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VACCINATING URBAN POPULATIONS IN RESPONSE TO COVID-19: LEGAL CHALLENGES AND OPTIONS

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Rebecca Freed†* & Summer Ghaith†***

The real-time development of multiple, efficacious vaccines through federal alliances with U.S.-based pharmaceutical companies via Operation Warp Speed during the COVID-19 pandemic is a shining achievement. The health and safety of U.S. residents rely on a national vaccine campaign led by the Biden Administration seeking to rapidly achieve “herd immunity,” especially among populations in denser, urban environments. Immunizing millions of persons in urban locales is complicated by their vulnerabilities to COVID-19, initial lack of access to vaccines, issues of eligibility, and vaccine hesitancy. This Essay explores these challenges and how they are addressed through legal and policy responses promoting national mass vaccination efforts affecting U.S. urban populations.

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INTRODUCTION

Against the backdrop of the COVID-19 pandemic — the most impactful public health emergency in U.S. history¹ — arose the real-time development and authorization of multiple efficacious and safe COVID-19 vaccines.² Through Operation Warp Speed,³ major U.S. pharmaceutical companies like Pfizer,[®] Moderna,[®] and Janssen,[®] a division of Johnson & Johnson,[®] continue to align with federal authorities on this stellar achievement. Suppressing the pandemic relies predominantly on the most systematic national vaccine campaign ever undertaken. Immunizing hundreds of millions of U.S. residents against the COVID-19 virus by late-summer 2021 is the goal.⁴ Reaching it is not so easy.⁵

Extensive uptake of COVID-19 vaccines is key, especially among U.S. urbanites doubly hit by (1) the relative ease of COVID-19's

1. As of October 20, 2021, the U.S. has documented over 45 million COVID-19 infections and 730,209 deaths. *COVID-19 Dashboard: Global Deaths*, CTR. FOR SYS. SCI. & ENG'G (CSSE) AT JOHNS HOPKINS UNIV., <https://coronavirus.jhu.edu/map.html> [<https://perma.cc/N25C-8HM3>] (last visited Oct. 20, 2021). Average life expectancy has dropped by over a year due largely to the pandemic, with more precipitous decreases among racial classes and vulnerable communities in U.S. urban settings. ELIZABETH ARIAS, BETZAIDA TEJADA-VERA & FARIDA AHMAD, CTRS. FOR DISEASE CONTROL & PREVENTION, VITAL STATISTICS RAPID RELEASE: PROVISIONAL LIFE EXPECTANCY ESTIMATES FOR JANUARY THROUGH JUNE, 2020 (2021), <https://www.cdc.gov/nchs/data/vsrr/VSR10-508.pdf> [<https://perma.cc/FYD7-3FGJ>].

2. See *COVID-19 Vaccines*, FDA (Mar. 24, 2021), <https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines#authorized-vaccines> [<https://perma.cc/5FH6-6X8>]. COVID-19 vaccines authorized for emergency use to date include Pfizer-BioNTech[®], Moderna[®], and Johnson & Johnson/Janssen[®]. *Id.*

3. See *Coronavirus: Operation Warp Speed*, U.S. DEP'T DEF. (Jan. 12, 2021), <https://docs.house.gov/meetings/IF/IF14/20210203/111136/HHRG-117-IF14-20210203-SD044.pdf> [<https://perma.cc/657Q-HZLZ>]. Operation Warp Speed used the resources of the federal government and the U.S. private sector to “accelerate the testing, supply, development, and distribution of safe and effective vaccines, therapeutics, and diagnostics to counter COVID-19 by January 2021.” *Id.*

4. See Justine Coleman & Amie Parnes, *Biden's New Goal Is 200 Million COVID-19 Vaccinations in First 100 Days*, HILL (Mar. 25, 2021, 12:30 PM), <https://thehill.com/policy/healthcare/544917-biden-to-announce-updated-goal-of-200-million-covid-19-vaccinations-in> [<https://perma.cc/9QL5-J7F>].

5. See Andis Robeznieks, *Coronavirus Herd Immunity Will Take Team Effort, Says Dr. Fauci*, AM. MED. ASS'N (Feb. 22, 2021), <https://www.ama-assn.org/delivering-care/public-health/coronavirus-herd-immunity-will-take-team-effort-says-dr-fauci> [<https://perma.cc/FB6H-3BSJ>].

spread in dense areas and (2) months of social distancing impacting their economic and social interests.⁶ Vaccinating populations across U.S.-metropolitan areas raises manifold challenges. Early access to COVID-19 vaccines was specious.⁷ Not everyone was suitable or eligible for COVID-19 vaccination, notably those who are immunocompromised and children (ages 0–11) whose full, unmitigated return to daycares or schools depends on achieving herd immunity.⁸ Millions of U.S.-city dwellers are reticent about vaccinations for fears of their potential harms due to copious, false information⁹ or long-standing distrust of governmental medical and public health interventions.¹⁰

Governments and private sector entities responded to these and other challenges in divergent ways. The Biden Administration endorsed recommendations to assure equity in the allocation of vaccines, consistent with guidance from the National Academies of Sciences, Engineering, and Medicine.¹¹ The President's National COVID-19 Strategic Plan expressly promoted widespread access, education, and distribution of vaccines in hard-hit locales.¹² State and

6. See *infra* notes 22–43.

7. See Elizabeth Weise & Karen Weintraub, *Amid a Chaotic COVID-19 Vaccine Rollout, States Find Ways to Connect Shots with Arms*, USA TODAY (Mar. 2, 2021, 9:01 AM), <https://www.usatoday.com/story/news/health/2021/03/01/covid-vaccine-rollout-states-find-different-ways-deliver-shots/6826155002/> [<https://perma.cc/6J8Z-63TA>] (addressing disparities in state vaccination rates “because of the nation’s fractured and underfunded health system” and different leadership approaches).

8. See Elizabeth Pratt, *When Will COVID-19 Vaccines Be Available to Children Under 12?*, HEALTHLINE (May 20, 2021), <https://www.healthline.com/health-news/when-will-covid-19-vaccines-be-available-to-children-under-12> [<https://perma.cc/P6RE-PSVV>].

