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**Decreasing Influenza Vaccination Disparity Rates by
Utilization of Hotspot Deployments of a Mobile Health Vehicle**

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This Manuscript Partially Fulfills the Requirements for the
Doctor of Nursing Practice Program and is Approved by:

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April 7, 2024

**University of St. Augustine for Health Sciences
DNP Scholarly Project
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Title of DNP Project: Decreasing Influenza Vaccination Disparity Rates by Utilization of Hotspot Deployments of a Mobile Health Vehicle <i>My signature confirms I have reviewed and approved this final written DNP Scholarly Project. DocuSign electronic signature or wet signature required.</i>

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Abstract

Practice Problem: Influenza vaccination for Black/African American patients is historically lower than White patients across all healthcare organizations (Quinn, 2018). In the organization's 2022 performance, only 13.98% of Black/African American patients ages 19 and older were vaccinated compared to 27.81% of White/Caucasian patients.

PICOT: The PICOT question that guided this project was for Black/African American patients ages 19 and older receiving care from primary care clinics in Southeast San Diego (P), what is the impact of adding access to influenza vaccinations through hotspot-driven MHV deployments (I) compared to usual vaccination delivery in the medical office building (MOB) (C) on influenza vaccine disparity rates (O) in 8 weeks (T)?

Evidence: Gaining rapport and trust from the patients, engaging the community, and improving access to care aided in the increased uptake of vaccinations for patients.

Intervention: Hot spot-driven deployments of the organization's mobile health vehicle was leveraged to improve Black/African American patient influenza vaccination rates.

Outcome: The overall disparity rate between Black/African American and White/Caucasian patients in the target zip codes decreased in 2023. The successful vaccination percentage increased for the 91977-zip code and the MHV.

Conclusion: The project's practice change plan assisted a large Southern California healthcare organization improve influenza vaccination rates by leveraging the MHV's hotspot-driven deployments. Despite the lack of statistical significance, the project increased the percentage of patients receiving their vaccinations from the MHV and established a new community partnership for vaccination access.

Decreasing Influenza Vaccination Disparity Rates by Utilization of Hotspot Deployments of a Mobile Health Vehicle

The COVID-19 pandemic has shed light on the nation's healthcare system and its challenges. A glaring challenge requiring attention from all healthcare organizations was the need to decrease and eliminate health disparities (Nduga & Artiga, 2023). Health disparities are the gaps or differences in care delivery or health outcomes between different population groups, and these were significantly influenced by social determinants of health (SDOH). SDOH are factors such as place of birth, residence, education, income, and access to care that impact an individual's overall health and quality of life (U.S. Department of Health and Human Services, n.d.-b). To fully address health disparities, organizations and their care teams must become well-versed in SDOH and how it impacts health equity and patients' total health.

Health equity stems from providing patient populations with needed resources and opportunities to obtain a higher level of wellness (Braveman et al., 2018). Equity is different from equality. Equity translates to organizations providing more resources to specific patient groups to establish a level starting line versus equality, where an organization provides the same resource across all patient demographics. Improving health equity is a colossal undertaking and will require intentional and strategic actions from healthcare organizations. A large, managed healthcare organization in Southern California took its first step towards health equity by embedding influenza vaccine equity for Black/African American patients into their performance goals. This project aimed to achieve this goal by addressing the SDOH of access to care via the utilization of hotspot reporting to determine its Mobile Health Vehicle (MHV) deployments.

Significance of the Practice Problem

Influenza vaccination for Black/African American patients is historically lower than White patients across all healthcare organizations (Quinn, 2018). In the 2022 US influenza season, influenza vaccination for Black/African American patients was only 42% compared to 54% for White patients (Black et al., 2022). This was mirrored in the organization's 2022 performance;

only 13.98% of Black/African American patients ages 19 and older were vaccinated compared to 27.81% of White/Caucasian patients. Increasing vaccination for this patient population was imperative to prevent influenza infections, as symptom severity from influenza infection is higher for Black/African American patients. This severity results in higher hospitalization, complications, and death rates. These staggering statistics were attributed to the other disparities Black/African American patients face related to their chronic conditions, such as diabetes and cardiovascular disease (Quinn, 2018).

The organization must address influenza vaccine disparities as vaccinations preserve the health of one of its high-risk patient populations. Black/African American influenza vaccination was embedded into the organization's performance goals to decrease healthcare disparities. Thus, this goal aimed to gain multiple benefits: healthier patients, cost savings from hospitalizations, financial rewards for the care teams with goal achievement, and a higher level of care quality reported to the Healthcare Effectiveness Data and Information Set (HEDIS). Care and quality performance reported to HEDIS were accessible to the public and were used to compare the performance of different healthcare organizations, influencing the patient selection of health plans (U.S. Department of Health and Human Services, n.d.-a). An increase or decrease in health plan membership was of great concern to the organization as membership played a significant role in the organization's finances, hence the importance of reporting high-quality care delivery to HEDIS.

An increase in influenza vaccination impacts the health status of patients at the local and national levels. At a local level, influenza vaccinations provide a twofold benefit: protecting the individual, their family, and community members and preventing possible hospitalizations, complications, and deaths (Quinn, 2018). Fewer hospitalizations and complications mean healthier patients, creating a national impact as vaccinations translate to a decrease in overall US economic burdens. The total burden for the 2021-2022 influenza season, consisting of direct

and indirect costs, was estimated at \$11.2 billion (National Foundation for Infectious Diseases, 2022).

PICOT Question

For Black/African American patients ages 19 and older receiving care from primary care clinics in Southeast San Diego (P), what is the impact of adding access to influenza vaccinations through hotspot driven MHV deployments (I) compared to usual vaccination delivery in the medical office building (MOB) (C) on influenza vaccine disparity rates (O) in 8 weeks (T)?

Population/Problem

The target population was unvaccinated Black/African American patients ages 19-85 who received care from the organization's Southeast San Diego primary care clinics. Inclusion criteria included all genders, marital statuses, educational statuses, and socioeconomic statuses. Exclusion criteria were patients under 19 years of age who did not identify as Black/African American, were vaccinated, and received care from clinics outside Southeast San Diego.

Intervention

The project's proposed intervention was the removal of barriers to care (influenza vaccinations) by delivering community-based vaccinations to patients (Swope et al., 2023). Prior studies demonstrated increased vaccination rates when healthcare access was provided in underserved communities. The intervention leveraged hotspot data with high influenza vaccine disparity rates and deployed the MHV to these locations. MHV staff were to provide consultation, education, and administration of no-cost influenza vaccination to patients at deployment sites.

Comparison

The current practice relied on primary care clinics administering vaccinations in the MOB, and hotspot reports were not utilized to determine where to send the MHV for care

delivery. Historically, the organization did not leverage the MHV to increase its influenza vaccination uptake. Pre-existing MHV deployments were static, focused solely on areas without an MOB instead of demand-based deployments.

Outcome

The desired outcome of this project was a decrease in the influenza vaccine disparity rate of Black/African American patients, ultimately increasing health equity.

Timing

Influenza vaccination rates were measured by the organization weekly. Due to the reporting frequency, there was a high likelihood of noting a change in influenza vaccination rates or lack thereof in eight weeks.

Evidence-Based Practice Framework & Change Theory

This project leveraged the JHEBP framework, which had three components: inquiry, practice, and learning (Dearholt et al., 2022). The inquiry component referred to the process of investigating or questioning the problem. For this project, identifying a disparity and noting possible interventions, such as leveraging the MHV to increase Black/African American influenza vaccination rates, were part of the inquiry component. The second component, the practice component, was how nurses translated their knowledge into delivering care to patients. Studies have noted that increasing access to care improved health equity (Swope et al., 2023). Using the MHV, the DNP project aimed to translate this knowledge to increase access to influenza vaccinations for patients residing in high disparity rate zip codes. The last component of the JHEBP model was learning, which referred to a permanent change in an individual's actions, skillset, or mindset caused by an experience (Dearholt et al., 2022). This DNP project influenced the organization's processes for decreasing disparity rates in Black/African American influenza vaccinations.

