



Striving for health equity: Lessons for health care stakeholders in an ongoing pandemic

Our efforts in this initiative focused on three key areas:



Investigating the roles of key players



The relationship between COVID-19, population health outcomes and health disparities

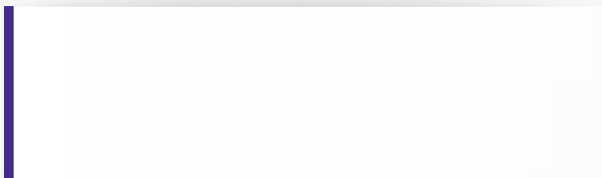
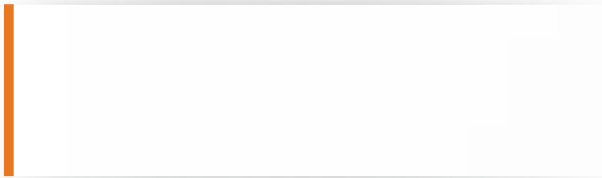
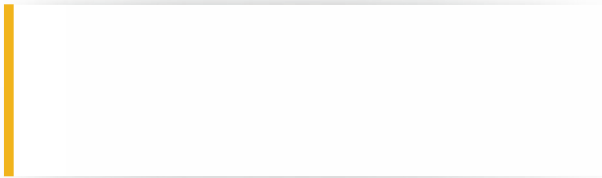
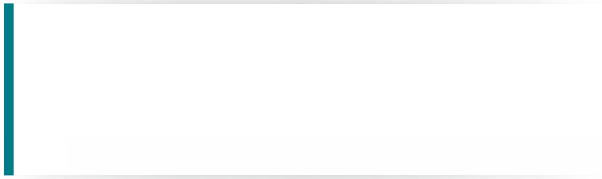
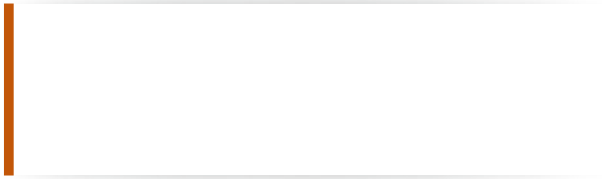


Vaccine hesitancy across communities

Insights identified include the roles that communities and prominent stakeholders played in vaccine rollouts as well as the relationship between morbidity and mortality of the COVID-19 pandemic and existing health disparities. By learning from this public health crisis, improving our future preparedness, and prioritizing health equity as foundational to solutions going forward, health officials and health care stakeholders can make meaningful strides in helping to build healthier, more resilient communities.

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Moving forward collectively

Exploring lessons learned from the COVID-19 pandemic

COVID-19's exposure of U.S. health inequities

SARS-CoV-2, commonly referred to as COVID-19, is the deadliest pandemic since the 1918 Spanish influenza. At its peak between November 2020 and February 2021, there were 27 million reported cases of this severe acute respiratory syndrome in the U.S.¹ While the full scale of global devastation is yet unknown, the U.S. was among the first countries to experience a severe outbreak, which exacerbated and placed a national spotlight on long-standing health disparities in addition to creating new challenges for health officials. The creation and production of the COVID-19 vaccines in 2020 demonstrated the marvels of modern science while juxtaposed with the nation's struggle to ensure equitable access to health care services and vaccinations for many vulnerable populations. Those whose health was more fragile due to demographics (age, disability) and/or social determinants of health (health literacy, access to health care services) were more vulnerable during the pandemic.²

As of September 2021, most experts are hopeful that the worst of the pandemic is behind the United States.³ However, newly emerging coronavirus variants continue to pose danger to unvaccinated Americans and the health care system struggles to manage overwhelming caseloads.³ To improve our ability to respond to the public health crisis at hand and develop proactive, long-term, sustainable strategies, we must reflect on the challenges with the current COVID-19 vaccine campaign to inform how similar large-scale public health interventions can be more effectively and equitably managed.

While the U.S. has lacked a strong, centralized response, many community stakeholders have mobilized to help vaccines reach communities in need. When traditional health care partners (payers, providers, health systems, state health departments) come together with non-traditional partners (employers, not-for-profits), they enhance a community's ability to respond to pandemic challenges effectively.



At its peak between November 2020 and February 2021, there were 27 million reported cases of COVID-19.

Looking back

What did we learn from the COVID-19 vaccine program?

The current vaccine campaign across the U.S. has yielded mixed results. When compared to other countries experiencing COVID-19 outbreaks, the U.S. has fully vaccinated more of its citizens — 52% as of September 2021.⁵ The U.S. also appears to have effectively navigated early supply constraints and now most states have vaccines available for anyone eligible. While these are promising indicators, vaccine uptake varied widely, and not only by state, but often by county as well as by ZIP code.³ We examined how dynamics of prioritization and access, coupled with vaccine hesitancy, created disparate outcomes for distinct segments of the American population.



