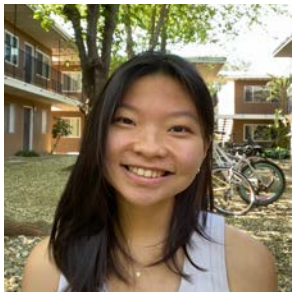
Health Disparities and COVID-19: Moving Towards Vaccine Equity in California



Monica Tsui

Writer's Comment: It's no surprise COVID-19 impacts communities differently. At the time when Professor Whithaus assigned our class our final research project, COVID-19 vaccines were just approved for emergency use authorization and distribution was slowly spanning out across the state. After reading more about disparate COVID-19 health outcomes in disadvantaged communities, I wanted to investigate whether vaccine rollout followed similar patterns- and if it did, what public health interventions California could take to improve equity in distribution. Outside of the research I conducted in my literature review, many of my recommendations from this paper were informed by my volunteer experiences in a student-run clinic, which showed me the power of rooting public health and advocacy work in the community.

Instructor's Comment: Monica Tsui's essay, "Health Disparities and COVID-19: Moving Towards Vaccine Equity in California," makes an important case not only about vaccine (in)equity but also about underlying disparities in access to healthcare in California. It is also a fascinating essay in and of itself. Her writing is clear and tackles a complicated issue with verve. Most impressive, Monica does not stop with a critique of existing inequities. Instead, she uses her writing to develop a clear set of recommendations about how to move towards a more equitable distribution of vaccines. It would have been easy for Monica to write only about the unfairness of existing inequities. Her writing insists that something be done about them, and she sketches out how public health officials might actually begin to move in that

direction. There is real insight in this essay and a real call to action, a call for change.

—Carl Whithaus, University Writing Program

Introduction

California, with a population of nearly 40 million people, is one of the largest and most populous states in the nation. Given this statistic, it's not surprising that California also leads the country in the number of residents vaccinated with at least one dose of the Moderna, Pfizer or Janssen COVID-19 mRNA vaccine. As of August 2021, over 46 million vaccine doses have been administered across the state with approximately 65% of the population fully vaccinated against COVID-19. (CA Department of Public Health, August 2021) With vaccination rates steadily increasing amidst the imminent threat of the more contagious Delta variant, California appears to be taking strong steps towards disarming COVID-19 and mitigating its devastating effects. Though vaccine trends in California are promising, equity in distribution remains a strong point of contention, especially considering the disparate impact of COVID-19 in communities of color and vulnerable groups. Thus, it is important to consider social factors influencing health and analyze their corresponding effect on vaccine access. By examining literature on COVID-19 health disparities and drawing from public health case studies, this paper will make a series of public health and policy recommendations to advocate for a more equitable vaccine rollout in California.

Background: Literature Review

To understand current gaps in vaccine access, it is essential to look at ongoing disparities in health outcomes and access to healthcare, along with their driving factors. Race and ethnicity plays a pivotal role in determining health outcomes in COVID-19 patients; African American, Latinx, and Indigenous communities

experience disproportionately higher rates of positive cases, hospitalizations and deaths from COVID-19 since the onset of the pandemic. Azar, in a cohort analysis of patients at Sutter Health, found African Americans were 52.5% more likely to be hospitalized from COVID-19 compared to 25.7% of white patients, and they were also 43.4% more likely to suffer serious complications. (May 2020) When health outcomes were analyzed at the sub-county level by Public Use Microdata Area (PUMA), Reitsma also reports "death rates in both Latino (59.2 per 100,000 cases) and Black (65.0 per 100,000 cases) populations were more than 1.5 times higher than that of the White population (38.3 deaths per 100,000 cases)." (May 2021) Poor health outcomes in these communities are driven by a combination of social factors underscoring a pattern of systemic barriers and racial discrimination. Many of these communities lack access to quality healthcare or insurance, face financial barriers preventing them from seeking treatment or live in environments considered 'high exposure risk' (which is defined as households with multiple generations, crowded spaces, and households with essential workers). These risk factors are influenced by race and ethnicity, along with financial status. PUMAs designated as possessing "elevated exposure risk" tend to have higher proportions of Latinx residents. Cultural barriers also amplify these disparities. Individuals may be hesitant to seek care due to distrust in medical institutions, lack of accessible vaccine information, or preference towards traditional medicine practices over modern medicine. From these statistics lies a grim takeaway: social determinants of health influenced by race, ethnicity, and income "play a pivotal role in determining how and when care is accessed, and what the outcome is." (Azar, May 2020)