9. See Lawrence O. Gostin et al., *The Public Health Crisis of Underimmunisation: A Global Plan of Action*, 20 LANCET INFECTIOUS DISEASES e11, e12 (2019).

10. See Jeneen Interlandi & Yaryna Serkez, *What Are the Vaccine Roadblocks Where You Live?*, N.Y. TIMES (Feb. 25, 2021), <https://www.nytimes.com/interactive/2021/02/25/opinion/covid-vaccination-barriers.html> [<https://perma.cc/6ZHD-NV5A>].

11. See *A Framework for Equitable Allocation of Vaccine for the Novel Coronavirus*, NAT'L ACADS. SCIS., ENG'G, & MED., <https://www.nationalacademies.org/our-work/a-framework-for-equitable-allocation-of-vaccine-for-the-novel-coronavirus> [<https://perma.cc/ZJD3-X3KL>] (last visited Oct. 29, 2021).

12. See *generally* WHITE HOUSE, NATIONAL STRATEGY FOR THE COVID-19 RESPONSE & PANDEMIC PREPAREDNESS (2021) [hereinafter WHITE HOUSE COVID-19 RESPONSE], <https://www.whitehouse.gov/wp-content/uploads/2021/01/National-Strategy-for-the-COVID-19-Response-and-Pandemic-Preparedness.pdf> [<https://perma.cc/Y5BJ-HGB4>].

local governments set or supported varying vaccine mandates, provided alternative incentives for vaccinations, or posited “vaccine passports.”¹³ Manifold employers and universities have required COVID-19 vaccinations in specific jurisdictions, leading to lawsuits and legislative objections.¹⁴ Vaccine lotteries in some states heightened concerns among urbanites.¹⁵ Even as extensive vaccine hesitancy compromises national vaccine objectives and threatens the health of entire metropolitan areas,¹⁶ the U.S. Supreme Court seems poised to broadly require religious exemptions to vaccines overall.¹⁷

This Essay explores legal and policy perspectives underlying these profound issues, proffering guidance on national mass vaccination efforts to help urban populations return to levels of post-pandemic normalcy, coextensively saving tens of thousands of lives. Part I examines the disproportionate effects of COVID-19 on urban populations, exacerbated by accelerated disease spread in densely populated communities, health disparities among ethnic and racial minorities, and adverse economic effects of social distancing. Challenges accompanying efforts to vaccinate urbanites, including logistical obstacles and hesitancy, are explored in Part II. Part III assesses the extensive national push to promote vaccine awareness and health literacy, equitably allocate vaccine resources, and increase COVID-19 vaccination rates through traditional and novel routes. Based on these observations, Part IV highlights complications inherent in vaccinating urban populations arising from opposing legal and ethical perspectives on vaccine equity, incentives, mandates, and religious interests. To increase uptake of COVID-19 vaccines among

13. See generally James G. Hodge, Jr. et al., *Legal Challenges Underlying COVID-19 Vaccinations*, 49 J.L., MED., & ETHICS 495 (2021).

14. See Andy Thomason & Brian O’Leary, *Here’s a List of Colleges That Will Require Students or Employees to Be Vaccinated Against Covid-19*, CHRON. HIGHER EDUC. (June 17, 2021, 2:01 PM), <https://www.chronicle.com/blogs/live-coronavirus-updates/heres-a-list-of-colleges-that-will-require-students-to-be-vaccinated-against-covid-19> [https://perma.cc/8THJ-ZYS8].

15. See, e.g., Sarah Mervosh, *Who Wants to Be a Millionaire? In Ohio, You Just Need Luck, and a Covid Vaccine*, N.Y. TIMES (June 3, 2021), <https://www.nytimes.com/2021/05/26/us/coronavirus-ohio-lottery-vax-a-million.html> [https://perma.cc/RC5R-DYU3].

16. See Austin Fast, *Rural Communities Fall Further Behind in COVID-19 Vaccination Rates*, NPR (June 11, 2021, 5:30 AM), <https://www.npr.org/sections/health-shots/2021/06/11/1005367753/rural-communities-fall-farther-behind-in-covid-19-vaccination-rates> [https://perma.cc/4WXA-4XSN] (“If COVID-19 flares up in any unvaccinated rural or suburban area, those outbreaks would likely ripple into nearby cities, according to Keith Mueller, director of the University of Iowa’s Rural Policy Research Institute.”).

17. See Hodge, Jr. et al., *supra* note 13.

individuals living, working, and socializing in close proximity.²² Multi-generational and multi-family housing,²³ widespread use of public transportation,²⁴ and social lifestyles in U.S. cities contribute to disease spread. Unsurprisingly, COVID-19 case counts exploded at the inception of the pandemic in March 2020 in densely populated places like Seattle²⁵ and New York City.²⁶

Deleterious impacts of COVID-19 are accentuated especially among urban populations at heightened risk of infection, including minority groups and persons experiencing homelessness.²⁷ During

22. See Yousef Alimohamadi, Maryam Taghdir & Moijaba Sepandi, *Estimate of the Basic Reproduction Number for COVID-19: A Systematic Review and Meta-Analysis*, 53 J. PREVENTATIVE MED. & PUB. HEALTH 151, 151–57 (2020); see also Joseph Eisenberg, *R0: How Scientists Quantify the Intensity of an Outbreak Like Coronavirus and its Pandemic Potential*, U. MICH. SCH. PUB. HEALTH (Feb. 12, 2020), <https://sph.umich.edu/pursuit/2020posts/how-scientists-quantify-outbreaks.html> [<https://perma.cc/TL58-QP35>] (explaining that COVID-19's basic reproduction number is associated with population density; thus, it is more infective in denser populations).