Lewin's Change Theory posited that change occurs when the driving force for change was stronger than the forces of opposition or equilibrium (Lewin, 1942). This theory had three

stages: unfreezing, change, and refreezing. Unfreezing referred to creating a call to action for change to occur and explaining why change was needed. Unfreezing the current beliefs of the organization related to influenza vaccine delivery and MHV deployment required education related to the organization's equity goal and the importance of changing its deployment practices to address healthcare disparities. The current process of deployment for the MHV was predetermined, with set locations scheduled for different days of the week. During the change phase, deployments for the MHV were driven by hot spot reports in addition to set locations. Historically, the MHV was not utilized to manage health disparities in the community. Project completion aimed to refreeze hotspot-driven deployment practices for the MHV to address healthcare disparities. Lewin's change theory helped frame the change process for this EBP implementation. It aided with setting the organizational expectation of health equity, noted the need for engaging the stakeholders, and stressed the importance of cementing the new process.

Evidence Search Strategy

The DNP project's evidence search was conducted through PubMed, Elsevier, and PLoS. These databases were used to find information and studies on mobile health vehicle programs, health disparities, and Black/African American flu vaccination rates and sentiments. Keywords utilized for the search were "mobile clinic" and its synonyms such as "mobile health unit, mobile health van". Additional terms used were "vaccines", "equity", "black", "African American", and "disparities". These terms were used in the following combinations: "mobile clinic or mobile van or mobile hospitals AND vaccines NOT mobile health apps", "African American AND black AND flu vaccine or influenza vaccines", "mobile clinic or mobile van or mobile hospitals AND disparities or equity". Additional articles were gathered by reviewing references of articles selected for the project. The inclusion criteria were articles published in 2018 or later. Exclusion criteria were articles older than 10 years.

Evidence Search Results

One hundred and sixteen articles were generated with this project's search strategy. Articles older than 10 years, related to mHealth, or articles unrelated to mobile health units, health disparities, or health equity were automatically eliminated (n=93). After identifying duplicates and relevance, 23 articles were reviewed. Nine sources were deemed unrelated to the PICOT question; thus, 14 sources were retained for the project (Appendix A, B). The search and article selection process were noted in the PRISMA Diagram, located in Appendix C.

Two out of 14 articles were research Level I (RCT), four were research Level III (qualitative, non-experimental, and systematic review), and eight were non-research Level V from field experts. Kulle et al.'s (2022) and Scarcini et al.'s (2020) RCTs were graded as "A" per the JHEBP tool as the results generated by the studies were high quality (Dearholt et al., 2022). All Level III articles except the systematic review were graded "A" as the researchers of the articles were transparent, diligent, and provided insightful interpretation. The systematic review article was deemed with a "B" grade as the authors noted that they omitted articles that may have been impactful due to a lack of access to full texts (Kan & Zhang, 2018). According to the JHEBP tool, a "B" grade level was determined when literature was only fairly appraised. Non-research articles were deemed "A" grade as the sources were experts in the field and governmental agencies such as the CDC, FEMA, and the Kaiser Foundation. Implementing mobile vaccinations via mobile health vehicles was EBP highly recommended by these expert sources.

Several available research articles generated by the search were older than five years, and newer articles referred to these older studies. Articles older than five years may be cited in this paper to adhere to citations from primary sources. Health disparities were persistent, and the call to action has not changed, thus, findings from past research were deemed relevant by the DNP project manager. Minimal randomized control trials (RCT) related to health equity or mobile health clinics were found, which could reflect the researchers' desire to increase

equitable care to all populations. Performing an RCT would mean limiting the intervention to the intervention group only. The intervention to decrease disparities was an ethical decision for the researchers, and they chose to open the intervention to all participants to increase overall health equity. Simply noted, withholding an intervention that could benefit all participants may be perceived as unethical and unintentionally increase health disparities.

Themes with Practice Recommendations

After completion of the evidence reviews, three consistent themes were noted to increase vaccination rates for the Black/African American community. These themes focused on the importance of gaining rapport and trust from the patients, engaging the community, and improving access to care. The articles concluded that leveraging one or a combination of these themes aided in the increased uptake of vaccinations for patients, and can be delivered with ease to improve vaccinations for the organization's Black/African American patients via a mobile health unit (MHU).

Importance of Rapport and Trust

There is a high level of medical mistrust within the Black/African American communities due to historical wrongful experimentations such as the Tuskegee Syphilis Study and the case of Henrietta Lacks (Bajaj & Stanford, 2021). Paired with the current systemic racism faced by the community, these traumatic experiments where human rights were violated during research studies were contributing factors to vaccine hesitancy (Bajaj & Stanford, 2021). Thus, it was imperative to establish trust and rapport to encourage vaccination for the 2023-2024 flu vaccination season. Both research and non-research sources noted that providing education and culturally competent care were the foundations of building trust.

Bouchelle et al. (2017), Quinn (2018), Marquez et al. (2021), and Nadison et al. (2022) all noted the importance of educating communities of color about vaccines by providing facts on vaccine efficacy, how it worked, and expected side effects. It was recommended that healthcare providers give “the gist” of the vaccine when providing education, where patients were made

aware of why vaccinations were important and key points to remember (Quinn, 2018). How this education was delivered needs to be provided appropriately. This translated to the need for care teams to communicate clearly, respectfully, inclusively, and with an understanding of the culture of the community (Bouchelle et al., 2017). Additionally, health organizations needed to engage with community organizations and important community figures to increase trust (Bouchelle et al., 2017; Nadison et al., 2022).

Importance of Community Engagement

Community engagement and partnerships with community figures increased vaccine uptake in minority communities (Marquez et al., 2021; Nadison et al., 2022). Encouraging recently vaccinated patients to share their vaccination experiences with their friends, family members, and the overall community also aided in increasing vaccine uptake (Marquez et al., 2021), in addition to sharing the importance of protecting one's family members (Quinn, 2018). Studies noted that vaccination rates increase when the community provides information to patients (Marquez et al., 2021; Nadison et al., 2022). Community institutions such as barbershops and beauty salons, community centers, or churches were integral partners for healthcare organizations, as historically, these were safe places to obtain and share information (Nadison et al., 2022). When both the healthcare organization and the community work in partnership, there was an increase in vaccinations and the overall well-being of Black/African American patients (Nadison et al., 2022).

Importance of Improved Access

Articles written by governmental agencies such as the CDC (2022) and FEMA (2021) noted that MHUs successfully improved access to care for minority communities. Lack of transportation was often cited as a barrier to receiving vaccinations (Kan & Zhang, 2018). MHUs were proven to reach underserved communities that otherwise do not have access to care (Gupta et al., 2022; Scarcini, 2020). Care recipients from MHUs noted that having care at convenient neighborhood locations (Marquez et al., 2021; Scarcini, 2020) or close to

transportation hubs, their place of employment, or along the route of their daily activities (Bouchelle et al., 2017) made it easy for them to seek care and receive vaccinations. MHUs opened near nursing homes also significantly increased vaccination rates (Kulle et al., 2022). Targeted deployment of MHUs through hotspot reporting (Swope et al., 2023) paired with community partnerships and education led to increased vaccinations for the Black/African American communities (Nadison et al., 2022).

Practice Recommendation

Improving patient trust through appropriate education, engaging the community, and increasing access was attainable via MHUs. Leveraging the organization's MHV, a type of MHU, to deliver trustworthy care and increase care access to the community addressed the PICOT question of increasing Black/African American influenza vaccination rates. The organization's historical efforts toward vaccine equity focused on increased signage, not community engagement. Its MHV has established processes and set weekly locations. Its weekly location must be modified by leveraging hotspot reports for targeted deployments. An assessment was performed to determine how the staff engaged with the communities, and the Community Benefit department was engaged to identify partners from the community. Pairing the MHV with the evidence gathered from this project had the great potential to address the PICOT question and improved vaccination uptake for Black/African American patients.

Setting, Stakeholders, and Systems Change

This project was conducted in a large healthcare system in Southern California. Patients with insurance coverage in the following Southeast San Diego zip codes: 92116, 92105, 91977, 92139, and 92115, and who traditionally receive influenza vaccinations from the primary care department were selected from this project. At the time of project implementation, 2,454 Black/African American patients were identified within these zip codes. Organizational culture was driven by its mission and vision to improve the health of patients and the community by delivering high-quality and affordable care. The organization was committed to raising health

equity and consistently included health equity measures as a component of its annual goals. Thus, this project was readily approved by the CNO.

