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Commentary

COVID-19 Vaccination of Adolescents and Young Adults of Color: Viewing Acceptance and Uptake With a Health Equity Lens



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The COVID-19 pandemic has challenged health-care systems across the world and magnified health inequalities related to systemic racism and globalization. As of February 2021, there have been over 100 million confirmed cases of COVID-19 and over two million deaths reported to the World Health Organization [1]. Within the United States (U.S.), Black, Indigenous, Latinx, and other People of Color (BILPOC) are diagnosed, hospitalized, and die at 1.5, 3.3, and 2.8 times the rates of Whites, respectively [2]. BILPOC are also more likely to have defined medical conditions associated with higher risk of severe COVID-19 infections [2]. The disproportionate morbidity and mortality seen among BILPOC adults also impacts BILPOC adolescents and young adults (AYAs). Compared with Whites, BILPOC AYAs are 1) more likely to be essential workers and unable to work from home; 2) less likely to be

able to take sick or medical leave, jeopardizing their jobs and families' livelihoods, 3) more likely to reside in intergenerational households with greater crowding; 4) more likely to experience the grief and psychological stress from the death of a loved one due to COVID-19, and 5) more likely to live in households with increased incidence of COVID-19 comorbidities [2,3]. These and other effects of structural racism can undermine AYA success in remaining free from COVID-19, including limiting vaccine access and uptake.

Two vaccines have received Emergency Use Authorization from the U.S. Food and Drug Administration, and at least 10 vaccines were authorized or approved worldwide as of January 2020 [4]. Vaccine studies are continuing among racially and ethnically diverse countries around the world. The current vaccines used in the U.S. (Pfizer and Moderna) have 95% and 94% efficacy, respectively, against symptomatic COVID-19 disease two weeks after receipt of the second dose, and this degree of protection was seen across all racial and ethnic groups. In the large studies that led to the two Emergency Use Authorization in the U.S., approximately 20% of participants were non-White and 20%–25% were Hispanic [5,6]. All study participants in the Moderna trial were adults (≥18 years), and although the Pfizer trial enrolled participants aged ≥16 years, the overwhelming majority were aged ≥18 years [5,6]. Both Pfizer and Moderna are conducting studies in adolescents aged 12 years and older and are planning age-deescalation studies [7]. Greater participation from ethnically diverse child and adolescent populations and results of these trials are urgently needed so FDA authorization can be extended to younger populations.

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However, even with effectively implemented clinical trials, vaccine hesitancy may impact vaccine acceptance and protection among BILPOC. In 2019, the World Health Organization listed vaccine hesitancy as one of the top 10 threats to global health [8]. Hesitancy is predictive of, but not the same as, vaccine refusal. Drivers of hesitancy vary across different vaccines, nations, and racial/ethnic groups and include fears of racism and exploitation [8]. From the torture of enslaved Black teenager Lucy by James Marion Sims in the pursuit of gynecological discoveries to the Tuskegee Syphilis Study from 1932 to 1972 and to physicians' racist beliefs about Black people having a high pain tolerance to justify undertreating pain in Black individuals, Black Americans have understandable reasons for mistrust of the medical system [9].

While recent research shows a lower intent to receive the COVID-19 vaccine among Black Americans, vaccine hesitancy is not only limited to Blacks [10]. The Latinx community has been subjected to anti-immigrant state policies including recent harmful medical treatment for immigrant detainees which have increased fear [11]. While the community clearly respects the dangers of COVID-19 as evidenced by higher compliance with masking and travel restrictions, almost 80% do not trust the vaccine and 60% lack faith in its development or think it will be too expensive [12]. Dissemination of information about the vaccine being freely available, regardless of insurance status, from trusted community organizations, is critical to reduce these barriers. It is also important to clearly explain how vaccine records are not shared with Immigration and Custom Enforcement. Addressing medical mistrust and adequate supply and distribution to Indian Health Services are also important to ensure equitable uptake among Indigenous populations.

Other contributors to heightened vaccine hesitancy in BILPOC communities include the speed of COVID-19 vaccine development and concerns related to political motivations. There is some evidence that the antivaccine industry is exploiting racial injustices to persuade select BILPOC communities to distrust the COVID-19 vaccine [13]. There is also hesitancy among some Muslims and other religious groups because of the potential or perceived use of pork gelatin in the vaccine [14]. Vaccine hesitancy among adult BILPOC is important because it directly impacts receipt of vaccines in AYAs; one of the strongest predictors of adolescent vaccination acceptance is parental acceptance [15].

Prioritization of individuals more likely to be impacted by COVID-19 (e.g., essential workers, residents of long-term care facilities, the elderly) is an evidence-based strategy for public health control [9]. However, this strategy ignores other vulnerable groups such as incarcerated and institutionalized populations who are more likely to be BILPOC because of structural racism.

