Preparing for SARS-CoV-2 Vaccines in US Immigrant Communities: Strategies for Allocation, Distribution, and Communication

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Widely administered efficacious severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) vaccines are the safest and most efficient way to achieve individual- and population-level immunity, making SARS-CoV-2 vaccination the most viable strategy for controlling the coronavirus disease 2019 (COVID-19) pandemic in the United States. To this end, the US government has invested more than $10 billion in "Operation Warp Speed," a public-private partnership including the Centers for Disease Control and Prevention (CDC), the US Food and Drug Administration (FDA), and the US Department of Defense. Operation Warp Speed funded the development of several SARS-CoV-2 vaccines and aimed to deliver 300 million doses of a vaccine by the ambitious date of January 2021.

Broad vaccine uptake (i.e., an estimated 55% to 82% of the population) is necessary to achieve population-level immunity.[1] However, the advent of safe and efficacious vaccines alone will not guarantee their acceptability or uptake within US communities. Surveys of the US population indicate that a large proportion of Americans may choose not to undergo SARS-CoV-2 vaccination; 20% of Americans do not plan to get the SARS-CoV-2 vaccine, and another 31% are unsure if they will get it, according to an Associated Press poll conducted in May 2020. Another survey published in August 2020 found that 67% of those surveyed would accept a SARS-CoV-2 vaccine "if it is recommended for them," but results showed significant geographic and demographic differences in vaccine acceptance.[2] Such data suggest that SARS-CoV-2 vaccine hesitancy among the general public is largely a result of concerns about possible vaccine side effects, misconceptions about contracting SARS-CoV-2 from the vaccine, and indifference to SARS-CoV-2 infection risk. It is essential to confront the barriers to vaccination now—before SARS-CoV-2 vaccines are distributed—to achieve broad vaccine acceptance.

Specific challenges related to the acceptance of SARS-CoV-2 vaccines are exacerbated by obstacles to vaccination that already exist for underserved populations in the United States. Unfortunately, experience in both routine and outbreak contexts has shown that entrenched socioeconomic disparities often preclude equal access to vaccines. This is evidenced by suboptimal vaccination rates in many US immigrant communities, despite their overwhelmingly positive attitudes toward routine vaccination.[3] For example, CDC data indicate that adult Latinx routine vaccination rates are below the national average in many states with large immigrant populations, including Texas, California, Florida, and New York.[4] Additionally, although routine immunizations are generally well received in immigrant communities, acceptance of a new vaccine may be low because of concerns about vaccine safety and discrimination based on race or immigration status. Historical data from the H1N1 influenza pandemic of 2009 to 2010 showed that immunization rates for the new H1N1 vaccine were low for all ethnic groups, but they were significantly lower in Latinx than in non-Hispanic White individuals.[5]

EFFECT OF SARS-COV-2 ON US IMMIGRANT GROUPS

Underserved US immigrant communities are among those most affected by

SARS-CoV-2. This is largely because of structural injustices within the United States, compounded by a pervasive culture of fear and mistrust among immigrants that has only worsened in the current political climate. Limited access to health care has contributed to an increased prevalence of chronic medical conditions among many US immigrant populations, putting them at higher risk for developing severe COVID-19. Additionally, many immigrants are less able to adhere to recommendations for physical distancing because of their employment as essential workers outside the home and the multigenerational composition of their households. Although no published studies detail SARS-CoV-2 infection and COVID-19 hospitalization and mortality rates specifically for US immigrant communities, a plethora of data indicate that these rates are higher in people of color.[6] As a case in point, although Latinx individuals represent only approximately 18% of the US population,[7] they constitute more than 35% of the COVID-19 deaths documented to date.[8] Data compiled by the California Institute for Rural Studies showed that California's Monterey County agricultural workers—who are predominantly foreign-born—were three times more likely to develop SARS-CoV-2 infection than were nonagricultural employees.[9] From yet another perspective, people living in the confined conditions of federal immigration detention facilities are unable to practice physical distancing procedures to protect themselves from SARS-CoV-2,[10] and as of December 3, 2020, more than 7500 detained immigrants had tested positive for SARS-CoV-2.[11]

With the relatively high burden of SARS-CoV-2 infection and disease in communities of color, it is of critical importance not to overlook the immigrant population in efforts to achieve optimal distribution and acceptance of SARS-CoV-2 vaccines. Maximizing uptake of these vaccines will be the most effective way to stop viral transmission within the community and reduce morbidity and mortality from SARS-CoV-2 in this often neglected and vulnerable segment of the population.