A new requirement established by the Joint Commission (TJC) in January 2023 required healthcare organizations to address SDOH and health equity as part of the accreditation process (The Joint Commission, 2022). Increasing flu vaccination rates for Black/African American patients was a goal established for 2023-2024 across the organization to increase health equity. The goal's connection to TJC accreditation was ultimately tied to funding and reimbursements from CMS. The organization aimed to maintain TJC accreditation, and due to this commitment, the likelihood of practice continuation beyond the project's completion was high. Successful attainment of this goal required collaboration across multiple service lines; thus, multiple stakeholders were involved in this project. Stakeholders were identified across multiple chains, from frontline staff members to Regional Equity, Inclusion, and Diversity leaders. A list of stakeholders and the impact of the intervention on these individuals was noted in Appendix D.

A SWOT analysis of the organization was conducted before project implementation and noted in Appendix E. A prominent strength of the organization which lends itself to this project was its robust databases. Having easy access to data facilitated obtaining baseline Black/African American flu vaccination rates before and after the intervention. A weakness of the organization was its size. With multiple locations and departments, simultaneous implementation of practice updates was difficult. One opportunity identified for the organization was in technology. Upon review of the organization's social media (SM) activity, the DNP project manager identified a need for the organization to increase its utilization of SM to improve patient engagement in the community. This helped mitigate the threat of multiple competition from other healthcare organizations in the area through increased awareness of the organization's service offerings.

The proposed project's system change was conducted at the micro level. This targeted approach aimed to increase the number of patients receiving influenza vaccinations from the MHV. Leveraging the MHV to increase vaccinations augmented existing primary care vaccination efforts, ultimately increasing the overall vaccination rate. This project created systems change at the meso level for the organization and spread across different departments and MOBs throughout Southern California.

Implementation Plan with Timeline and Budget

The overall objective of this project was to increase flu vaccination rates and increase health equity. To do so, the project sought to reach the following three goals:

1. The MHV will increase the frequency of its deployments to bi-weekly, compared to once monthly, adding a location near sites determined by hot spot zip code reports over eight weeks.
2. Hot spot-driven MHV deployments will decrease influenza vaccine disparity for Black/African American patients from 9.49% to 8.49% in eight weeks (CNO identified a 1% change as clinical significance for the project).
3. The MHV will increase the number of Black/African American patients vaccinated through the MHV from 18 to 30 by increasing patient trust and engagement via cultural humility in eight weeks.

Implementation success was noted in the weekly data reports provided by the flu vaccine coordinator. The implementation of this project fell within the translation phase of the JHEBP framework as it applied current EBP related to increasing vaccination rates via an MHU to influenza vaccination and utilization of an MHV. Multiple actions were needed to implement this project, and a Gantt chart was provided in Appendix F to illustrate key milestones. Lewin's change theory was the foundation of project implementation, and it was divided into three steps: unfreezing, changing, and refreezing (Lewin, 1947).

Unfreezing

In the first step, the unfreezing phase, education was provided to the area leaders and frontline team members regarding hotspot reports, the need to remove access to care barriers by tailoring deployment sites close to where our Black/African American patients reside, and the importance of cultural humility to establish trust. Data regarding the influenza vaccination disparity were shared and noted as a call to action to improve the organization's health equity. Leaders of the organization were already aware of hot spot reports as they were currently leveraged to increase the quality of diabetes and hypertension care.

With this project, the DNP project manager alerted leaders of the spread of hot spot reports to MHV deployments and how it will improve influenza vaccine equity through individual meetings. Hot spot-driven MHV deployment was a change in current practice. Meetings with the area operations administrator, the MHV director, and the MHV physician in charge were conducted to present the proposal and outline possible outcomes. This project required collaboration across different practices to reach success. The project required information and input from the administration team, vaccination coordinator, community relations manager, the care team, and the Population Management Support Coordinator (PMSC). Additional meetings, along with meeting topics to prepare for implementation, were noted in Appendix G.

MHV staff were alerted of the project through an information session with a Q&A portion. To ensure the MHV staff were forging trusting relationships with the patients they serve, a one-hour training was provided to teach cultural humility. Cultural humility is understanding and being open to learning about the different cultures one interacts with (Pierce, 2021). To successfully practice cultural humility, the staff received training to learn different techniques to gain the patient's trust. This education was delivered via a classroom setting utilizing a presentation created by the behavioral health department, guided by the curricula from the U.S. Department of Health & Human Services (Appendix H).

Change

The new practice of leveraging hot spot reports for MHV deployments was implemented during the change phase after providing proposals and education to stakeholders. The MHV increased its deployments to hotspot areas. The future locations of the MHV were altered to accommodate the new care delivery location central to hot spot zip codes. The DNP project manager utilized the organization's text message outreach system and created a request for the PMSC to send an automated text alert for the MHV's additional locations to 2,454 Black/African American patients. Historical text outreach return rates for the organization was 10%, and the DNP project manager aimed to have an increase of 12 more patients present to the MHV for their influenza vaccinations. The DNP project manager requested for the PMSC to utilize the organization's Instagram, Facebook, and Twitter accounts. These accounts were leveraged to alert the community about the MHV's new locations, aimed to increase the number of patients visiting the MHV for their influenza vaccinations. A detailed process map outlining intervention implementation was noted in Appendix I.

The impact of the new MHV locations were monitored via vaccination reports. Existing vaccination reports for the organization provided weekly updates to the metric's performance and did not require any alterations to monitor the change. Project implementation did not require additional funding, as it was accomplished by shifting resources. Additional budgetary implications were noted in Table 1. Income from the project was not readily determined as it relies on delayed funding from Medicare.

Refreezing

The project's completion determined if the practice entered the refreezing phase. The organization's culture was focused on maintaining practices that generate positive outcomes, and would choose to adopt the change if the results translate to better patient outcomes. A proposal to the CNO was provided to continue the practice and to spread cultural humility training across the service area. Refreezing would impact new hires for the MHV as cultural

competency training was required for their orientation process. Additional staff may be required when this new practice is adopted as there may be an increase in demand for MHV services from other area zip codes.

Results

Data collection for the project was completed through collaboration with both the organization's local and regional data teams. Data containing age, sex, race, zip code of residence, location of where vaccination was obtained, and date of vaccination were obtained from the organization's EHR by data analysts and received by the DNP project manager. The project was conducted from October 28, 2023, to December 23, 2023. To closely compare the data sets, a similar timeframe was requested for 2022 data.

The DNP project manager adhered to the organization's policies to protect patient privacy. Patient HIPAA was preserved by maintaining information within the organization's EHR. By maintaining the information within the organization's system, the project protected patients' sensitive information. Project approvals were obtained from USAHS and the organization. The approval process for the university involved submitting the project proposal to the EPRC. The university validated the proposal to ensure that the project was an evidence-based practice translation project, not a research project. The proposed project was submitted to the organization's IRB to protect the target population's human rights.

Data between the data analysts and the DNP project manager was transmitted via secure email, and additional encryption practices were implemented to maintain patient privacy. The DNP project manager organized the data sets in Excel to illustrate the difference in values between 2022 and 2023 (Appendix J). The project was evaluated on outcome, process, and balancing measures (Appendix L). The outcome measures for this project were vaccination rates for Black/African American patients and the flu vaccine disparity rate compared to White/Caucasian patients. The key process measure were the number of patients who chose to obtain their influenza vaccinations from the MHV compared to the MOB. The balancing

measures considered for this project were the possibilities of increased vaccine administration or documentation errors, patient complaints related to decreased access to other MHV services, and wait times due to increased patient volumes.

Initial data provided by data analysts initially contained aggregated data and did not contain an age column. Due to the missing information, the DNP project manager could not determine vaccination rates for specific age groups, and vaccination rates were provided for all patients. An additional request was sent to the data analyst team to add an age column for the data sets to facilitate accurate data reporting for patients ages 19 years and older. Due to the large data sets, each request for an update for reports required 10 business days to generate.

The organization's vaccination rate for Black/African American patients for October 30, 2022-December 24, 2022, residing in 92116, 92105, 91977, 92115, and 92139 zip codes was 12.27%. A 9.49% disparity rate was noted compared to the vaccination rate for White/Caucasian patients. This DNP project aimed to increase the vaccination rate to decrease the vaccine disparity rate by 1% to 8.49%. Data from the project revealed an overall decrease in vaccine disparity between Black/African American and White/Caucasian patients from 9.49% (2022) to 7.52% (2023) for 92116, 92105, 91977, 92115, and 92139 zip codes (Appendix J). It was important to note that successful influenza vaccination rates for both patient groups decreased in 2023 compared to 2022. The overall successful vaccinations in 2023 for Black/African American patients dropped by 1.16%, while vaccination rates for White/Caucasian patients dropped by 4.52%.