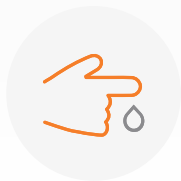
Vaccine prioritization

CDC recommendations for vaccine allocation

To help guide the early pandemic response, the Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practices (ACIP) developed recommendations on how states could allocate early supplies of the vaccine based on risk level.

ACIP's measurable goals⁶

The CDC's recommendations prioritized health care workers and residents of long-term care facilities first, followed by people ages 75 and older, and front-line essential (non-health care) workers. Later phases included those aged 64–75, those with high-risk medical conditions, remaining essential workers and finally, the general population.⁶



Decrease death and serious disease as much as possible



Preserve societies' ability to function



Reduce added COVID-19 burden on people already facing disparities

Prioritization and ACIP's ethical principles



Maximize benefits
and minimize harms



Mitigate health inequities



Promote justice



Promote transparency

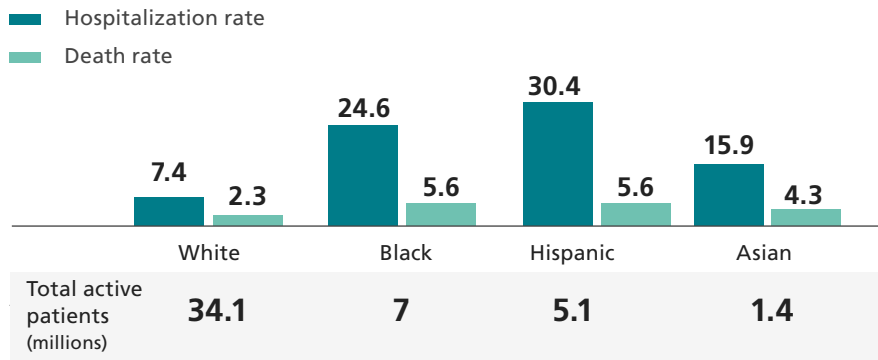
Underserved communities have borne a disproportionately larger share of the pandemic burden, including exposure risk, case rates, infection severity and more.



As illustrated above, the ACIP ethical principles sought to maximize the benefits of the vaccines, minimize the harm of COVID-19, mitigate health disparities, remove unjust and avoidable barriers to receiving the vaccine, and ensure that the national decision process was clear and transparent for all communities.⁷ However, research has found that prioritizing vaccine access by age may have addressed the increased risk of COVID-19 disease burden in the senior population but was unable to account for more diverse epidemiological variables. As a result, the ACIP's strategy failed to account for the distinctive epidemiologic patterns among historically marginalized populations.⁸ Underserved communities have borne a disproportionately larger share of the pandemic burden, including exposure risk, case rates, infection severity and more. The list of inequities is now extending to COVID-19 vaccination rates. Infection rates, hospitalizations and deaths were all higher among non-white Americans compared to their white counterparts.⁹ This suggests that disparities persist past social and economic inequities, barriers to care, infection rates and include other factors like racism and discrimination.

COVID-19 hospitalization and death rates by race

Active EPIC patients, rate per 10K as of July 2021



Regardless of sociodemographic characteristics and underlying health conditions, people of color are at a much higher risk for hospitalization and death.

The vaccine supply constraint did not allow for a prioritization order that could account for all at-risk groups simultaneously, but more careful segmentation of health risks and social determinants could have led to more proactive outreach to the most vulnerable communities.

Vaccine access

In March 2020, the CDC indicated that vaccine equity, the preferential access and administration to those most affected by COVID-19, was an important goal.⁷ Regardless, vaccination rates continue to lag in some of the most vulnerable communities.

According to the Duke Margolis Center for Health Policy, differential access to coronavirus vaccination sites contributes to disparities and highlights the impact of systemic inequities and barriers in the health care system. Americans affected by systemic barriers such as a lack of transportation, inability to get time off work for vaccine appointments, lack of Wi-Fi access for online registration, or overwhelmed and underdeveloped registration systems are likely to have other health care access issues that impact their overall health.⁸

Access issues are particularly painful for rural populations who experience compounding barriers, including a shortage of hospitals, pharmacies and clinicians, traveling long distances to receive care, and lack of public transportation options. Intentional efforts to prioritize community partnerships and reduce differential access to COVID-19 vaccinations through place-based approaches are critical to improving vaccination rates among historically marginalized populations.⁸