Medical insurance type, income level, and geographic location are also influencing factors. Patients with Medicaid or Medicare health insurance were twice as likely to be hospitalized from COVID-19 compared to patients with commercial insurance types. Income plays a significant role as well; COVID-19 patients "residing in the top two quartiles of income were less likely to

be admitted to the hospital than those residing in the bottom-quartile ZIP codes." (Azar, May 2020) African Americans as a group were more likely to possess Medicaid health insurance and reside in lower-quartile ZIP codes. These studies paint a picture of the influence of intersectionality in healthcare: racial, social, and financial inequalities compound to produce overwhelming barriers preventing or delaying care and increasing exposure rates. These statistics demonstrate a strong need to consider the failings of the modern healthcare system in reaching vulnerable populations and revise current public health approaches to equalize access to care.

A major part of addressing vaccine inequity will require addressing vaccine hesitancy in minority communities. Because part of reaching herd immunity will require a majority of the population to receive the vaccine, it can be tempting to be resentful at individuals refusing to receive the vaccine where supply and access is readily available. However, it is important to understand the social and historical context of systemic racial discrimination and its motivating impact in driving distrust in large-scale institutions wtihin communities of color. Bruckhaus, for instance, cites "only 42% of African American respondents express[ing] their willingness to receive the vaccine, compared to 61% of white respondents." (July 2021) Past medical traumas, including incidents like the 1932 Tuskegee Syphilis Study, coupled with present-day racial biases in physicians, build upon the notion that large-scale institutions like healthcare are foundationally racist and cannot be trusted. A respondent in a study investigating attitudes towards COVID-19 vaccines and trust in government poignantly noted, "We have such a strong history in this country being experimented on unwillingly or without informed consent, and I know we were all taught that and it's … almost embedded in our culture. [...] And so, there's an inherent distrust." (Strully, April 2021) This feeling of distrust is markedly absent in white participants in a similar study analyzing attitudes towards influenza inoculation. Jamison notes that for the majority of white respondents, "trust in the government's role in influenza vaccination is implicit and unquestioned" while trust in

African Americans "is earned only after reconciling injustices of the past and addressing present racism." (December 2018) Improving vaccine uptake will require jointly alleviating these justified fears and providing vaccine information through culturally competent means.

Existing State Policy and Initiatives

Public health officials revised California's initial rollout plan in an effort to improve vaccine access in the hardest-hit neighborhoods. In the initial months of vaccine distribution in December 2020, distribution was prioritized solely by age group, under the reasoning that individuals aged 50+ are more vulnerable to COVID-19 due to comorbidities and pre-existing illness. Though this generalized approach allowed those most physically vulnerable to poor health outcomes to receive vaccines, it left behind many impoverished and marginalized communities, which bear the brunt of the impact from COVID-19. A disproportionate amount of doses were administered to more affluent neighborhoods, with "California's wealthiest populations [being] vaccinated at nearly twice the rate of [the] most vulnerable populations. (CA Department of Public Health, March 2021) Prioritizing vaccine distribution by community vulnerability and geographic location is a much more equitable approach compared to general age-based thresholds given the disproportionate incidence of cases from these groups. A study with collaboration of leaders in public health and medicine recommend "states [consider] targeting broad swaths of the population in highly specific geographic contexts" using forms of direct outreach including "home visits, walk-in pop-up clinics, [and] assigning appointment slots to all residents." (Wrigley-Field, March 2021) In March 2021, the state responded to these disparities by developing a vaccine equity matrix (VEM) to categorize individual counties by priority level and by reserving 40% of vaccine doses to communities in the lowest VEM quartile. These changes were implemented under an update to "Blueprint

to a Safer Economy", a state-wide plan introduced in August 2020 to acknowledge the long-term effects of the pandemic and safely reopen the economy. VEM quartiles were established from the California Healthy Places Index (HPI) and ranked counties in California from unhealthy community conditions (Quartile 1) to healthy community conditions (Quartile 4). Since this major policy change in March 2021, vaccination rates in Quartile 1 counties have picked up. However, there are still disparities in vaccine coverage by geographic location organized by the VEM, with 78.7% of Quartile 4 residents being fully vaccinated compared to only 56.2% in Quartile 1 as of August 2021. (CA Department of Public Health, August 2021) Though this policy change improved conditions, there remains a need to tackle ongoing disparities.