The project added an MHV deployment in the 91977-zip code, resulting in a vaccination rate change from 10.35% to 10.59% and a reduction in the disparity rate from 7.65% to 5.90% (Appendix J). A two proportions z-test was conducted to examine whether there was a significant difference between this zip code's 2022 and 2023 vaccination rates. The result of the two proportions z-test was not significant based on an alpha value of .05, $z = -0.16$, $p = .875$,

95.00% CI = [-.03, .03], indicating that the MHV location did not significantly increase Black/African American influenza vaccination rates (Table 2) (Intellectus Statistics, 2023).

The DNP project manager noted that the goal of increasing the number of vaccinated Black/African American patients with the MHV was not met. The rate of successful vaccination did increase for the MHV. Successful influenza vaccination for the MHV rose from 43.80% to 71.40% (Appendix K). For 2023, the MHV had a reverse disparity for vaccinations (-27.50%), with more Black/African American patients receiving their flu vaccines compared to White/Caucasian patients (Appendix K). A two proportions z-test was also conducted for this data, which was not significant based on an alpha value of .05, $z = -1.64$, $p = .101$, 95.00% CI = [-.61, .05], indicating that the increase in successful vaccinations in the MHV for Black/African American patients was not statistically significant. (Table 3) (Intellectus Statistics, 2023).

Impact

The project presented the concept of leveraging hotspots to determine the deployment of the MHV. The project also increased patient awareness regarding the MHV as an option to receive their annual flu vaccinations. Lastly, staff were provided with training for cultural humility for the project to increase patient engagement and ultimately increase influenza vaccine uptake. These concepts were changes to current practice and resulted in a new deployment site for the MHV and improved interactions between the patients and the MHV team.

Any increase in the vaccination rate and decrease in the disparity rate due to MHV-administered vaccinations was deemed clinically significant per the organization's CNO. Vaccinations afford patients the needed protection to avoid influenza complications such as hospitalization or death (Quinn, 2018). Increasing the number of Black/African American patients receiving their influenza vaccinations was important, as these efforts aim to increase health equity. Due to their high likelihood of experiencing influenza complications, the organization was actively increasing health equity through its efforts to keep its members healthy. An intervention's impact on a patient's life was deemed clinically significant when it

improves their well-being (Carpenter et al., 2021), and this project contributed to increasing the likelihood of patients receiving their influenza vaccinations from the MHV, as evidenced by eight more patients receiving vaccinations in the 91977-zip code and the reverse disparity for MHV vaccinations in 2023.

A notable barrier encountered by this project was timing. Project implementation did not occur until late October due to the need to obtain approvals both from the university and the organization. Despite this challenge, the project engaged a new community partner in the 91977 zip code and captured unvaccinated patients who would have otherwise chosen not to receive the flu vaccine. Patients verbalized to the staff that had the MHV not been deployed to the 91977 site, they would have otherwise gone another season without becoming vaccinated. An additional barrier met by this project was the low uptake to outreach. Despite sending 20,716 instances of automated outreach text messages, phone calls, emails, and a social media campaign, only 14 (compared to 18 in 2022) Black/African American patients presented to the MHV for care. This finding was shared with the organization and was a future area of opportunity requiring guidance from the patient advisory council to determine better ways of engaging patients.

Vaccinating against influenza is key to keeping patients and their families safe. Black/African American patients were at higher risk for complications from influenza (Quinn, 2018). The organization agreed to sustain the efforts of this project to increase influenza vaccine equity in the community for future influenza vaccination efforts. Sustainability planning was underway with the organization's equity, inclusion, and diversity council to leverage influenza vaccination hotspots to determine the appropriate timing and deployment of the MHV. The intervention of leveraging the MHV to increase vaccination rates was not disruptive, and the organization committed to continuing hot-spot-driven deployments to increase vaccine uptake. The organization can capture more patients with a committed focus and better timing of the MHV deployments. Additional funding was not needed currently as present staff capacity meets

the demands for patient volumes. Close monitoring of the number of patients receiving vaccinations from the MHV was needed. It were performed by its leadership team to determine if more resources were required to meet demand.

Dissemination

The results of the project were disseminated with the University of St. Augustine Health Sciences (USAHS) and the organization where the project was completed. It were presented to the DNP project manager's classmates and faculty via an oral poster presentation. The project manuscript were uploaded via SOAR@USAHS and linked to the DNP project manager's LinkedIn profile. Additionally, the project results were presented through several organizational meetings via PowerPoint format. Meetings include the influenza vaccination report-outs, local service area leadership meetings, equity, inclusion, diversity, and regional leadership meetings. Meetings were recorded and disseminated throughout the organization to elicit awareness surrounding the topic of health equity. The DNP project manager will seek out opportunities to present the project at a future national conference, such as the American Organization of Nurse Leaders. Lastly, the DNP project manager will aim to publish project results in a peer-reviewed journal such as the Journal of Health Equity.

Conclusion

It is imperative for healthcare organizations to address health disparities and aim to increase health equity for their patients. The project's PICOT question assisted a large Southern California healthcare organization improve influenza vaccination rates by leveraging the MHV's hotspot-driven deployments. Deployment of the MHV to zip codes with a low rate of influenza vaccinations for Black/African American patients was a step towards decreasing health disparities through increased access to care, ultimately leading to health equity. The project built patient trust and rapport, engaged the community, and increased access to influenza vaccinations. This project contributed to the translation of the EBP of utilizing MHUs to decrease healthcare disparities by expanding its application to influenza vaccinations. The project results

were shared with USAHS and the organization to spread the practice of utilizing the MHV to augment vaccination efforts across San Diego. The path to health equity is long and challenging for organizations. Organizations need to have the mindset to not delay actionable items that are meant for today to tomorrow (Jung, 2014) to ensure the well-being of all patient populations.

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Table 1

Implementation EBP Project Budget

Role	Budget
Physician	\$200/hr
Four shifts, 2 hours of training (34hrs)	\$6,800.00
RN	\$80/hr
Four shifts, 2 hours of training (34hrs)	\$2,720.00
LVN	\$33/hr
Four shifts, 2 hours of training (34hrs)	\$1,122.00
PMSC	\$30/hr
Four hours of managing outreach	\$120.00
Supplies	
TBD	
TOTAL EXPENSES	\$10,762.00

Note: All budget entries were estimates. Expenses were based on means. Revenue estimates do not include potential cost avoidance due to realized outcomes. All costs associated to salary and benefits, patient care supplies, and overhead were fixed indirect expenses not associated with this project. Project costs were nominal for printing and laminating, under \$100.

Appendix A

Citation	Design, Level, Quality Grade	Sample	Intervention, Comparison	Theoretical Foundation	Outcome Definition	Usefulness, Results, Key Findings
<p>Black, C. L., O’Halloran, A., Hung, M.-C., Srivastav, A., Lu, P.-J., Garg, S., Jhung, M., Fry, A., Jatlaoui, T. C., Davenport, E., & Burns, E. (2022). Vital Signs: Influenza Hospitalizations and Vaccination Coverage by Race and Ethnicity-United States, 2009-10 Through 2021-22 Influenza Seasons. <i>MMWR. Morbidity and Mortality Weekly Report</i>, 71(43), 1366–1373. https://doi.org/10.15585/mmwr.mm7143e1</p>	<p>Nonresearch, V, A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>Ethnic minority groups have lower vaccination rates and were more likely to have a higher severity of symptoms when infected by influenza</p>
<p>Bouchelle, Z., Rawlins, Y., Hill, C., Bennet, J., Perez, L. X., & Oriol, N. (2017). Preventative health, diversity, and inclusion: A qualitative study of client experience aboard a mobile health clinic in Boston, Massachusetts. <i>International Journal for Equity in Health</i>, 16(1), 191. https://doi.org/10.1186/s12939-017-0688-6</p>	<p>Qualitative, III, A</p>	<p>25 participants from convenience sampling in Boston</p>	<p>Increasing access to healthcare through availability of a mobile health vehicle</p>	<p>Grounded Theory</p>	<p>Noted three salient points from interviews: Clients opt to receive care from mobile health vehicles due to relational (better communication from providers, experience a culture of</p>	<p>Provides insight as to why patients would opt to receive care from mobile health vehicles MHVs proven to be successful with reaching medically underserved populations Trust, Access, and convenience were</p>

					respect and inclusivity, providers were more knowledgeable about the community) and structural (focus on prevention and wellness, fast and free services, convenient locations) factors	28ptimized to ensure vaccinations
Braveman, P., Arkin, E., Orleans, T., Proctor, D., Acker, J., & Plough, A. (2018). What is health equity? Behavioral Science & Policy 4(1), 1-14. Doi:10.1353/bsp.2018.0000.	Nonresearch, V, A	N/A	N/A	N/A	N/A	Impact of SDOH on health disparities Call to action on what is needed to address the disparities, encouraging healthcare organizations to have interventions that impact SDOH Health equity definitions: 1. It addresses the underlying social inequities in opportunities and resources needed to be healthy—such