Vaccine hesitancy

Vaccine hesitancy is defined by the World Health Organization (WHO) as the “delay in acceptance or refusal of safe vaccines, despite availability of vaccine services.”¹⁰ Even though there is clear scientific evidence of the safety and efficacy of the COVID-19 vaccines, low vaccine uptake remains a critical, worldwide threat to the goal of preventing disease and death from COVID-19. In the early days of the COVID-19 vaccination campaign, the story of vaccine hesitancy in the U.S. was centered on ethnic minorities, particularly the Black community.¹⁰ A history of medical malpractice and medical crimes victimizing the Black community have contributed to justified caution and trepidation about the vaccine. Among these unethical medical encounters were the Tuskegee studies in the 1930s, hypertension studies in the 1950s, and more recently, the diabetes prevention trials in the late 1990s.¹¹ However, recent survey results published in the *Journal of the American Medical Association (JAMA)* show the largest declines in vaccine hesitancy among Black and Hispanic people between October 2020 and March 2021.¹² Still, as of July 2021, the Kaiser Family Foundation (KFF) Vaccine Monitor reported that 32% of the Black community and 29% of the Hispanic community were still hesitant to receive the COVID-19 vaccine, reporting in categories of “wait and see,” “only if required,” and “definitely not,” when asked about getting a COVID-19 vaccine.¹³ The health care industry must endeavor to build cultural humility among its workforce and trust with communities of color. This is essential both to address coronavirus vaccine hesitancy and to impart systemic change to these communities’ access to, and experience within, the health care system.

In recent months, another demographic has risen to the top in terms of vaccine hesitancy. 48% of self-identified Republican adults overall are currently unvaccinated, and 43% fall into the categories of “wait and see,” “only if required,” and “definitely not,” regarding their willingness to receive the vaccine.¹³ Vaccine hesitancy is also significant in rural areas, with rural, Republican men having the highest hesitancy and 35% reporting they do not want the COVID-19 vaccine.¹⁴ Rural vaccine hesitancy, compounded with access barriers in these areas, has led to increased circulation of COVID-19 variants in rural populations in recent months. The race to effectively reach hesitant populations will ultimately impact the longevity and severity of the pandemic and serve as an indicator of challenges that future public health interventions could face.



Rural vaccine hesitancy, compounded with access barriers in these areas, has led to increased circulation of COVID-19 variants in rural populations in recent months.



In response to spikes in coronavirus rates and deaths in minority communities, many health departments ramped up vaccination efforts, including educational campaigns and partnerships in Black and Indigenous communities. However, few initiatives have effectively targeted vaccine misinformation that is rampant among Republican communities.¹⁴ Though best practices differ from one segment to another, having trusted community leaders and health care providers underscore the importance of the vaccine has improved vaccine uptake. We discuss how cultivating these relationships between leaders and community can be a foundation for other population-level initiatives in the next section.

The result of vaccine access and prioritization disparities, coupled with vaccine hesitancy, is that the U.S. has pockets of populations that are at higher risk for COVID-19, especially with the rise of new, more severe variants. As access and hesitancy issues are tackled in the U.S., global efforts to secure vaccine supplies are becoming more organized. As a result, excess U.S. vaccine supplies are now being reallocated to address worldwide supply shortages. If vaccine hesitancy in the U.S. cannot be fully addressed, administering vaccines abroad is the best way to ensure that reinfections and mutations are contained.³






Though best practices differ from one segment to another, having trusted community leaders and health care providers underscore the importance of the vaccine has improved vaccine uptake.

Looking forward

How can we apply these lessons in future public health interventions?

Stakeholders in the health care ecosystem play unique roles in delivering COVID-19 care and driving health equity. Cross-sector partnerships across health care stakeholders will continue to be a key feature in future public health solutions, whether the focus is on COVID-19 vaccine boosters or other population-level interventions. Below is an outline of crucial participants in driving accessible, impactful and efficient interventions. In the sections below, we highlight each stakeholder's differentiators and the roles they might play in partnerships with others to build a more equitable foundation for public health.

	Examples of stakeholders	Key capabilities
 Health plans	Such as commercial payers, government payers and Medicare Advantage plans	Access to large patient databases and claims data, design of benefits and solutions tailored to specific populations
 Providers and health systems	Such as primary care practices, hospitals, private practices and academic medical centers	Direct access to patients, personal and trusted relationship with patients through culturally competent care
 Employers	Such as small, medium and large privately owned businesses as well as corporations	Direct access to patients, personal and trusted relationship with patients through culturally competent care
 Public and not-for-profit sector	Such as federally qualified health centers, community health centers and state health departments	Strong relationship and experience in outreach and effectively caring for underserved communities
 Community organizations	Such as churches, shelters, community centers, schools and social services	Deep local connections to communities, trusted leaders and community networks that can be mobilized to develop interventions

By analyzing these dynamics, we can apply lessons learned from the COVID-19 vaccine campaigns to other pressing population-level issues such as the opioid epidemic, the obesity crisis and maternal health disparities.