23. According to the Centers for Disease Control and Prevention (CDC), multifamily housing and communal living increased risk of COVID-19 exposure and decreased ability to adequately social distance. *Considerations for Owners and Operators of Multifamily Housing Including Populations at Increased Risk for Complications from COVID-19*, CTRS. FOR DISEASE CONTROL & PREVENTION (May 5, 2021), <https://www.cdc.gov/coronavirus/2019-ncov/community/multifamily-housing.html> [<https://perma.cc/SZ2L-8RT3>]. A study of U.S. counties using data accessed in April 2020 found that counties with predominantly Black populations disproportionately had a higher urbanicity score, and individuals in these counties were more likely to live in households having more than one person per room. Gregorio A. Millett et al., *Assessing Differential Impacts of COVID-19 on Black Communities*, 47 ANNALS EPIDEMIOLOGY 37, 37–44 (2020). These counties demonstrated greater COVID-19 cases. *Id.*

24. Researchers examining data across U.S. counties found that use of public transportation was strongly associated with higher rates of COVID-19 cases and deaths. See Jose F. Figueroa et al., *Association of Race, Ethnicity, and Community-Level Factors with COVID-19 Cases and Deaths Across U.S. Counties*, 9 HEALTHCARE, Mar. 2021, at 1, 4. Specifically, they found “41.0 additional deaths per 10% point increase in proportion of workers.” *Id.* at 4.

25. See *Coronavirus Daily News Updates, March 30: What to Know Today About COVID-19 in the Seattle Area, Washington State and the Nation*, SEATTLE TIMES (June 11, 2020, 5:15 PM), <https://www.seattletimes.com/seattle-news/health/coronavirus-daily-news-updates-march-30-what-to-know-today-about-covid-19-in-the-seattle-area-washington-state-and-the-nation/> [<https://perma.cc/4T5B-J238>] (observing that in Washington State, “COVID-19 cases continue to climb”).

26. See Eliza Relman, *New York City Mayor Bill de Blasio Announces ‘An Explosion’ of New Coronavirus Cases as City Total Hits 3,615*, BUS. INSIDER (Mar. 19, 2020), <https://www.businessinsider.com/nyc-mayor-bill-de-blasio-calls-explosion-of-coronavirus-cases-staggering-2020-3> [<https://perma.cc/GR92-WEBS>].

27. See Tori L. Cowger et al., *Comparison of Weighted and Unweighted Population Data to Assess Inequities in Coronavirus Disease 2019 Deaths by*

the pandemic, COVID-19 death rates among Black, Latino, and Indigenous U.S. residents were more than double the death rate of white residents.²⁸ Reasons underlying these disparities include (1) limited access to health services;²⁹ (2) employment-related risks of exposures;³⁰ (3) increased rates of pre-existing health conditions;³¹ and (4) economic inequalities.³² Individuals experiencing

Race/Ethnicity Reported by the US Centers for Disease Control and Prevention, 3 JAMA NETWORK OPEN, 2020, at 1, 4.

28. *The Color of Coronavirus: Covid-19 Deaths by Race and Ethnicity in the U.S.*, AM. PUB. MEDIA RSCH. LAB (Mar. 5, 2021), <https://www.apmresearchlab.org/covid/deaths-by-race> [https://perma.cc/E6D7-KBG8]; see also *COVID-19: Data*, N.Y.C. HEALTH, <https://www1.nyc.gov/site/doh/covid/covid-19-data-totals.page#rates> [https://perma.cc/C38Z-KFXG] (last visited July 19, 2021) (noting the following differences in deaths per 100,000 people: 198.6 deaths involving white individuals, 332.77 deaths involving Black individuals, and 366.72 deaths involving persons identifying as Hispanic/Latino).

29. See Caitlin Owens & Andrew Witherspoon, *People of Color Have Less Access to Coronavirus Testing*, AXIOS (June 23, 2020), <https://www.axios.com/minorities-coronavirus-testing-9a6397e4-a7e7-4077-bad2-bbd77fe5d1c2.html> [https://perma.cc/64EF-H9HN] (describing that researchers found that zip codes where 75% of the population is White had “an average of one testing site for every 14,500 people” while zip codes where 75% of the population is a minority group had “an average of one site per 23,300 people.”). Minorities face challenges in access to healthcare as evidenced by high uninsured rates of Native Americans (22%), Hispanics (19%) and African Americans (12%) compared to whites (8%). Don Bambino Geno Tai et al., *The Disproportionate Impact of COVID-19 on Racial and Ethnic Minorities in the United States*, 72 CLINICAL INFECTIOUS DISEASES 703, 705–06 (2021).

30. According to the CDC, minorities are asymmetrically employed in essential work settings, including “healthcare facilities, farms, factories, warehouses, food processing, accommodation and food services, retail services, grocery stores, and public transportation,” which increases their exposure to COVID-19. See *Covid-19 Racial and Ethnic Health Disparities*, CTRS. FOR DISEASE CONTROL & PREVENTION (Dec. 10, 2020), <https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/racial-ethnic-disparities/increased-risk-exposure.html> [https://perma.cc/35EQ-8TCQ]; see also Elise Gould & Valerie Wilson, *Black Workers Face Two of the Most Lethal Preexisting Conditions for Coronavirus — Racism and Economic Inequality*, ECON. POL’Y INST. (June 1, 2020), <https://www.epi.org/publication/black-workers-covid/> [https://perma.cc/45YX-QN7H] (finding Black Americans are more likely to represent essential workers evidenced by the fact that they represent only 12% of the workforce but are approximately “[17%] of all front-line-industry workers”).