						<p>as good jobs with fair pay, quality education and housing, safe environments and medical care—that contribute to worse health in excluded or marginalized groups of people. This will almost always require cross-sector efforts. 2. Ultimately it should benefit everyone’s well-being, but it is systematically targeted to produce the greatest health benefit for socially disadvantaged groups, who were worse off both on health and on opportunities to be as healthy as possible. 3. It evaluates its efforts not by measuring</p>
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						average impact or health in a whole population, but by measuring both: (a) change in the selected outcomes among disadvantaged groups; and (b) the size of gaps—in absolute and relative terms—between disadvantaged and advantaged groups.
CDC. (2022, June 15). Mobile Vaccination Resources CDC. https://www.cdc.gov/vaccines/covid-19/planning/mobile.html	Nonresearch, V, A	N/A	N/A	N/A	N/A	Guidance and recommendation to leverage mobile health clinics to address health disparities and decrease the barriers to access to care

<p>FEMA. (2021, March 16). Mobile Vaccination Centers Improve Vaccine Accessibility FEMA.gov. https://www.fema.gov/blog/mobile-vaccination-centers-improve-vaccine-accessibility</p>	<p>Nonresearch, V, A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>The mobile centers take on these challenges by entering hard-to-reach areas and targeting specific populations such as high-risk groups, essential workers and rural communities.</p>
<p>Gupta, P. S., Mohareb, A. M., Valdes, C., Price, C., Jolliffe, M., Regis, C., Munshi, N., Taborda, E., Lautenschlager, M., Fox, A., Hanscom, D., Kruse, G., LaRocque, R., Betancourt, J., & Taveras, E. M. (2022). Expanding COVID-19 vaccine access to underserved populations through implementation of mobile vaccination units. <i>Preventive Medicine</i>, 163, 107226. https://doi.org/10.1016/j.ypmed.2022.107226</p>	<p>Nonexperimental Research, III, A</p>	<p>1,982 vaccine recipients in Boston</p>	<p>Implementation of three mobile vaccination units</p>	<p>N/A</p>	<p>Determine if more underserved patients utilize mobile vaccination units, high number of adolescents and minorities presented to the mobile units</p>	<p>Mobile health units have the potential to reach adolescents and ethnic minorities in underserved communities compared to traditional care deliveries by delivering care where the patients were</p>

<p>Kulle, A.-C., Schumacher, S., & von Bieberstein, F. (2022). Mobile Vaccination Units Substantially Increase COVID-19 Vaccinations: Evidence From a Randomized Controlled Trial (SSRN Scholarly Paper No. 4203727). https://doi.org/10.2139/ssrn.4166827</p>	<p>Quantitative, I, A</p>	<p>20,414 unvaccinated adults from 10 communities in Sweden, probability sampling</p>	<p>Communicating to community members upcoming availability of mobile health vehicles to provide COVID-19 vaccinations</p>	<p>N/A</p>	<p>Noted an increase in vaccination rates due to the availability of mobile health vehicle</p>	<p>First study to evaluate the causal effect of mobile health vehicle availability and COVID-19 vaccination uptake</p>
<p>Marquez, C., Kerkhoff, A. D., Naso, J., Contreras, M. G., Castellanos Diaz, E., Rojas, S., Peng, J., Rubio, L., Jones, D., Jacobo, J., Rojas, S., Gonzalez, R., Fuchs, J. D., Black, D., Ribeiro, S., Nossokoff, J., Tulier-Laiwa, V., Martinez, J., Chamie, G., ... Havlir, D. V. (2021). A multi-component, community-based strategy to facilitate COVID-19 vaccine uptake among Latinx populations: From theory to practice. PloS One, 16(9), e0257111. https://doi.org/10.1371/journal.pone.0257111</p>	<p>Nonexperimental Research, III, A</p>	<p>12,103 vaccine recipients in San Francisco’s Mission District</p>	<p>Implementation of Unidos en Salud, a vaccination program aimed to increase vaccinations for the LatinX community</p>	<p>PRECEDE Model</p>	<p>Increase in vaccinations for participants, successfully vaccinated 12,103 individuals from the area</p>	<p>Noted the importance of delivering culturally competent and accessible care to patients to increase successful vaccinations, there is a need to improve the level of trust of healthcare providers</p> <p>Vaccinations were completed due to site location, convenience, and recommended by others they trusted</p> <p>Findings were consistent with other surveys</p>

<p>Nadison, M. M., Flamm, L. J. M., Roberts, A. F., Staton, T., Wiener, L. F., CNM, Locke, J., Bullock, E., Loftus, B., Carpenter, C. M., Sadler, M., & Horberg, M. A. S. (2022). Kaiser Permanente’s Good Health & Great Hair Program: Partnering With Barbershops and Beauty Salons to Advance Health Equity in West Baltimore, Maryland. <i>Journal of Public Health Management & Practice</i>, 28(2), E369–E379. https://doi.org/10.1097/PHH.0000000000001381</p>	<p>Nonresearch, V, A</p>	<p>1,823 participants in Baltimore</p>	<p>Pairing barbershops and beauty salons with mobile health vehicles to increase health equity in historically redlined neighborhoods</p>	<p>N/A</p>	<p>Delivery of health and social supports to residents of West Baltimore</p>	<p>Multiple success stories were noted such as successful identification of previously undiagnosed health conditions, successful COVID-19 treatments and vaccinations, establishment of primary care, and behavioral health resources</p> <p>Partnerships between the community and the mobile health vehicle fostered an increased trust in the health system and more engagement from patients</p>
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<p>Nduga, N., & Artiga, S. (2023, April 21). Disparities in Health and Health Care: 5 Key Questions and Answers. KFF. https://www.kff.org/racial-equity-and-health-policy/issue-brief/disparities-in-health-and-health-care-5-key-question-and-answers/</p>	<p>Nonresearch, V, A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>Impact of SDOH on health disparities</p> <p>Call to action on what is needed to address the disparities, encouraging healthcare organizations to have interventions that impact SDOH</p>
<p>Quinn, S. C. (2018). African American adults and seasonal influenza vaccination: Changing our approach can move the needle. <i>Human Vaccines & Immunotherapeutics</i>, 14(3), 719–723. https://doi.org/10.1080/21645515.2017.1376152</p>	<p>Nonresearch, V, A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>Information regarding the current state of vaccination disparity for Black/African Americans, from a survey delivered by the author, it was noted that this patient population had less knowledge about influenza vaccination, thus, have a higher level of mistrust.</p> <p>It is also noted that vaccination opportunities were offered less to this patient population despite multiple</p>

						visits to see their healthcare providers. Provide recommendations with how healthcare providers can foster trust through increased education and noting “the gist” – provide the reasoning behind why individuals need to get vaccinated.
Scarinci, I. C., Hansen, B., & Kim, Y.-I. (2020). HPV vaccine uptake among daughters of Latinx immigrant mothers: Findings from a cluster randomized controlled trial of a community-based, culturally relevant intervention. <i>Vaccine</i> , 38(25), 4125–4134. https://doi.org/10.1016/j.vaccine.2020.03.052	Quantitative, I, A	278 mother-daughter dyads in Alabama, probability sampling	Culturally competent and community based care to increase HPV vaccination	PEN-3 Model of Health Behaviors and the Health Belief Model	Increase in vaccinations for participants in the intervention arm compared to usual care in health institutions	Providing culturally sensitive and in the community care increases the likelihood of vaccinations Removing barriers to access such as bringing vaccinations to the community increase the likelihood of patients getting vaccinated

