN YOUR COMMUNITY?

The Health Education Council is pleased to launch the COVID Youth Ambassador Corps, a 4-week community health training and paid community project program for Yolo, Solano and Napa County youth and young adults ages 17 -24, who are interested in promoting COVID-19 vaccination through, social media campaigns, art/music and community/school/homebased events.

**ACCEPTING APPLICATIONS FOR THE SECOND COHORT
TRAINING DATES: JAN 25,26&27, FEB 2&3
3:30-5PM VIA ZOOM**

Ambassadors will explore:

- Community building
- COVID basics, prevention, and hygiene
- Testing and vaccination
- Common virus and vaccine myths
- Social and mental health impacts of the pandemic
- Vaccination Outreach Projects



APPLICATION DEADLINE: Tuesday, January 18, 2022

For more information, visit <https://bit.ly/covid-youthcorps>
or contact Patricia Guzman at pguzman@healthedcouncil.org




The Health Education Council is a 501(c)(3) nonprofit organization that cultivates health and well-being in under-served communities by leveraging the power of collaboration. Visit www.healthedcouncil.org for more info. Funding provided by Partnership HealthPlan of California (PHC).

Figure.2 Summary of COVID-19 Youth Ambassador Corp. projects

YOUTH COMMUNITY PROJECTS