VACCINE BARRIERS IN US IMMIGRANT COMMUNITIES

Although immigrant families typically express positive attitudes toward routine vaccination,[3] their vaccination rates tend to be low for a multitude of reasons, including lack of health insurance, poor local vaccine availability, vaccine cost, low health literacy, language differences, transportation challenges, and immigration status. Moreover, underrepresented groups in the United States are traditionally more skeptical of the safety and efficacy of new products of medical research, including vaccines. Misinformation and antivaccine messaging on the Internet and social media sites worsen vaccine hesitancy across the board.[12]

Long-standing socioeconomic disparities continue to impede vaccine access within US immigrant communities. Approximately 15% of the more than 40 million US immigrants live below the poverty level.[13] Among the nonelderly immigrant population, 23% of documented and more than 45% of undocumented immigrants are uninsured (compared with 9% of immigrants who are US citizens) and, therefore, have limited options to meet their medical needs.[14] Rising unemployment rates caused by the economic strain of the COVID-19 pandemic have led to further loss of health insurance among US immigrant families.[15] Whether insured, underinsured, or uninsured, many racial/ethnic minority community members do not have a regular primary care provider or a medical home, thus limiting their access to vaccinations.[16]

Compounding the medical obstacles that have historically challenged vaccine access in immigrant communities, the current political environment has exacerbated another substantial barrier to vaccination: fear. The two main types of fear that US immigrants experience are (1) fear of deportation and (2) fear of being labeled a "public charge." Regarding the former, undocumented immigrants may fear that they will be apprehended by US Immigration and Customs Enforcement or that their personal data will be reported to the government.[17] Regarding the latter, immigrants may fear that the receipt of any type of assistance, including free or reduced-cost vaccines, will preclude them from obtaining lawful permanent residence and future US citizenship.[18]

OPTIMIZING SARS-COV-2 VACCINE DISTRIBUTION

Timely development and implementation of a multifaceted, nationally coordinated strategy is crucial to achieve rapid population-level immunity via SARS-CoV-2 vaccination. Keeping in mind the unique set of challenges faced by immigrants, how can we ensure that SARS-CoV-2 vaccines are fairly distributed to and accessible for US immigrants?

During the H1N1 influenza pandemic, the US government provided guidance on vaccine allocation,[19] and they likely will provide similar guidance for the distribution of SARS-CoV-2 vaccines. The CDC released preliminary recommendations for which groups should be vaccinated during the initial phase of the COVID-19 vaccination program ("Phase 1a") on December 1, 2020. These early recommendations focused on ensuring

CORE COMPONENTS OF SEVERE ACUTE RESPIRATORY SYNDROME CORONAVIRUS 2 (SARS-COV-2) VACCINATION PLANNING TO PROMOTE EQUITY AND SOLIDARITY OF VACCINE UPTAKE IN US IMMIGRANT COMMUNITIES

Allocation strategies

- National political advocacy for immigrant communities
- Explicit involvement of immigrant communities in vaccine allocation decisions

Distribution strategies

- Free or low-cost vaccine made available to all
- Easy access to vaccine within immigrant communities via mobile clinics
- Vaccine-friendly protocols in health care provider offices

Communication strategies

- Clear and accurate messaging in language(s) of immigrant community
- Widespread vaccine education campaigns via print, electronic, and spoken media
- Health care providers educating families about and recommending vaccines

vaccination of health care personnel, other essential workers, adults with high-risk medical conditions, and older adults (≥ 65 years) but do not mention prioritizing disproportionately affected racial/ethnic minority groups. Going forward, it is critical that federal SARS-CoV-2 vaccine guidance explicitly consider the underserved segments of the US population, irrespective of immigration status. To this end, several independent working groups have released recommendations regarding national preparation for the SARS-CoV-2 vaccines, including the Johns Hopkins Center for Health Security and Texas State University[20] and, more recently, the National Academies of Sciences, Engineering, and Medicine.[21] Collectively, the frameworks put forth by such groups identify three core components of SARS-CoV-2 vaccination planning, with the goal of promoting equity and solidarity of vaccine uptake: (1) allocation, (2) distribution, and (3) communication. We apply these considerations specifically to the underserved US immigrant population (see the box on this page).

Allocation

Because access to SARS-CoV-2 vaccines inevitably will be limited at first, the needs of vulnerable US immigrant communities already hit hard by COVID-19 must be considered during the careful and transparent deliberation regarding which groups will be prioritized. Representatives from US immigrant communities should be explicitly solicited for their input on vaccine allocation. Such direct community involvement will likely lead to innovative solutions for many of the anticipated SARS-CoV-2 vaccine distribution problems, greater trust in government authorities, and higher rates of community vaccine acceptance. Direct community involvement also will increase the likelihood that US immigrant communities will understand and embrace a vaccine allocation plan, as well as help identify and educate the community members who would benefit most from SARS-CoV-2 vaccination during its phased rollout.