31. See Monica Webb Hooper et al., *COVID-19 and Racial/Ethnic Disparities*, 323 JAMA 2466, 2467 (2020). Minority groups have increased rates of comorbidities increasing their risk of COVID-19 mortality, including “diabetes, cardiovascular disease, asthma, HIV, morbid obesity, liver disease, and kidney disease.” *Id.*

32. See Annabel X. Tan et al., *Association Between Income Inequality and County-Level COVID-19 Cases and Deaths in the US*, 4 JAMA NETWORK OPEN, 2021, at 1, 4, <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2779417> [https://perma.cc/V4AT-B47T]. In a study of county-level data of COVID-19 cases

homelessness must often shelter, eat, and congregate in cramped settings where proper social distancing is impossible.³³ Governmental stay-in-place orders designed to abate disease spread are hard to follow among individuals lacking access to safe housing³⁴ or in crowded city infrastructures.³⁵

Months of extensive social distancing to quell COVID-19 had collateral consequences in urban settings. Economic adversity arose due to increased unemployment rates despite unprecedented government stimulus efforts.³⁶ Between January 2020 and March 2021, more than 74.7 million U.S. residents lost their jobs.³⁷ Unemployment claims in the United States rose 99% at the end of May 2021 compared to January 2020.³⁸ Since most U.S. jobs are based in urban settings, unemployment rates unsurprisingly were highest in large U.S. cities.³⁹ These collective economic impacts were

and deaths from March 2020 through February 2021, economic disparities were positively associated with COVID-19 morbidity and mortality. *Id.*

33. See Emma Grey Ellis, *The Lasting Impact of COVID-19 on Homelessness in the US*, WIRED (Jan. 20, 2021), <https://www.wired.com/story/covid-19-homelessness-future/> [https://perma.cc/26MC-7GG2].

34. See Melissa Perri et al., *COVID-19 and People Experiencing Homelessness: Challenges and Mitigation Strategies*, 192 CANADIAN MED. ASS'N J. E716, E717–18 (2020).

35. See Bijan Stephen, *A New Map Shows That You Can't Maintain Social Distancing on Many New York City Sidewalks*, VERGE (Apr. 21, 2021), <https://www.theverge.com/2020/4/21/21229683/covid-19-map-new-york-city-social-distancing-spread-coronavirus> [https://perma.cc/G9XP-BRRS] (illustrating how it is physically impossible to keep six feet of distance in accordance with social distancing mandates on New York's sidewalks).

36. See generally Rakesh Kochhar, *Unemployment Rose Higher in Three Months of COVID-19 Than It Did in Two Years of the Great Recession*, PEW RSCH. CTR. (June 11, 2020), <https://www.pewresearch.org/fact-tank/2020/06/11/unemployment-rose-higher-in-three-months-of-covid-19-than-it-did-in-two-years-of-the-great-recession/> [https://perma.cc/T2K3-ZJ6Q] (discussing the increased unemployment rate); Lorie Konish, *New Round of \$1,400 Stimulus Checks Brings Total Amount Sent to About \$291 Billion*, CNBC (May 27, 2021), <https://www.cnbc.com/2021/05/26/new-round-of-1400-stimulus-checks-brings-total-sent-to-391-billion.html> [https://perma.cc/QY9L-4BV3] (discussing the government's stimulus efforts).

37. See Brian Root & Lena Simet, *United States: Pandemic Impact on People in Poverty*, HUM. RTS. WATCH (Mar. 2, 2021), <https://www.hrw.org/news/2021/03/02/united-states-pandemic-impact-people-poverty#> [https://perma.cc/LBX3-U2KR].

38. See *COVID-19 Impact and Recovery*, USA FACTS, <https://usafacts.org/covid-recovery-hub/> [https://perma.cc/TTUM-B2P3] (last visited July 19, 2021).

39. *NYC Job Losses Proportionately Greatest Among Largest U.S. Cities*, CTR. FOR N.Y.C. AFF. (Apr. 9, 2021), <http://www.centrernyc.org/reports-briefs/2021/4/9/nyc-job-losses-proportionately-greatest-among-largest-us-cities> [https://perma.cc/7FSU-VBG5]. New York City experienced a 13.6% unemployment rate over the first year

compounded by threats of home evictions,⁴⁰ mental health impacts of social isolation,⁴¹ increased illicit drug and alcohol use,⁴² and poverty,⁴³ all present in greater degrees among U.S. urban populations during the pandemic.

II. UNIQUE CHALLENGES OF VACCINATING URBAN POPULATIONS

Following the authorization of the first COVID-19 vaccines in December 2020 by the Food and Drug Administration (FDA),⁴⁴ state and local health departments had to quickly develop and implement efficient distribution plans. Logistical challenges⁴⁵ were compounded by substantial post-holiday spikes in COVID-19 infections occurring nationally in early 2021, leading millions of U.S. residents to clamor

of the pandemic, followed by San Francisco (13.2%), Los Angeles (12.1%), Philadelphia, Boston, Miami, Washington D.C., and Chicago (9–10%). *Id.*

40. See *The Public Health Implications of Housing Instability, Eviction, and Homelessness*, NETWORK FOR PUB. HEALTH L. (Apr. 21, 2021), <https://www.networkforphl.org/resources/legal-and-policy-approaches-towards-preventing-housing-instability/the-public-health-implications-of-housing-instability-eviction-and-homelessness/> [https://perma.cc/RE3J-44DJ].

41. See Mark É. Czeisler et al., *Mental Health, Substance Use, and Suicidal Ideation During the COVID-19 Pandemic – United States, June 24–30, 2020*, 69 MORBIDITY & MORTALITY WKLY. REP. 1049, 1053 (2020). This study found that the prevalence of anxiety and depression were three and four times higher, respectively, in June 2020 compared to the second quarter of 2019. *Id.*; see also Nirmita Panchal et al., *The Implications of COVID-19 for Health and Substance Use*, KAISER FAM. FOUND. (Feb. 10, 2021), <https://www.kff.org/coronavirus-covid-19/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use/> [https://perma.cc/8EN9-GJ3X]. Eleven percent of adults reported symptoms of anxiety and/or depressive disorder from January to June 2019; 41.1% of adults reported these symptoms in January 2021. *Id.*

42. CDC reported in June 2020 that 13% of Americans admitted to beginning or increasing substance use. See Czeisler et al., *supra* note 41, at 1051.

43. See *generally COVID-19 to Add as Many as 150 Million Extreme Poor by 2021*, WORLD BANK (Oct. 7, 2020), <https://www.worldbank.org/en/news/press-release/2020/10/07/covid-19-to-add-as-many-as-150-million-extreme-poor-by-2021> [https://perma.cc/JD4C-CT7B].