Health plans

By simplifying the means of access, bringing care more directly to members, making changes to coverage and benefit design, and using data-driven insights to target populations, health plans have made an impact in addressing vaccine inequities. They reflected leadership and saved many members from financial uncertainty during the early outbreak by leveraging community partnerships to enhance vaccine distribution and addressing the rise in health-related social needs. Many health plans also ensured that COVID-19 tests and vaccines would be free of charge to members. In recent months, health plans have increasingly turned their outreach toward communities with low vaccination rates by using big data and cross-industry partnerships to identify and reach members in need of vaccine services. This carries the benefits of addressing issues related to vaccine access while also migrating health care costs associated with coronavirus complications.

The greatest asset that health plans can offer other stakeholders is their ability to leverage rich databases to systematically identify vulnerable communities for targeted interventions. Launched in March 2021, Vaccine Community Connectors program — a pilot program shared by over a dozen payers — has aimed to do just that by using enrollee data, analytics and government resources to identify communities and tailor vaccine outreach to them.¹⁵ A challenge for the COVID-19 vaccine campaign has been state-run distribution sites lacking capabilities to collect and share vaccination data.¹⁶ Recognizing this limitation during the pandemic, health plans proactively created supplementary reporting capabilities and actively partnered with government and community vaccine programs to address data challenges. These types of data collection and analytic discipline can be generalized to any number of other public health crises. For example, Optum® Advisory Services has developed propensity models with rich data integration to help health plans and providers consider their members' levels of social isolation and social vulnerability index score, level of engagement with the health care system, and other analytical indicators related to social determinants of health (SDOH) to inform targeted quality of care improvement strategies.¹⁷

Cross-industry and private-public partnerships are also integral in the vaccine campaign. Successful partnerships have taken the shape of mass vaccination sites in targeted areas, mobile vaccine units and enhanced access to virtual health visits to support non-COVID care. While these types of partnerships have existed in the market for many years, the pandemic presented opportunities for health plans to perform and contribute with greater sophistication and scale. For example, Anthem teamed up with Lyft in several states to provide free transportation to vaccine clinics for low-income individuals.¹⁸ The state of California contracted with Blue Shield of California to expand existing provider networks and apply state-developed criteria using real-time data to allocate vaccines to communities disproportionately affected by COVID-19.¹⁹ These partnership and data sharing models can be extrapolated to improve the coordination of chronic condition management such as diabetes and heart disease.



Providers and health systems

Health care providers and health systems provide acute care for illnesses, manage chronic conditions, and help patients achieve and maintain wellness. As such, providers are the most familiar and trusted health care stakeholders, while health systems are well-recognized institutions where community members are employed and receive care. As more health systems adopt risk-based models, these institutions are emerging as important hubs where community wellness is prioritized. During the pandemic, providers and health systems were uniquely positioned to support an equitable vaccine campaign by tapping into existing population health infrastructure. The greatest assets providers and health systems have are the ability to deliver health care locally, build trust with communities and maintain capacity for future public health crises.

As centralized COVID-19 vaccine drives become less common, the bulk of vaccines will be administered in more traditional health care settings by providers. Primary care providers (PCPs) administer about 50% of all vaccines to adults in the U.S.²⁰ Recent studies have shown that a strong provider recommendation is closely correlated with vaccination uptake — three in 10 adults who are not currently convinced to get a COVID-19 vaccine say they would be more likely to comply if it is offered to them during a routine medical visit.²¹ Recalling the issue of vaccine hesitancy discussed earlier, PCPs could play an impactful role in mitigating patients' concerns. Providers working in a myriad of health care settings are trusted community members, and thus are uniquely positioned to increase vaccine confidence and access.

Patient databases, care management technology and expertise, and long-standing patient-provider relationships position health systems to impact change on the front lines. Patient databases and care management technologies can be used to quickly identify and stratify the most vulnerable individuals. This data provides insight into geographical areas greatly impacted by COVID-19, allowing health systems to provide targeted support to the communities with the greatest need. For example, the New Orleans-based Ochsner Health developed an approach where 'hubs' receive large vaccine shipments that are divided and deployed to sites across Louisiana and Mississippi with priority to high-risk communities.²² This type of logistics management and capability building carries many lessons for other service lines. Enabling digital solutions like virtual appointment sign-ups and virtual visits help health systems direct patients to resources through lower cost modalities. Not only can these tools help patients seek care for COVID-19, they can also increase access to general preventive services and boost health literacy. San Joaquin General Hospital partnered with Verily's COVID-19 Pathfinder tool which deployed resources and chatbots for members to use to track symptoms, find care and ask questions.²³ Frequent patient screening for digital and health literacy, as well as access to technology, can help inform the level of digital solutioning that is feasible and effective.