Because many immigrant communities are home to a large proportion of essential workers as well as individuals at high risk for severe SARS-CoV-2 sequelae because of chronic medical conditions, a significant amount of political advocacy is necessary to ensure that these communities are not overlooked. This is particularly important for the disenfranchised individuals in immigration detention, where conditions are not conducive to physical distancing, and protective personal equipment and cleaning supplies are not always available.

Distribution

As the United States develops the capacity to conduct a mass SARS-CoV-2 vaccination campaign, the most efficient and effective ways to get vaccines to and dispersed within US immigrant communities must be studied. Critically, the SARS-CoV-2 vaccines must be free or very low cost for all recipients. Judicious consideration of where to provide vaccination services is critical to avoid the scheduling and transportation barriers faced by many US immigrant families. For example, school-based clinics are traditionally an efficient way to provide routine vaccinations because children (and their families) are already present regularly. However, because many schools have transitioned to virtual classes during the COVID-19 pandemic, the United States must devise new strategies for making vaccines—including the SARS-CoV-2 vaccines—easily accessible. Drive-through vaccine clinics and mobile clinics are two options that have been successful thus far in the pandemic for provision of routine vaccinations and hold promise for distribution of the SARS-CoV-2 vaccines. In addition to innovative solutions such as these, steps must be taken to ensure that a large proportion of SARS-CoV-2 vaccination can easily occur in health care provider offices. Simple clinic interventions such as standing vaccine orders, automated vaccine reminders, and rapid vaccination services have already been shown to improve vaccination rates in other contexts and should be part of every clinic's SARS-CoV-2 vaccine preparedness plan.

Communication

Setting appropriate expectations and providing accurate and timely information to US immigrant communities—before SARS-CoV-2 vaccines become available—are of the utmost importance. Although it may seem obvious, simply providing adequate, clear, and accessible information to families in their preferred language can reduce concerns and misconceptions about vaccines. Along with strong educational public health campaigns targeting these communities, individual health care providers' recommendations are crucial in influencing US immigrant families' decisions about whether to vaccinate. Thus, all health care providers, especially those practicing in immigrant communities, should receive training on how to educate families about SARS-CoV-2 vaccines, common vaccine misconceptions, and the varied health beliefs among immigrant groups.

Because media is another influential factor in the vaccine decision-making process for many immigrant (and nonimmigrant) families, a widespread, coordinated, and sustained effort to provide clear and accurate media messages about the SARS-CoV-2 vaccines is necessary to fight misinformation and antivaccine rhetoric. These important messages must be provided in the preferred languages of immigrant communities. Both physical (e.g., printed materials) and electronic (e.g., television, radio, and Internet) messaging should be customized to address culturally relevant vaccine beliefs, misconceptions, and fears. It is of critical importance that official vaccine promotional materials are created in partnership with and revised by individuals from the target communities to ensure that the messages are easily understandable and culturally appropriate. Printed material should be accompanied by physically distanced in-person or virtual dialogue (again, in the community's preferred languages) to reach those who are not literate and to answer questions not covered in the available printed documents.

CONCLUSIONS

SARS-CoV-2 infection has had a significant global effect, leading to more than 1.5 million deaths and survivors with long-term morbidity, particularly in vulnerable communities. The ability to control the COVID-19 pandemic rests heavily on the widespread use of SARS-CoV-2 vaccines to induce large-scale, highly protective immunity, including in historically hard-to-reach populations such as those who have more recently immigrated to the United States. As national vaccine allocation, distribution, and communication plans are made, it is important to include creative, inclusive approaches to equitable vaccine access based on input from representatives of immigrant communities. Steps to ensure that US immigrants will accept and have access to SARS-CoV-2 vaccines must be taken now, to quickly and equitably implement state and federal vaccine distribution policies as soon as safe and effective SARS-CoV-2 vaccines become available. AJPH

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PUBLICATION INFORMATION

Full Citation: Clark EH, Fredricks K, Woc-Colburn L, et al. Preparing for SARS-CoV-2 vaccines in US immigrant communities: strategies for allocation, distribution, and communication. *Am J Public Health*. 2021;111(4):577–581.

Acceptance Date: November 3, 2020.

DOI: https://doi.org/10.2105/AJPH.2020.306047

CONTRIBUTORS

E. H. Clark conceptualized the project. E. H. Clark, K. Fredricks, and J. Weatherhead outlined and drafted the article. All authors contributed critical intellectual content and participated in writing the final draft of the article.

CONFLICTS OF INTEREST

M. Elena Bottazzi develops vaccines for neglected tropical diseases and emerging pathogens, including coronavirus vaccines.

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