44. See *FDA Takes Key Action in Fight Against COVID-19 by Issuing Emergency Use Authorization for First COVID-19 Vaccine*, FDA (Dec. 11, 2020), <https://www.fda.gov/news-events/press-announcements/fda-takes-key-action-fight-against-covid-19-issuing-emergency-use-authorization-first-covid-19#:~:text=Today%20C%20the%20U.S.%20Food%20and,years%20of%20age%20and%20older> [https://perma.cc/BG5Q-6UK6].

45. Rebecca Robbins, Frances Robles & Tim Arango, *Here's Why Distribution of the Vaccine Is Taking Longer Than Expected*, N.Y. TIMES (Jan. 11, 2021), <https://www.nytimes.com/2020/12/31/health/vaccine-distribution-delays.html> [https://perma.cc/F3BS-83SJ].

for vaccines. Immediate and extensive administrations of COVID-19 vaccines were needed to obviate morbidity and mortality occurring in U.S. cities. As free vaccines initially rolled out to states via federal allocations, the national vaccination campaign commenced. Demand quickly outstripped available supplies, requiring state or local health departments to allocate vaccines rapidly, safely, and ethically.

Seemingly overnight, large parking lots across urban locales were converted to massive vaccine points of distribution (PODs).⁴⁶ In Anaheim, California, Disneyland became a “super” POD with a goal of vaccinating 7,000 persons per day.⁴⁷ At the height of COVID-19 vaccine administration in March 2021, a 24/7 vaccination site at State Farm Stadium in Glendale, Arizona, administered one vaccine approximately every ten seconds — totaling 9,000 vaccines a day.⁴⁸ Speed on site was essential. Authorized vaccinations from Pfizer[®] and Moderna[®] each required two doses approximately three weeks apart,⁴⁹ as well as specific cold storage measures and vial distribution

46. See Toni Guinyard & Jonathan Lloyd, *Disneyland Opens as a New Front in the Battle Against Coronavirus*, NBC L.A. (Jan. 13, 2021, 12:33 PM), <https://www.nbclosangeles.com/news/coronavirus/southern-california-coronavirus/disneyland-vaccine-vaccination-coronavirus-covid-19-anaheim-orange-county/2506019/> [<https://perma.cc/FNL3-E7UC>] (“The mega-sites are technically called ‘super PODS,’ an acronym for Point of Distribution.”).

47. See *id.*

48. *State Farm Stadium COVID-19 Vaccine Site Eclipses Half a Million Doses Given*, KTAR NEWS (Mar. 15, 2021), <https://ktar.com/story/4164128/state-farm-stadium-covid-19-vaccine-site-eclipses-half-a-million-doses-given/> [<https://perma.cc/6NUX-T5A6>].

49. See Stephen M. Hahn & Peter Marks, *FDA Statement on Following the Authorized Dosing Schedules for COVID-19 Vaccines*, FDA (Jan. 4, 2021), <https://www.fda.gov/news-events/press-announcements/fda-statement-following-authorized-dosing-schedules-covid-19-vaccines> [<https://perma.cc/V7SW-PFWF>]. Only later was the single dose vaccine produced by Janssen[®], a division of Johnson & Johnson[®], authorized for use nationally by the FDA on February 27, 2021. See *FDA Issues Emergency Use Authorization for Third COVID-19 Vaccine*, FDA (Feb. 27, 2021), <https://www.fda.gov/news-events/press-announcements/fda-issues-emergency-use-authorization-third-covid-19-vaccine> [<https://perma.cc/JUQ4-Y6CF>].

limitations.⁵⁰ Assuring recipients received COVID-19 vaccines safely while mitigating waste was a daily ordeal.⁵¹

Other logistical problems arose. Registration systems in many states were difficult for persons to navigate after some websites were slowed or crashed due to high demand.⁵² Inclement weather, such as snow and heat, forced some urban PODs to close temporarily.⁵³ Enormous PODs often needed hundreds of daily volunteers to operate.⁵⁴ When COVID-19 vaccine eligibility expanded, volunteer sign-ups tapered off, and meeting personnel needs became more difficult.⁵⁵ Accessing sites that delivered COVID-19 vaccines to

50. See U.S. DEP'T OF HEALTH & HUM. SERVS., CTRS. FOR DISEASE CONTROL & PREVENTION, *VACCINE STORAGE AND HANDLING TOOLKIT* 8–15, 56 (2021), <https://www.cdc.gov/vaccines/hcp/admin/storage/toolkit/storage-handling-toolkit.pdf> [<https://perma.cc/VM79-VGQB>]. This toolkit provides acceptable temperature storage requirements for COVID-19 vaccines, e.g., the Pfizer vaccine must be stored in one of three ways, and each affects the longevity of the vaccine's potency: "Ultra-cold: -80° C and -60° C (-112° F and -76° F) . . . Frozen: -25° C and -15° C (-13° F to 5° F) for up to 2 weeks . . . Refrigerated: 2° C and 8° C (36° F and 46° F) for up to five days (120 hours)." *Id.*

51. See Dana Rubinstein, *After Unused Vaccines Are Thrown in Trash, Cuomo Loosens Rules*, N.Y. TIMES (Jan. 17, 2021), <https://www.nytimes.com/2021/01/10/nyregion/new-york-vaccine-guidelines.html> [<https://perma.cc/W2U5-BUVT>].

52. See generally Giulia McDonnell Nieto del Rio & Christina Morales, *Demand Overwhelms Some U.S. Vaccine Registration Sites*, N.Y. TIMES (Apr. 12, 2021), <https://www.nytimes.com/live/2021/01/09/world/covid-19-coronavirus> [<https://perma.cc/7QC7-U3ZT>].