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Employers

In the short run, it is imperative that employers support an equitable vaccine campaign to ensure the safety of their employees and customers as the U.S. returns to previous levels of economic activity. Although the debate continues over whether the country, and by extension the globe, can achieve population immunity, the scientific community agrees that it is necessary for employees — especially essential workers who have remained at risk throughout the pandemic — to be vaccinated in order for their businesses to fully rebound. It is critical for employers to encourage their employees and customers to get vaccinated (see Figure 3).

Employer strategies to ensure worker safety

Figure 3: Actions that employees can take to prioritize health equity in their workforce



Access

- Provide employees paid leave for vaccine appointments and recovery
- Reimburse appointment transportation costs
- Partner with health systems for mass vaccination events



Education

- Distribute vaccine information and resources in the workplace
- Partner with trusted community leaders and health care professionals to host information sessions for employees



Incentives

- Offer rewards like free food and drinks, gift cards, cash prizes and savings bonds, and lottery-based high-value items to employees who complete their vaccination



Requirements

- Require vaccination for in-person gatherings at work and company travel
- Require masks for non-vaccinated employees in the workplace
- Require vaccination as a condition of employment

Beyond the pandemic, employers should consider sustainable ways to create a safe and healthy workplace. Collaborating with in-house or external digital partners to track symptoms can help automate the process. For the first year of the pandemic, until May of 2021, UnitedHealth Group (UHG) employees were utilizing the proprietary ProtectWell application to virtually check in and answer questions about their health and potential symptoms before they entered the office each day.²⁴ Once at the office, all employees were required to wear masks and saw signs around the space encouraging them to continue to socially distance and to wash their hands frequently throughout the day. UHG updated its policies in accordance with CDC guideline and beginning June 1, 2021, vaccinated employees were no longer required to wear a mask in their facilities. However, screening for symptoms before entering the workplace and ensuring office capacity was capped at 25% are policies that continue to remain in place. These policies engender a higher sense of safety and confidence among employees and can be applied to elevate general health safety measures even after the pandemic.

Public sector

Policymakers play a critical role in the establishment of regulations that support an equitable vaccine campaign. Such policies improve the systems within which all other stakeholders interact and have the power to ensure that individuals have equitable access and outcomes, regardless of race, ethnicity, socioeconomic status and other potentially incumbering factors. In the United States, health policies are formed and implemented across several levels of government, creating a patchwork of programs and eligibility criteria for patients. We consider policymaking at the federal, state and local levels and comment on how improved integration through the pandemic led to improved outcomes for patients.

Federally Qualified Health Centers (FQHCs) serve uninsured and underinsured Americans. By providing care for low-income and vulnerable populations, FQHCs are key players in delivering care to communities that would otherwise go unserved. To ensure that underserved communities and those disproportionately affected by COVID-19 are equitably vaccinated, the Health Resources and Services Administration (HRSA) and CDC launched a program to directly allocate COVID-19 vaccines to HRSA-supported health centers. These health centers prioritized vaccines for individuals experiencing homelessness, public housing residents, seasonal agricultural workers and patients with limited English proficiency.²⁵

The COVID-19 response at the state level is more varied. MultiState's COVID-19 Policy Dashboard updates information issued by state and key local agencies and policymakers.²⁶ In the aggregate, the data shows that counties with greater restrictions and stronger emphasis on vaccinations are seeing a decrease in caseloads. The inverse is also true: cases of COVID-19 are rising more rapidly in counties with less regulation and lower vaccination rates.²⁷ To add further nuance, states and municipalities have approached vaccine eligibility in different ways. As a response to early data showing gaps in vaccinations in certain wards of the city, Washington, D.C., changed its vaccine appointment system to prioritize people living in these low-income, underserved areas. Residents of these communities were able to register for vaccine appointments 24 hours before they became available to people living in other areas of the city. This deliberate action has directly correlated with an increase in uptake of the vaccine among this population of residents, from roughly 25% at the beginning of March 2021, to 41% as of mid-June.²⁸ Taking a more hands-on approach, some states are engaging in effective partnerships to directly impact vaccination rates. Tennessee has partnered with pharmacies and community health centers to add more than 100 vaccination sites across the state, with a focus on rural and underserved areas. Rhode Island is using hospitalization, death and case data to target vaccine distribution by location. Connecticut is closely tracking vaccine rollout in localities that rank high on the social vulnerability index. Despite these successes, data availability has been a challenge throughout the pandemic. Having access to real-time information on testing and vaccination rates, especially for historically undercounted communities, is key to developing policies that prioritize distribution of the COVID-19 vaccine.



Data shows that counties with greater COVID-19 restrictions and stronger emphasis on vaccinations are seeing a decrease in caseloads.