<p>Swope, M., Alem, A. C., Russo, S. C., Gin, N. E., Chevez, S. G., & Haque, R. (2023). Developing a Community-Oriented and Place-Based Strategy to Improve COVID-19 Vaccine Accessibility. <i>The Permanente Journal</i>, 27(1), 103–112. https://doi.org/10.7812/TPP/22.097</p>	<p>Nonresearch, V, A</p>	<p>4.7 million patients in Southern California</p>	<p>Leverage hot spot reporting to guide equitable resources for increasing COVID-19 vaccinations</p>	<p>N/A</p>	<p>70% or better COVID-19 vaccination rate, at the end of 2021, the organization vaccinated 80.7% of its population in hot spot areas</p>	<p>Leveraging hot spot reporting and mobile health vehicles to increase access to vaccinations, along with tailored text messaging and partnership with the communities</p> <p>Hotspot guided MHV deployment showed 2 out of 3 vaccinated individuals were Black or Hispanic</p> <p>Place based approach helped with decreasing health disparities</p>
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Legend:

- Level I: Experimental study, randomized controlled trial (RCT)
- Level III: NonExperimental study, qualitative study, systematic review – combination of quantitative and qualitative studies
- Grade A – Quantitative: Consistent, generalizable results; sufficient sample size for the study design; adequate control; definitive conclusions; consistent recommendations based on a comprehensive literature review that includes thorough reference to scientific evidence.
- Grade B – Quantitative: Reasonably consistent results; sufficient sample size for the study design; some control; fairly definitive conclusions; reasonably consistent recommendations based on a fairly comprehensive literature review that includes some reference to scientific evidence.
- Grade A/B – Qualitative: The report discusses efforts to enhance or evaluate the quality of the data and the overall inquiry in sufficient detail; it describes the specific techniques used to enhance the quality of the inquiry.

- Grade A – Nonresearch, Expert Opinion: Expertise is clearly evident, draws definitive conclusions, and provides scientific rationale; thought leader in the field.
- Grade A – Nonresearch, QI: Clear aims and objectives; consistent results across multiple settings; formal quality improvement or financial evaluation methods used; definitive conclusions; consistent recommendations with thorough reference to scientific evidence.

Appendix B

Citation	Quality Grade	Question	Search Strategy	Inclusion/Exclusion Criteria	Data Extraction and Analysis	Key Findings	Usefulness/Recommendation/Implications
<p>Kan, T., & Zhang, J. (2018). Factors influencing seasonal influenza vaccination behaviour among elderly people: A systematic review. <i>Public Health</i>, 156, 67–78. https://doi.org/10.1016/j.puhe.2017.12.007</p>	<p>III, B</p>	<p>What were the behavioural related factors that optimized influenza vaccination among the elderly</p>	<p>PubMed (1874-2016), Embase (1945-2016), Science Collection Index Expanded (2007-2016), CINAHL (1939-2016), and Elsevier. Keywords: influenza, vaccination, elderly people, knowledge/attitude, acceptance/perception/intention, and synonyms</p>	<p>Inclusion: studies that analyzed factors associated with influenza vaccination, participants age 60 and older, cross-sectional, longitudinal, and qualitative studies, English, no restrictions on publication year Exclusion: studies related to pandemic influenza or pneumonia, articles that explored determinants not including health</p>	<p>Key information extracted: study country/countries, study design and samples, survey instruments, data collection, and main findings Quality of studies were optimized utilizing Strengthening the Reporting of Observational Studies in Epidemiology Critical Appraisal programme</p>	<p>Participants older than 70 were more likely to get vaccinated Females were more likely to get vaccinated Living with others increases the optimized of vaccination Higher likelihood of getting vaccinated for optimized chronic conditions Self</p>	<p>Provides insight to clinicians and organizations what can be done to increase the vaccination of the patients and the communities they serve Convenience and availability of vaccines improve the likelihood of vaccinations</p>

				behavior factors, intervention studies or second analysis studies based on national surveys or other data sources, duplicate reports of the same research		perceived good health cause vaccine refusal Participant s more knowledgeable about influenza were more likely to get vaccinated Perception of susceptibility increases the uptake of flu 40optimized 4040 Perceived severity of illness increases the chances of vaccination Perceived inconvenie nces or
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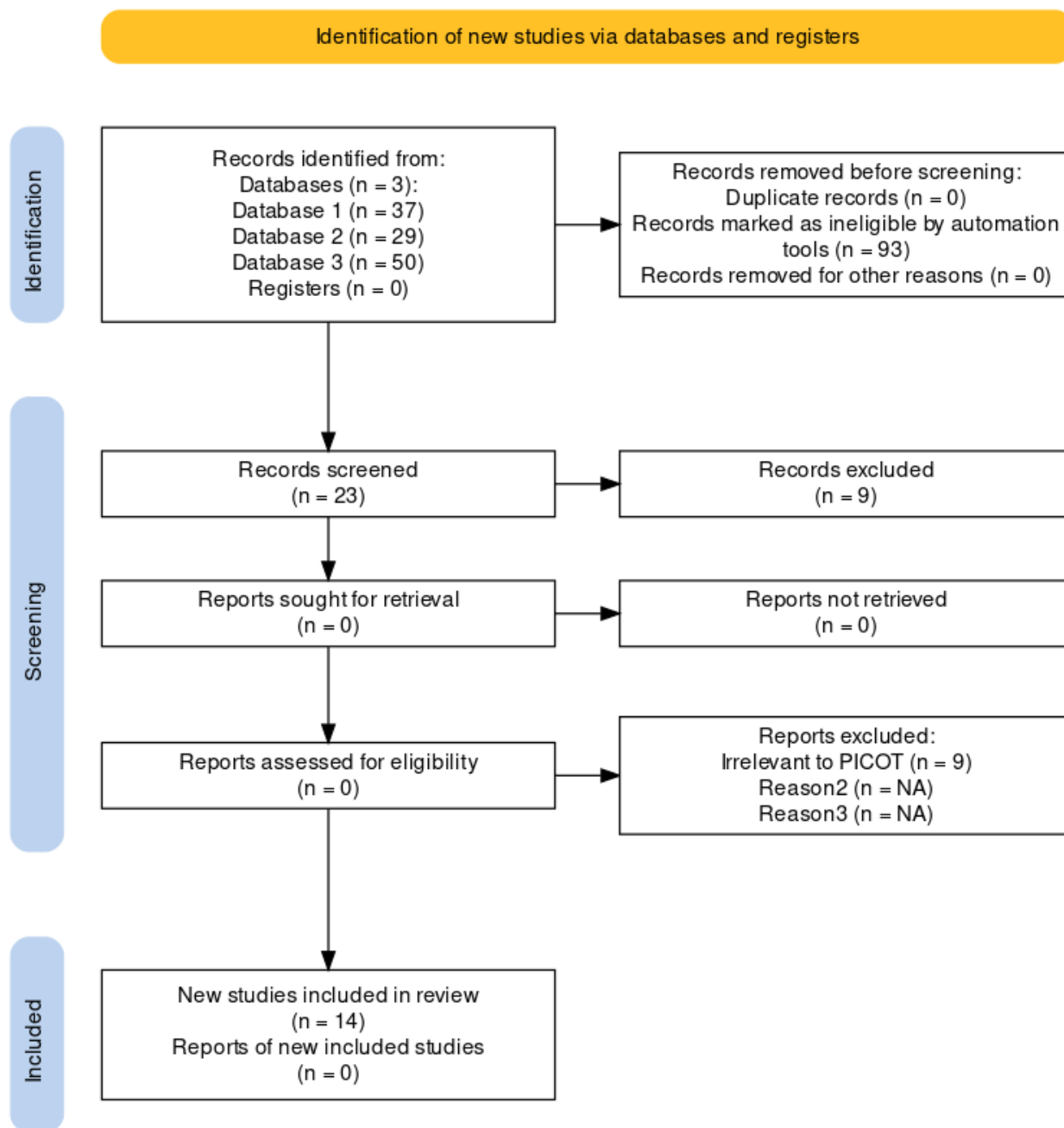
						lack of transportat ion decrease the41ptimi zed41 of vaccination	
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Legend:

- Level III: NonExperimental study, qualitative study, systematic review – combination of quantitative and qualitative studies

Appendix C

PRISMA Diagram



Note: PRISMA flowchart chart diagram from “PRISMA2020: An R package and Shiny app for producing PRISMA 2020-compliant flow diagrams, with interactivity for 42ptimized digital transparency and Open Synthesis” by Haddaway, N. R., Page, M. J., Pritchard, C. C., &

McGuinness, L. A., 2022, *Campbell Systematic Reviews*, 18(2), e1230. <https://doi.org/10.1002/cl2.1230>.