53. See *Is My Vaccine POD Canceled? Health Department Releases Inclement Weather Plans*, KFOR NEWS (Feb. 9, 2021, 7:31 AM), <https://kfor.com/news/coronavirus/is-my-vaccine-pod-canceled-health-department-releases-inclement-weather-plans/> [<https://perma.cc/B57X-JF6Z>]; see also Christina Duran, *Kino Stadium Outdoor Vaccination Site Will Close Due to Heat*, TUCSON LOC. MEDIA (Apr. 14, 2021), https://www.tucsonlocalmedia.com/health_care/article_e7b90bb4-9d5f-11eb-80f6-43ada9690515.html [<https://perma.cc/6NFW-TH6R>].

54. See Ciara Encinas, *Vaccine Volunteers Needed at UArizona Pod*, KGUN9 (Apr. 3, 2021, 7:01 PM), <https://www.kgun9.com/news/coronavirus/vaccine-volunteers-needed-at-uarizona-pod> [<https://perma.cc/MZ6C-TMPU>]; see also Natasha Vaughn, *Help Needed for COVID Vaccine Distribution*, HUDSONVALLEY360 (Jan. 25, 2021), https://www.hudsonvalley360.com/news/publicserviceneeds/help-needed-for-covid-vaccine-distribution/article_3ba0abb7-84a1-58a1-be7b-20521f68a421.html [<https://perma.cc/GW4W-KFDN>] (stating that "hundreds of volunteers" would be needed to accomplish New York's COVID-19 vaccination goals).

55. See Kim Powell, *Vaccine Sites Worry of Volunteer Shortage amid Eligibility Announcement*, AZFAMILY (Mar. 22, 2021), https://www.azfamily.com/news/continuing_coverage/coronavirus_coverage/vacciWhilene-sites-worry-of-volunteer-shortage-amid-eligibility-announcement/article_a0b30b18-8b92-11eb-8461-5b1857cbc144.html [<https://perma.cc/4RRV-VYGJ>]; see also *Vaccination Site Volunteers Needed as Eligibility Expands*, MSN (Apr. 3, 2021),

persons in their vehicles proved troublesome for urban individuals who lacked time off work,⁵⁶ reliable internet access,⁵⁷ or transportation.⁵⁸ Using websites to make COVID-19 vaccine appointments was difficult, especially for elderly persons without computer skills⁵⁹ and low-income individuals lacking access to affordable internet.⁶⁰ Communication barriers stymied millions of U.S. urban residents from getting vaccinated as information on access was not always well-translated into various languages.⁶¹

Despite substantial logistical challenges, tens of millions of U.S. residents received COVID-19 vaccines in the first 100 days of President Biden's term.⁶² Still, the White House acknowledged on June 22, 2021, that the national goal of inoculating 70% of U.S. residents by July 4, 2021, was unattainable.⁶³ Inoculating others in the months ahead was plagued by another issue that logistics cannot

<https://www.msn.com/en-us/money/smallbusiness/vaccination-site-volunteers-needed-as-eligibility-expands/vp-BB1fhcFu> [<https://perma.cc/564U-BTYZ>].

56. See Darian Benson, *Taking Time Off Work Can Be Barrier for Many in Getting Vaccinated*, WFYI INDIANAPOLIS (May 20, 2021), <https://www.wfyi.org/news/articles/taking-time-off-work-can-be-barrier-for-many-in-getting-vaccinated> [<https://perma.cc/ZK7C-8NNM>].

57. See Valerie G. Press et al., *Inequities in Technology Contribute to Disparities in COVID-19 Vaccine Distribution*, JAMA HEALTH F. (Mar. 19, 2021), <https://jamanetwork.com/journals/jama-health-forum/fullarticle/2777888> [<https://perma.cc/787B-NMU5>].

58. See Jenni Bergal, *Without a Ride, Many in Need Have No Shot at COVID-19 Vaccine*, PEW TRS. (Feb. 1, 2021), <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2021/02/01/without-a-ride-many-in-need-have-no-shot-at-covid-19-vaccine> [<https://perma.cc/HH92-5KYR>].

59. See Patty Nieberg & Suman Naishadham, *Online Sign-Ups Complicate Vaccine Rollout for Older People*, ASSOC. PRESS NEWS (Jan. 15, 2021), <https://apnews.com/article/us-news-coronavirus-pandemic-colorado-dc75b5356a80dd9fe122ab18a9323374> [<https://perma.cc/FA59-93SV>].

60. See Tom Wheeler, *5 Steps to Get the Internet to All Americans: COVID-19 and the Importance of Universal Broadband*, BROOKINGS (May 27, 2020), <https://www.brookings.edu/research/5-steps-to-get-the-internet-to-all-americans/> [<https://perma.cc/BAQ6-NL9G>].

61. See Jocelyn Solis-Moreira, *How Communities Are Breaking Down COVID-19 Vaccine Language Barriers*, VERYWELL HEALTH (May 6, 2021), <https://www.verywellhealth.com/is-language-a-barrier-to-covid-19-vaccination-5183758> [<https://perma.cc/5S3V-WRJX>].

62. See Nate Rattner & Kevin Breuninger, *200 Million Vaccine Shots, Hot Markets, Big Spending — Biden's First 100 Days, in Charts*, CNBC (Apr. 30, 2021, 8:11 AM), <https://www.cnbc.com/2021/04/30/bidens-first-100-days-in-charts-vaccines-hot-markets-big-spending.html> [<https://perma.cc/QP8Q-VNKL>].

63. See Sheryl Gay Stolberg, *With Mass Vaccination Sites Winding Down, It's All About the 'Ground Game,'* N.Y. TIMES (June 22, 2021), <https://www.nytimes.com/2021/06/22/us/politics/mass-vaccination-sites-coronavirus.html> [<https://perma.cc/RAP4-P8DT>].

alone solve: *vaccine hesitancy*. Millions of residents are leery of vaccines generally, and COVID-19 vaccines specifically.⁶⁴ Varied reasons include religious, political, or philosophical objections; fears over safety, widespread anti-vax misinformation, and entrenched distrust of governmental public health efforts.⁶⁵ This latter concern is pronounced among people of color⁶⁶ who have faced prior instances of government abuse or inattention related to their health needs.⁶⁷

III. PUBLIC AND PRIVATE SECTOR EFFORTS TO MAXIMIZE URBAN VACCINATION RATES

Manifold challenges related to vaccinating urban populations in the United States generated an array of public and private sector real-time efforts to improve immunization rates through enhanced

64. See Tracie O. Afifi et al., *How to Increase COVID-19 Vaccine Uptake and Decrease Vaccine Hesitancy in Young People*, CONVERSATION (May 27, 2021, 4:40 PM), <https://theconversation.com/how-to-increase-covid-19-vaccine-uptake-and-decrease-vaccine-hesitancy-in-young-people-161071> [<https://perma.cc/PU3P-VCRB>].