The American Rescue Plan was signed into law in March 2021 and includes more than \$7 billion in funding for public health agencies. This influx of funding represents a unique opportunity for state and local health agencies to invest resources in addressing health disparities exposed and worsened by COVID-19.²⁹

Three significant investments now can help accelerate efforts across the industry for decades:

1

Health equity

Addressing upstream and midstream social determinants of health and accelerating health equity initiatives through public and private partnerships can assist in building a stronger and more resilient health system for tomorrow.

2

Data modernization

Lack of funding, multiple data systems and disparate policies are some of the many contributing factors to poor interoperability and systems integration. The current public health infrastructure wasn't built for optimized collaboration. By modernizing systems and facilitating interoperability, the public health system can be more coordinated in its response to future public health challenges.

3

Innovation

Sound public health decisions are grounded in evidence. Leveraging artificial intelligence (AI), machine learning (ML), advanced analytics and other innovative technologies will allow public health players to share meaningful information, actionable insights and create best-in-class solutions collaboratively with key stakeholders. The public sector plays a crucial role in developing and investing in innovative technologies and partnerships.



By modernizing systems, facilitating interoperability and incorporating innovative technologies like artificial intelligence, the public health system can be more coordinated in its response to future public health challenges.

Community organizations and the private sector

Coupled with effective policymaking, engaging strategic partner organizations can help vulnerable communities solve problems locally. The CDC has developed a toolkit targeting community-based organizations (CBOs) as key partners in the vaccine campaign.³⁰ The Community-Based Organizations COVID-19 Vaccine Toolkit provides guidance for non-traditional organizations such as social service organizations, faith-based organizations, YMCA/YWCAs and youth organizations. The primary goal of this approach is to promote clear and accurate information through trusted community resources to reach citizens in ways that will resonate. Figure 4 highlights examples of effective state and community partnerships that address vaccine access and hesitancy.

Figure 4: Examples of equity-focused partnerships between states and community organizations



West Virginia

Engaged small family pharmacies and independent drug stores in their vaccine rollout efforts, increasing touch points for residents to access the vaccine. Resulted in the state having one of the highest vaccination rates in the world.



Massachusetts

Department of health invested resources directly into the 20 cities and towns most impacted by COVID-19 to increase awareness of vaccine safety and efficacy by working with local leaders and community- and faith-based groups. Also invested \$1M in grants to the MA league of community health centers for vaccine interventions.



North Carolina

Partnered with faith leaders to ensure communities of color have access to vaccinations at the state's mass vaccination clinics. They also released appointments to Black and Latino church attendees before opening registration more widely.