Appendix D

Project Stakeholders

Stakeholder	Impact of Intervention
Black/African American Patients	Vulnerable and high-risk members, improvement of flu vaccinations would aid in reducing influenza infections and its complications
Frontline Staff	Augmentation of practice via cultural humility training
MHV Leadership Team	Augmentation to deployment strategies
Area Operations Director Primary Care	Improvement to flu vaccination rates for patients managed by Primary Care
Ambulatory Quality Director	Improvement for San Diego flu vaccination rates
Chief Nursing Officer	Assistance with meeting TJC requirements
Chief Administrative Officer	Assistance with meeting TJC requirements
Community Benefit Liaison	Provide connections and resource with community partners to determine best locations
Regional Equity Inclusion and Diversity Council	Assistance with meeting TJC requirements

Appendix E

SWOT Analysis

<p>STRENGTHS Large data repository Nationwide reach and resources Strong focus and leadership support for health equity Integrated healthcare system</p>	<p>WEAKNESS Change is slow due to its large size Difficult in uniform messaging due to large size Coordination of care challenging due to size</p>
<p>OPPORTUNITIES Leverage technology such as social media to engage patient populations better Improve patient education related to available resources and care delivery</p>	<p>THREATS Multiple healthcare organizations compete in the same area Other organizations were watching and creating a better version of the existing services</p>

Appendix G

Project Implementation Unfreezing Meetings

Meeting Participant	Topics
MHV Admin	Current staffing mix, staffing needs, process of site selection
Vaccine Coordinator	Locating data, past raw numbers of Black/African American patients seeking care at MHV, past vaccination rates
Community Liaison	Where were the key locations in the community that have existing partnerships with the organization, what were the expectations of the community
MHV Physician	What were the barriers to reaching more Black/African American patients
Quality Director	What past messages were sent regarding vaccinations, what is needed to improve and alter the messaging
PMSC	What is the timeframe needed to deliver updated messaging to members

Appendix H

Cultural Humility Training Slides

Cultivating Cultural Humility

Bridging Understanding



Cultural Insights Snapshot

Think of a specific aspect of your culture that you are proud of or has shaped your identity.

Think of a cultural aspect or practice you find interesting or curious from another culture.



Culture

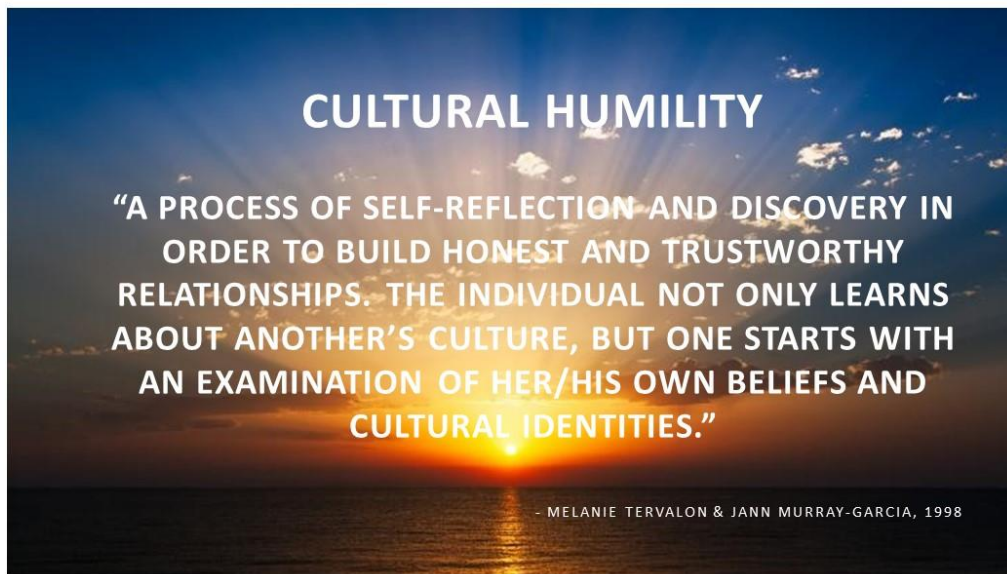
The customs, arts, social institutions, and achievements of a particular nation, people, or other social group.



Humility



Having or showing a modest or low estimate of one's own importance.



WHY IS HUMILITY IMPORTANT?

Understand	Understand the potential influence of power, privilege, and oppression on relationships with clients and colleagues
Identify	Identify how personal history, beliefs, and values influence their behaviors when working with clients and colleagues
Practice	Practice the Cultural Humility principle of "client as an expert" when serving individuals and communities
Practice	Practice respectful and curious inquiry about individual and community points of view, values, and life experiences, holding the stance of "listen as if the speaker is wise"
Practice	Practice strategies to readdress power dynamics from negatively influencing or obstructing the content and experience of service

Adapted from Cultural Humility; Rollins & Gonzalez -***Regional Behavioral Health

CULTURAL COMPETENCE

Cultural competence is the ability to work respectfully with people from diverse cultures and there is a willingness to learn from patients about their experiences.



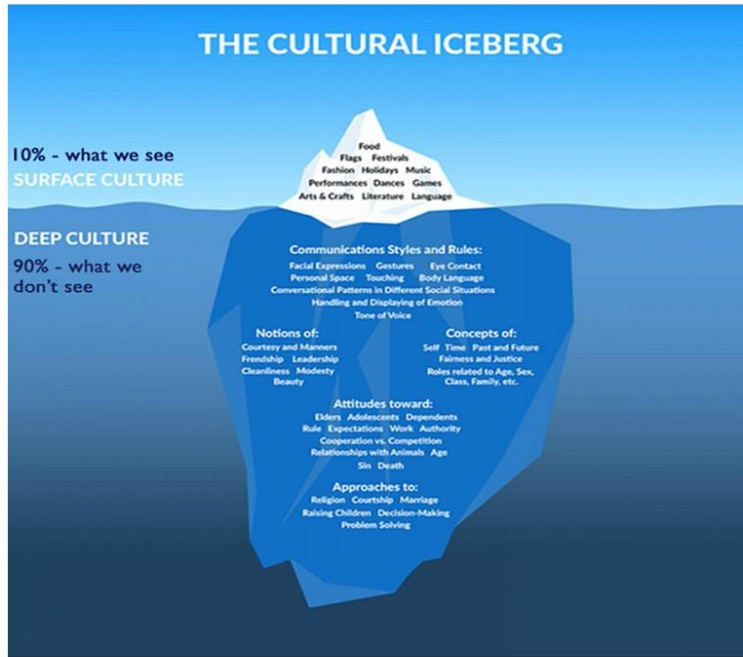
CULTURAL HUMILITY

Cultural humility is the ability to recognize one's own limitations in order to avoid making assumptions about other cultures. It involves understanding the complexity of identities — that even in sameness there is difference.

ENHANCING CULTURAL COMPETENCE WITH CULTURAL HUMILITY

- "Allows a meaningful connection with each patient as a unique individual, with diverse perspectives, culture, and lifestyles.
- Cultural Competence and Cultural Humility necessitates a consciousness of the limits of one's knowledge and the awareness of the ever-present potential for unconscious biases to limit one's viewpoint"

Adapted from Cultural Humility; Rollins & Gonzalez –*** Regional Behavioral Health



Three Dimensions of Cultural Humility

Self-Awareness	Respectful Communication	Collaborative Partnerships
<ul style="list-style-type: none"> • Reflecting on Personal Biases • Understanding Your Impact 	<ul style="list-style-type: none"> • Ask Questions • Active Listening • Empathetic Responding 	<ul style="list-style-type: none"> • Building Trust & Psychological Safety • Building Relationships

5 Rs OF CULTURAL HUMILITY: OPTIMIZING PATIENT CARE

REFLECTION	RESPECT	REGARD	RELEVANCE	RESILENCY
<p>Aim: Clinicians will approach every encounter with humility and understanding that there is always something to learn from everyone.</p> <p>Ask: What did I learn from each person in that encounter?</p>	<p>Aim: Clinicians will treat every person with the utmost respect and strive to preserve dignity at all times.</p> <p>Ask: Did I treat everyone involved in that encounter respectfully?</p>	<p>Aim: Clinicians will hold every person in their highest regard, be aware of, and not allow unconscious biases to interfere in any interactions.</p> <p>Ask: Did unconscious biases drive this interaction?</p>	<p>Aim: Clinicians will expect cultural humility to be relevant and apply this practice to every encounter.</p> <p>Ask: How was cultural humility relevant in this encounter?</p>	<p>Aim: Clinicians will embody the practice of cultural humility to enhance personal resiliency and global compassion.</p> <p>Ask: How was my personal resiliency affected by this interaction?</p>

Adapted from Addressing Biases in Patient Care with The 5Rs of Cultural Humility: A Clinician Coaching Tool, Masters, et al. (2019)

Ask Yourself



What is something I can do to ensure my colleagues and all of our patients feel heard and valued with the care we provide?