65. See Elizabeth Dias & Ruth Graham, *White Evangelical Resistance Is Obstacle in Vaccination Effort*, N.Y. TIMES (Apr. 12, 2021), <https://www.nytimes.com/2021/04/05/us/covid-vaccine-evangelicals.html> [<https://perma.cc/6ZRY-YQ2X>] (religious and political objections); see also *States with Religious and Philosophical Exemptions From School Immunization Requirements*, NAT'L CONF. ST. LEGISLATURES (Apr. 30, 2021), <https://www.ncsl.org/research/health/school-immunization-exemption-state-laws.aspx> [<https://perma.cc/3H2R-NEGN>] (describing religious and philosophical objections); Allyson Chiu & Lindsey Bever, *Are They Experimental? Can They Alter DNA? Experts Tackle Lingerin Coronavirus Vaccine Fears.*, WASH. POST (May 14, 2021, 8:00 AM), <https://www.washingtonpost.com/lifestyle/2021/05/14/safe-fast-vaccine-fear-infertility-dna/> [<https://perma.cc/6BV8-MECJ>] (describing anti-vax misinformation and vaccine distrust).

66. According to the de Beaumont Foundation, groups less likely to be “absolutely certain” to get the vaccine include Black Americans aged 18 to 49. *New Poll Reveals Most Effective Language to Improve COVID-19 Vaccine Acceptance*, DE BEAUMONT, <https://debeaumont.org/changing-the-covid-conversation/vaccineacceptance/> [<https://perma.cc/7XLS-48W3>] (last visited Oct. 20, 2021).

67. See Martha Hostetter & Sarah Klein, *Transforming Care: Understanding and Ameliorating Medical Mistrust Among Black Americans*, COMMONWEALTH FUND (Jan. 14, 2021), <https://www.commonwealthfund.org/publications/newsletter-article/2021/jan/medical-mistrust-among-black-americans> [<https://perma.cc/G9QK-MQ86>] (“The medical establishment has a long history of mistreating Black Americans — from gruesome experiments on enslaved people to the forced sterilizations of Black women and the infamous Tuskegee syphilis study that withheld treatment from hundreds of Black men for decades to let doctors track the course of the disease.”); see also Simar Singh Bajaj & Fatima Cody Stanford, *Beyond Tuskegee — Vaccine Distrust and Everyday Racism*, 384 NEW ENG. J. MED. 12 (Feb. 4, 2021), <https://www.nejm.org/doi/full/10.1056/NEJMp2035827> [<https://perma.cc/27P2-5B6R>] (“Every day, Black Americans have their pain denied, their conditions misdiagnosed, and necessary treatment withheld by physicians.”).

coordination and funding, equitable allocation of health resources, education campaigns, incentives, and vaccine mandates.

Extensive coordination by the White House enabled the infusion of greater doses of vaccines to states, opened federally-operated vaccine sites in dozens of locales, targeted specific at-risk populations for vaccine priority, and provided benefits for those seeking vaccines.⁶⁸ President Biden's National COVID-19 Strategic Plan promoted vaccine access and confidence in urban and ethnic communities disparately impacted by the pandemic.⁶⁹ On January 21, 2021, the President established the COVID-19 Health Equity Task Force⁷⁰ to help ensure equitable access to COVID-19 vaccines.⁷¹ From February to June 2021, federal authorities allocated \$10 billion to directly increase vaccine access in underserved populations, expand vaccine eligibility in community health centers that predominately serve minorities and low-income individuals, and support local efforts to reduce vaccine hesitancy.⁷² In April 2021, President Biden called

68. See Press Release, White House, Press Briefing by White House COVID-19 Response Team and Public Health (June 8, 2021, 10:19 AM) [hereinafter White House, Press Briefing], <https://www.whitehouse.gov/briefing-room/press-briefings/2021/06/08/press-briefing-by-white-house-covid-19-response-team-and-public-health-official/> [<https://perma.cc/8TNU-FFP2>].

69. See WHITE HOUSE COVID-19 RESPONSE, *supra* note 12. As of May 2021, community health centers central in President Biden's plan to ensure vaccine equity delivered more than 10 million COVID-19 vaccine doses nationwide. *More Than 10 Million COVID-19 Vaccine Doses Administered by Community Health Centers*, U.S. DEP'T HEALTH & HUM. SERVS. (May 19, 2021), <https://www.hhs.gov/about/news/2021/05/19/more-10-million-covid-19-vaccine-doses-administered-community-health-centers.html> [<https://perma.cc/M83C-XHTTP>]. Over 60% of these COVID-19 vaccine doses were administered to racial and ethnic minorities. *Id.*

70. See WHITE HOUSE COVID-19 RESPONSE, *supra* note 12, at 93–97. This task force, for example, coordinated with Black, Indigenous, and People of Color (BIPOC) communities to “advance culturally responsive communications that are sensitive to their concerns about COVID-19 vaccines in ways to improve equitable access and acceptance rates.” *Readout of the Second COVID-19 Health Equity Task Force Meeting*, DEP'T HEALTH & HUM. SERVS. (Apr. 13, 2021), <https://www.hhs.gov/about/news/2021/04/13/readout-second-covid-19-health-equity-task-force-meeting.html> [<https://perma.cc/LM7C-YRJQ>].