Case Study Analysis

Successful public health interventions by the Michigan Department of Public Health to mitigate COVID-19 health disparities provides insight on similar policies that can be implemented in California. The Michigan Coronavirus Racial Disparities Task Force, established in April 2020 through an executive order by Governor Gretchen Whitmer, offers a potential case model of improving vaccine uptake in marginalized communities through community engagement and centering health equity. The task force set actionable metrics towards decreasing inequities by including a diversity of perspectives (from public health officials to local community figures) in task force leadership, fostering community engagement in vaccine uptake efforts, building partnerships with local organizations, creating long-term infrastructure to sustain progress, and providing resources to mitigate other compounding stressors on vulnerable communities. Strategies used to move towards these goals include providing implicit bias and cultural sensitivity training to state officials and providers, bringing vaccines to local communities through drive-through community clinics, providing grants to 30

local nonprofits to tackle community-specific issues, addressing other social determinants of health by providing essential resources (providing emergency rental assistance to residents, food packages and toiletries to quarantined individuals, etc.) and introducing targeted vaccine messaging on social media platforms. The Michigan task force also initiated partnerships with industry leaders and local civil rights organizations, including the state chapter of the National Association for the Advancement of Colored People. These efforts resulted in "the average number of new cases for Black residents dropp[ing] from 176 million per day in March 2020 to 59 million per day in October 2020, with disparities in rate cases among Hispanic or Latino Michiganders also narrowed." (National Governors Association, February 2021) Though the goals of this task force did not explicitly involve improving vaccine uptake in communities of color, the actionable strategies they take towards considering social determinants of health, cultural competency in public policy, and facilitating community investment in mitigating the disparate impacts of COVID-19, offer a strong case model for a similar campaign in California.

Recommendations

To improve access to COVID-19 vaccines and mitigate health disparities driven by socioeconomic factors, the following broad public health interventions should be instituted across the state:

- Establish regional vaccine equity task forces to set measurable goals towards equalizing vaccine access and developing long-term infrastructure for health equity
- Prioritize allocation of vaccines to VEM Quartile 1 counties, with the goal of vaccinating 70% of the population residing in these counties by December 2021
- Address social determinants of health by improving regional access to food, housing, and linguistically appropriate health care services and vaccine information
- Center community engagement by funding local initiatives/nonprofits, accessible community health

clinics, and community organizations

Working towards a more equitable vaccine rollout will require a culturally competent, community-centered campaign with tactful consideration of underlying social determinants of health to cater to the heterogeneity of communities in California. Given the unique cultural contours and challenges to access each group faces, a one-size-fits-all approach will not be effective. Community campaigns are essential to build trust, provide accurate vaccine information to combat misinformation, and help individuals understand modern-day health inequities and where they stem from. Broad strategies to reach these goals include supporting and partnering with community organizations, encouraging local leaders (including personal primary care physicians, religious leaders, educators, local city health departments, etc.) to inform residents and alleviate their fears, and providing culturally sensitive and linguistically appropriate vaccine messaging. Individuals are much more inclined to listen to the advice of a long-trusted doctor or friend over the disembodied voices of detached government authorities. Providing linguistically appropriate information can include information brochures in multiple languages, accessible translators and translated signage at vaccine clinics, and producing targeted information on appropriate social media outlets and community centers. In broad terms, vaccine campaigns by regional task forces will need to prioritize building relationships with community organizations, centering local leaders in distributing vaccine information, providing culturally competent messaging, and developing long-term frameworks to create measurable goals towards health equity.

Conclusion

The COVID-19 pandemic continues to expose deep disparities in the United States healthcare system, with marginalized communities disproportionately bearing the heft of COVID-19 infection, hospitalization, and mortality rates. These disparities

become especially evident in a diverse state like California, where localities and groups on the fringes of society face insurmountable barriers in access to care, information, and vaccines. By approaching vaccine distribution through the lens of health equity, California can begin to mitigate these disparities and address underlying determinants of health. All Californians deserve equal access to quality healthcare, especially during a pandemic. In adopting these policy recommendations, we can hopefully take essential steps towards accomplishing this goal.

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