Consider



1. What did I learn from each person in that encounter?
2. Did I treat everyone involved in that encounter respectfully?
3. Did unconscious biases drive this interaction?
4. How was cultural humility relevant in this encounter?
5. How was my personal resiliency affected by this interaction?

Parting Thoughts

“With awareness comes responsibility and choice.”

— Amanda Lindhout

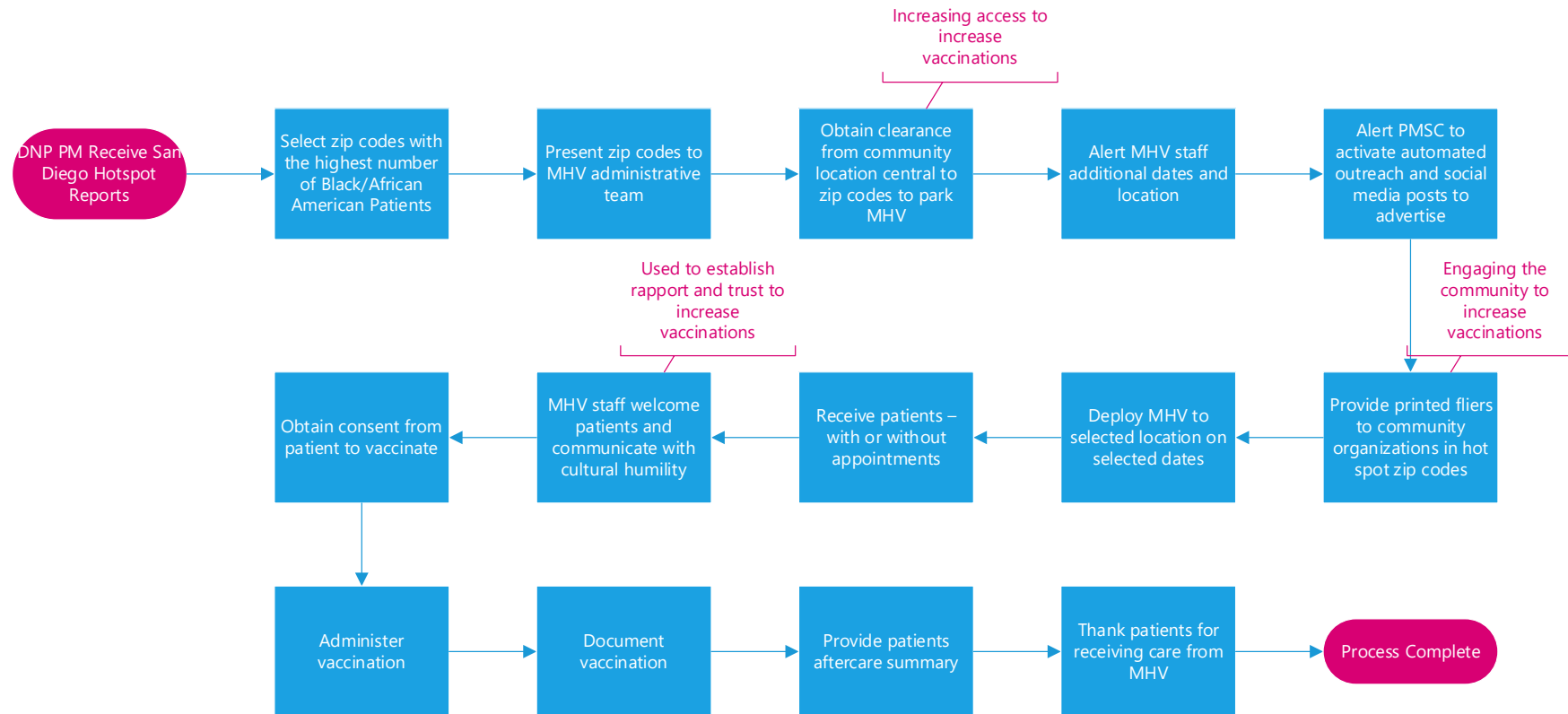
“Awareness with action is worthless.”

— Dr. Phil McGraw



Appendix I

Implementation of Hotspot-driven MHV Deployment



Appendix J

2022 Flu Season –
White:

Opportunities to Vaccinate	Zip Code of Residence	Agreed to Vaccinate	Declined to Vaccinate	Successful Opportunity	Disparity
1312	92116	311	1001	23.70%	10.60 %
774	92105	194	580	25.06%	11.50 %
1972	91977	355	1617	18.00%	7.65%
1551	92115	363	1188	23.40%	11.04 %
398	92139	84	314	21.11%	7.00%
6007	TOTAL	1307	4700	21.76%	9.49%

2022 Flu Season –
Black:

Opportunities to Vaccinate	Zip Code of Residence	Agreed to Vaccinate	Declined to Vaccinate	Successful Opportunity
145	92116	19	126	13.10%
516	92105	70	446	13.57%
773	91977	80	693	10.35%
469	92115	58	411	12.37%
355	92139	50	305	14.08%
2258	TOTAL	277	1981	12.27%

2023 Flu Season –
White:

Opportunities to Vaccinate	Zip Code of Residence	Agreed to Vaccinate	Declined to Vaccinate	Successful Opportunity	Disparity
1446	92116	288	1158	19.92%	6.25%
864	92105	170	694	19.68%	6.98%
2141	91977	353	1788	16.49%	5.90%
1798	92115	373	1425	20.75%	11.34 %
463	92139	84	379	18.14%	5.58%
6712	TOTAL	1268	5444	18.89%	7.52%

2023 Flu Season –
Black:

Opportunities to Vaccinate	Zip Code of Residence	Agreed to Vaccinate	Declined to Vaccinate	Successful Opportunity
161	92116	22	139	13.66%
583	92105	74	509	12.69%
831	91977	88	743	10.59%

489	92115	46	443	9.41%
390	92139	49	341	12.56%
2454	TOTAL	279	2175	11.37%

Table 2

Two Proportions z-Test for the Difference between 2022 91977-zip and 2023 91977-zip

Samples	Responses	<i>n</i>	Proportion	<i>SD</i>	<i>SE</i>
2022 91977-zip	80	773	.10	0.30	0.01
2023 91977-zip	88	831	.11	0.31	0.01

Note. $z = -0.16$, $p = .875$, 95.00% CI: [-.03, .03]

Table 3

Two Proportions z-Test for the Difference between 2022MHV and 2023MHV

Samples	Responses	<i>n</i>	Proportion	<i>SD</i>	<i>SE</i>
2022MHV	8	18	.44	0.50	0.12
2023MHV	10	14	.71	0.45	0.12

Note. $z = -1.64$, $p = .101$, 95.00% CI: [-.61, .05]

Appendix K

MHV Specific Data

Year	Accepted Flu Vaccine - White/Caucasian	Declined Flu Vaccine White/Caucasian	Total Opportunities - White/Caucasian	Accepted Flu Vaccine - Black/African American	Declined Flu Vaccine - Black/African American	Total Opportunities - Black/African American	Success Rate - White/Caucasian	Success Rate - Black/African American
2022	158	95	253	7	11	18	62.50%	43.80%
2023	133	170	303	10	4	14	43.90%	71.40%

Appendix L

Quality Measures

Measure	Indicators
Process	number of patients vaccinated at the MHV
Outcome	influenza vaccination rate of Black/African American patients vaccination disparity rate
Balancing	number of vaccination errors due to increase patient volume number of patient complaints related to wait times
Financial	cost of supplies due to increased patient volumes and additional MHV site