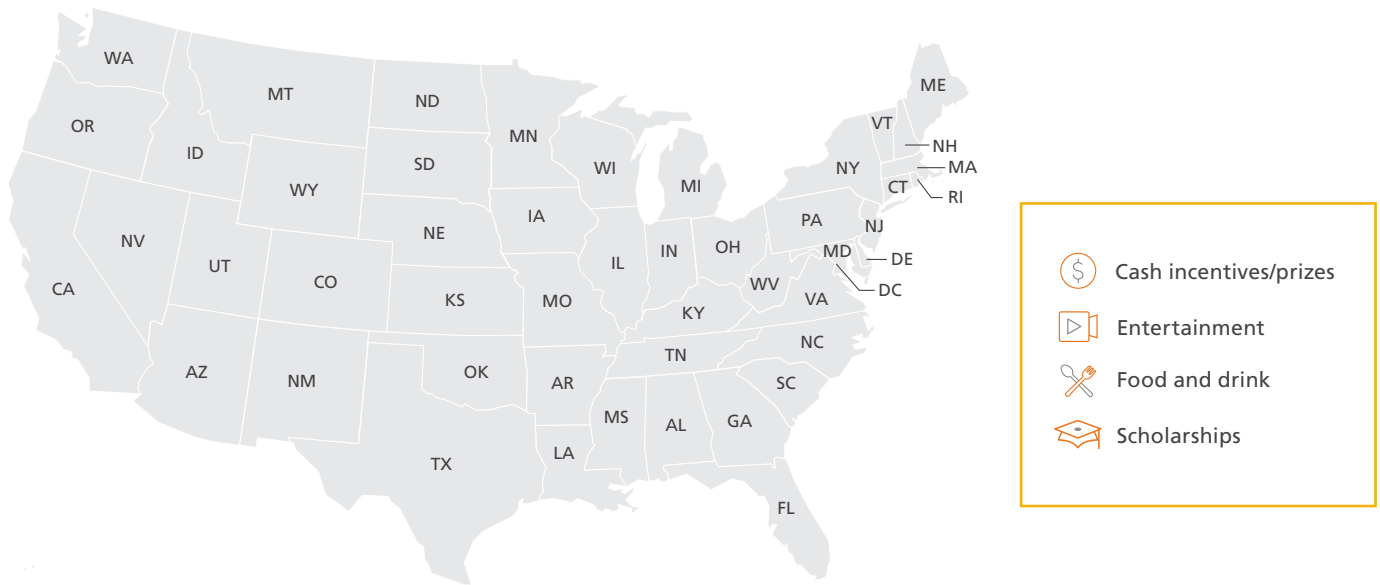
Colorado

Launched a Vaccine Equity task force, scheduled over 175 vaccine equity clinics across the state in partnership with community-based organizations, local public health agencies and tribes. Ensured that community organizations played a key role in providing outreach to their community members and registering people for appointments.















Many private organizations have also developed diverse incentives in hopes of increasing vaccination levels in their consumer bases or constituencies. While more time is needed to assess the effect of these incentives on vaccine rates, incentives also help promote brand awareness of sponsors and increase vaccine education in the short run.³¹ Figure 5 highlights a few representative examples of non-health care organizations amplifying vaccination campaigns.

Map of vaccine incentives

Figure 5: Map of widespread vaccine incentive examples offered in various states



National companies

-  **Anheuser Busch:** Free beverage when the U.S. reaches goal of 70% of adults being partially vaccinated
-  **Office Depot and Office Max:** Offering free lamination for vaccine cards nationwide
-  **National Football League:** Gave away 50 free Super Bowl tickets to vaccinated individuals
-  **California:** "Vax for the Win" drive — lottery open to California residents 12 and older who have had at least one dose of the vaccine
-  **Maine:** Giving away up to 5,000 fishing licenses and 5,000 hunting licenses for residents over 18 who receive their first shot
-  **Miami:** "Shots for Shots" campaign offered a drink coupon for adults who received their vaccinations at walk-up locations
-  **New Mexico:** Vaccinated individuals have a chance at winning \$250,000–\$5 million
- New York:**
 -  **Nathan's Famous:** Free hot dog on vaccination day at their Coney Island location
 -  **"Vax and Scratch"** — free lottery tickets to adults over 18 who got their vaccines at select locations in New York
-  **Raffling off a full-ride scholarship** to one of the state's public universities. Pfizer vaccine recipients ages 12–17 are eligible to win
-  **New York Yankees and New York Mets** are offering free tickets to vaccinated individuals who received their shots at these locations
- Ohio:**
 -  Vaccinated adults have the opportunity to win \$1 million
 -  Giving five full-ride scholarships to any in-state university for residents ages 12 to 17 who have received their vaccination
- Oregon:**
 -  "Take Your Shot" campaign — vaccinated adults are entered to win cash prizes



Community partnerships and private-sector collaboration are essential to broader public health and equity interventions. They also serve as trusted local resources with understanding of the populations' needs and the ability to mobilize volunteers and experts to connect members to appropriate, convenient services. Community partners also play the advocacy role for legislation while allocating civic resources.³² With deep connections to the communities they serve, community partners can provide valuable insight on other public health solutions including housing, social supports, education and financial empowerment.

Case study

Spotlight on the Navajo Nation's approach to vaccination

Issues at stake

Indigenous communities have long experienced worse socioeconomic and health outcomes compared to other U.S. citizens. Circumstances such as lack of financial resources^{33,34} and racial discrimination³⁵ are some of the many factors that contribute to these worse health outcomes, including higher rates of heart diseases, cancer and diabetes. These risk factors left many Native American communities in a worse position to handle the COVID-19 pandemic. Early COVID-19 prevalence data found that American Indians/Alaskan Natives were reported to have infection rates over 3.5 times higher than non-Hispanic whites and were over four times more likely to be hospitalized.^{36,37} When the FDA granted Emergency Use Authorization for COVID-19 vaccines, tribal leaders were in a unique position of altering the trajectory of the COVID-19 pandemic for their tribal members. However, these leaders faced unique barriers, including:

- **Native American distrust of the American health care and the COVID-19 vaccination.** Like the Black community's experience with the 1930s Tuskegee studies, Native Americans have also experienced a history of medical crimes, including the 1970s mass sterilization of Native American women. This effort was passed by President Richard Nixon and executed by the Indian Health Services (IHS). Confidence in the IHS has further eroded given the organization failed to provide an adequate amount of personal protective equipment (PPE) and COVID-19 test kits during the pandemic.^{38,39}
- **Logistical challenges including the lack of paved roads, running portable water and reliable electricity.** Of the 11,600 miles of road in the Navajo Nation, 9,000 miles are unpaved dirt roads. Even before the COVID-19 pandemic, these dirt roads could hamper transportation efforts, including ambulances and buses, to the point where their arrivals could be delayed by hours. Any vaccination effort by Navajo leaders would not only need to consider the logistical barriers of vaccine transportation, but also how to safely administer vaccines in areas that lack the necessary resources to store vaccines for extended periods of time.^{40,41}



About the Navajo Nation

The Navajo Nation extends across the states of Utah, Arizona and New Mexico, covering over 27,000 square miles.^{42,43} The Navajo Nation is considered one of the largest tribal nations with approximately 400,000 members.⁴⁰ The Navajo Nation is particularly known for its contributions during World War II, when Navajo members (Navajo Code Talkers) built a secret code to communicate on the front lines of battle.