In addition, significant health disparities exist even within the tiered strategy for vaccination. Addressing the structural racism that impacts health care (e.g., access to COVID-19 testing and vaccination); neighborhood and built environment (e.g., COVID-19 risk associated with public transportation); social and community context (e.g., loss of income from taking time off to receive the vaccine); and education (e.g., closures of schools and school-based health centers and challenges associated with providing virtual and safe in-person schooling) is crucial to vaccination success [16–18]. Inequity also exists in vaccine access for those who have been approved to receive it. Identified barriers include the need to be computer savvy and transportation access for populations who often need to leave their

communities to obtain the vaccines. Targeted strategies for BILPOC including AYAs need to address known barriers to vaccine access and uptake and must be integrated into the planning of vaccine rollouts to ensure that the hardest hit communities have access (Table 1).

BILPOC AYAs experience additional inequities when they enter the medical and public health system because these systems are designed for individuals who have completed psychosocial development and use the dominant culture's values and preferences [19]. Psychosocially, adolescence is a time of juxtaposition in the decision-making process. It is characterized by individualization when AYAs rely progressively less on their parents and more on their peers and social media for support in their decision-making [20]. Their propensity to seek the rewards of social inclusion (i.e., peer pressure) may also override higher cognitive processes which are needed to make complex decisions, particularly if they do not view themselves as vulnerable to COVID-19. Adolescence is also characterized by parents usually making the final health-care decision. Navigation of health

Table 1

Strategies to ensure globally the equitable allocation and acceptance and uptake of COVID-19 vaccine for Black, Indigenous, Latinx and other People of Color (BILPOC) adolescents and young adults (AYAs)

- **Work with BILPOC, including AYAs, to promote trust in COVID-19 vaccination efforts** to eliminate COVID-19 health disparities and ensure global health equity; the best predictor of adolescent acceptance of vaccination is parental acceptance.
- **Acknowledge racism exists in medicine and medical history** as the first step in helping to restore BILPOC's trust.
- **Increase enrollment of racially and ethnically diverse AYAs in vaccine clinical trials**; globally and actively engage racially and ethnically diverse scientists as investigators in vaccine clinical trials and as members of scientific advisory boards.
- **Include all youth** attending school, sports, and social activities and those living in close quarters, with unstable housing, in the juvenile justice system, or working part-time as essential workers.
- **Involve trusted community-based organizations, tribal partners, and AYA influencers** in implementation of vaccine allocation and location of vaccination sites.
- **Consider a 2-prong strategy that focuses on encouraging parental support and adolescent autonomy** to make their own decisions about COVID-19 vaccination.
- **Have an equity lens on culturally tailored vaccine distribution and hesitancy plans.**
- **Reshape global constructs of health inequalities** including structural racism and xenophobia, to increase the capacity of health-care systems and to access vaccines with an equity lens.
- **Ensure equitable access to vaccines for the people most at risk everywhere in the world**, regardless of their ability to pay, through the support of The Global Alliance for Vaccines and Immunization, the Vaccine Alliance, Coalition for Epidemic Preparedness Innovation and the WHO, which are leading the COVID-19 Vaccine Global Access (COVAX).
- **Recognize intentionality in addressing equity** may include prioritization of BILPOC communities and must engage them in the development and dissemination of public communication strategies and products.
- **Design vaccination outreach and messaging programs** that consider the psychosocial developmental characteristics of AYAs such as desires to seek social inclusion, limited capacity in future orientation, and the importance of social media.
- **Use graphs, voices, and videos, appealing to all languages and learning styles.**
- **Create and evaluate the use of technology** such as social media, text messaging, gaming, and applications as unique AYA strategies to provide accurate, up-to-date, tailored information to achieve high acceptance and uptake of COVID-19 vaccinations among BILPOC AYAs.
- **Inform individuals who may be migrant workers, undocumented immigrants, or uninsured that the vaccine is free**; that most states do not require proof of residency or other documents; and that receipt of the vaccine is not connected with Immigration and Customs Enforcement.

systems during critical development is further exacerbated by racism within health systems. The Institute of Medicine concluded that "[t]he sources of these [racial/ethnic] disparities are complex, are rooted in historical and contemporary inequities, and involve many participants at several levels, including health systems, their administrative and bureaucratic processes, utilization managers, health-care professionals, and patients" [21].

With globalization and an increasingly connected world, health inequities are no longer limited within national or regional boundaries [22]. The burden of the pandemic in high-income countries is closely connected with those pandemics' devastating effects in the poorest countries and results in unequal distribution of vaccine supply to countries with BILPOC populations. We are in need of global solidarity, highlighting common vulnerability, and taking aim at recognizing and reducing global health inequalities. This is particularly important as AYAs comprise 25% of the world's population—the highest prevalence in history [23].

To adequately address the unequal burden of the COVID-19 pandemic, vaccine distribution must include a strategic plan that ensures equity. The National Academies of Sciences, Engineering, and Medicine published the *Framework for Equitable Allocation of COVID-19 Vaccine* [9]. This framework is grounded by the principles of *maximum benefit*, promoting the short- and long-term health and well-being of the public; *equal concern* for everyone; *mitigation of health inequities*; *fairness*; *transparency*; and use of *evidence-based information* to guide vaccine allocation plans [9].

Public health strategies investing in serving hard-hit BILPOC communities including AYAs, focusing on acknowledging racism and regaining trust, embracing of adolescent development, reducing disparity, and incorporating principles of equality, equity and justice, will ultimately result in increased vaccination and decreased morbidity and mortality for all.

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