Innovative ideas

One of the keys to success was the cross-sector partnership that tied public, private, providers and community leaders to work as a team to successfully roll out the COVID-19 vaccinations. Notable partners include the Indian Health Services (IHS), Navajo Department of Health and Tribal Health Organizations. The key strength of this partnership was that it allowed the Navajo Nation to effectively use precious resources (vaccines, health care workers, etc.) to ensure the most vulnerable Navajo members had access to vaccines. As a result, the Navajo Nation was one of the first groups of people to reach 70% of the population to be fully vaccinated (a feat that many states are struggling to reach). In addition, Navajo Nation President Jonathan Nez predicted that the Navajo Nation would reach 80% by the end of 2021. The results of this focused vaccination effort can be seen in the multiple days in August 2021 where the Navajo Nation observed no COVID-19-related deaths.^{44,45}

When examining the Navajo Nation's approach, two critical strategies emerge:

- Collaborating with local community organizations to educate Navajo residents about the benefits of the COVID-19. Media channels used include town halls, press release, radio and television in both English and the Navajo language.⁴⁶
- Partnership with the IHS to ensure a stable supply of COVID-19 vaccines. Develop unique strategies to get COVID-19 vaccines into residents' arms including vaccine blitz and door-to-door vaccination campaigns.⁴⁷

Impact

In the face of adversity, the Navajo Nation gathered the necessary partners to develop solutions to vaccinate and protect its members. Early in the pandemic, the Navajo Nation was praised for its vaccination rollout as it outpaced the U.S. national rate of vaccination.⁴⁸ It was also recognized by Dr. Anthony Fauci as being a model in the fight to push back COVID-19.⁴⁹

Additionally, cross-collaboration partnerships have spurred the Navajo Nation to partner in other health disparity initiatives. For example, the IHS and Navajo tribe are currently collaborating on a project using \$5.2 million to ensure more than 95,000 homes have access to safe water.⁵⁰ The results of the cross-collaboration partnership have been instrumental in the COVID-19 vaccination and will be a key contributor as the Navajo Nation seeks to drive sustainable community-driven development.



In the face of adversity, the Navajo Nation gathered the necessary partners to develop solutions to vaccinate and protect their members. Early in the pandemic, the Navajo Nation was praised for its vaccination rollout as it outpaced the U.S. national rate of vaccination.⁴⁸

Conclusion

Innovative, equitable solutions will benefit society long beyond the pandemic

In June 2021, the United States surpassed 600,000 coronavirus deaths. After a year and half of crisis response, health care leaders are shifting their attention to long-term rehabilitation and sustainability planning. As the pandemic outlook brightens, the scientific, medical and business communities plan for a future beyond COVID-19. The role of health care stakeholders depends largely on their platform to impact change. Coordinating COVID-19 response efforts confers many benefits:



Immediate benefit

Reduce the severity of ongoing and future waves of the pandemic, ultimately preventing further infection and loss of life.



Short-term benefit

Improve the quality of COVID-19 and post-COVID-19 care. Emerging research finds that up to one in three coronavirus patients are long-haulers⁵¹ — those who continue to feel symptoms long after the days or weeks that represent a typical course of the disease. Recognizing that the long-term health and cost implications of long COVID-19 are yet unknown, the industry must mobilize to manage the risk and outcomes for these patients.



Long-term benefit

The COVID-19 pandemic necessitated the creation of innovative operating and collaboration models that markedly improved the way in which patients were engaged and serviced. The health care industry mobilized science, technology and logistics to deliver end-to-end coronavirus care — testing, hospital care, payment models, virtual care, etc. By generalizing lessons learned through the pandemic response, the industry will be better prepared to mitigate broader health inequities that have plagued the U.S. health care system since its inception. Unlocking the potential for systemness can tangibly ensure durable improvements to health care and larger equity efforts.⁵²

The challenges experienced during the coronavirus pandemic and vaccine campaign pressure-tested an already overburdened and understaffed health care system. By learning from this public health crisis, improving our future preparedness and prioritizing health equity as foundational to solutions going forward, health officials and health care stakeholders can make meaningful strides in helping to build healthier, more resilient communities.

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