71. See WHITE HOUSE COVID-19 RESPONSE, *supra* note 12, at 96.

72. See Press Release, White House, FACT SHEET: Biden Administration Announces Historic \$10 Billion Investment to Expand Access to COVID-19 Vaccines and Build Vaccine Confidence in Hardest-Hit and Highest-Risk Communities (Mar. 25, 2021), <https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/25/fact-sheet-biden-administration-announces-historic-10-billion-investment-to-expand-access-to-covid-19-vaccines-and-build-vaccine-confidence-in-hardest-hit-and-highest-risk-communities/> [<https://perma.cc/RBK8-VQHK>].

on employers to provide paid time off for employees to receive a COVID-19 vaccine, allowing a tax credit to help offset costs.⁷³

State and local governments simultaneously worked to equitably allocate resources to improve vaccine uptake among urbanites. Some states — California,⁷⁴ Rhode Island,⁷⁵ Utah⁷⁶ — and the District of Columbia⁷⁷ expressly prioritized minorities, low-income populations, and homeless individuals for COVID-19 vaccine access.

73. See Press Release, White House, FACT SHEET: President Biden to Call on All Employers to Provide Paid Time Off for Employees to Get Vaccinated After Meeting Goal of 200 Million Shots in the First 100 Days (Apr. 21, 2021), <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/21/fact-sheet-president-biden-to-call-on-all-employers-to-provide-paid-time-off-for-employees-to-get-vaccinated-after-meeting-goal-of-200-million-shots-in-the-first-100-days/> [https://perma.cc/Q8KY-9SY5].

74. See Nami Ndugga, Samantha Artiga & Olivia Pham, *How Are States Addressing Racial Equity in COVID-19 Vaccine Efforts?*, KAISER FAM. FOUND. (Mar. 10, 2021), <https://www.kff.org/racial-equity-and-health-policy/issue-brief/how-are-states-addressing-racial-equity-in-covid-19-vaccine-efforts> [https://perma.cc/2VFR-8HJM]. In early 2021, California implemented a code system to provide Black and Hispanic communities with priority access to vaccine appointments. *Id.* However, reports of misuse of the system emerged in February 2021. See Julia Wick, *Vaccine Access Codes for Hard-Hit Black, Latino Communities Improperly Used in Other L.A. Areas*, L.A. TIMES (Feb. 23, 2021, 8:18 AM), <https://www.latimes.com/california/story/2021-02-22/vaccine-access-codes-for-hard-hit-communities-of-color-circulate-widely-in-affluent-l-a> [https://perma.cc/D27F-RPYA]. California intended its special access codes to create appointments in communities of color, yet these codes were soon circulated to wealthy individuals working from home who were not yet eligible for the vaccine. *Id.*

75. See Ndugga et al., *supra* note 74. In January 2021, Rhode Island's Department of Health prioritized vaccine distribution in communities at elevated risk for serious COVID-19 complications. Press Release, R.I. Dep't of Health, Plan Announced for Next Phase of COVID-19 Vaccine Administration (Jan. 28, 2021), <https://www.ri.gov/press/view/40307> [https://perma.cc/8K9B-ESG8]. These efforts targeted Rhode Island's most urban cities such as Providence, Cranston, and Pawtucket. *Id.*

76. See Ndugga et al., *supra* note 74. Utah prioritized racial and ethnic groups at increased risk of severe COVID-19 complications in Phase 1c of their vaccine prioritization plan. *Id.*

77. Washington D.C. changed its appointment system to prioritize people living in low-income, underserved areas. See *DC Health to Make Additional Vaccination Appointments Available to Residents of Wards 1, 4, 5, 7, and 8 on Saturday, January 16*, D.C. EXEC. OFF. MAYOR (Jan. 15, 2021), <https://mayor.dc.gov/release/dc-health-make-additional-vaccination-appointments-available-residents-wards-1-4-5-7-and-8> [https://perma.cc/BY66-LWV4]. All homeless adults in Washington D.C. became eligible for the vaccine in January 2021. Carla K. Johnson, *Homeless Americans Finally Getting a Chance at COVID-19 Shot*, ASSOC. PRESS NEWS (Apr. 14, 2021), <https://apnews.com/article/homeless-shelters-san-francisco-health-coronavirus-pandemic-seattle-3aa7e2314032079c16d50d942a53531b> [https://perma.cc/DK2Q-5DTZ]. From January to April 2021, the District vaccinated thousands of homeless individuals and handed out bracelets printed with second-dose appointment dates. *Id.*

Massachusetts set aside additional vaccine doses for communities disproportionately impacted by the pandemic.⁷⁸

Additional public sector programs addressed individuals' transportation obstacles in obtaining the vaccine.⁷⁹ To increase access, Miami and other large municipalities created pop-up vaccination sites at beaches, airports, churches, and other locales.⁸⁰ Elderly people living in senior affordable housing units in Philadelphia received vaccines through mobile vaccine units.⁸¹ To

78. In December 2020, Governor Baker of Massachusetts declared that the State would allocate 20% of its vaccine supply to people of color most vulnerable in the pandemic. Deanna Pan, *Vaccine Rollout Earmarks Additional Doses for Hard-Hit Mass. Communities. But Delivering on That Could Be a Challenge*, BOS. GLOBE (Dec. 22, 2020, 11:30 AM), <https://www.bostonglobe.com/2020/12/22/nation/vaccine-rollout-earmarks-additional-doses-hard-hit-mass-communities-delivering-that-could-be-challenge/> [https://perma.cc/2UNT-PZ7J].

79. California implemented mobile vaccination sites to reach people who do not have adequate means of transportation. See Ariel Cohen, *Broader Vaccine Eligibility May Exacerbate Racial Inequities*, ROLL CALL (Apr. 13, 2021, 11:56 AM), <https://www.rollcall.com/2021/04/13/broader-vaccine-eligibility-may-exacerbate-racial-inequities/> [https://perma.cc/U2JM-HF2L]. In San Francisco, mobile units prioritized seniors in affordable family housing facilities. Press Release, Off. of the Mayor of S.F., San Francisco's Mobile Vaccination Unit to Vaccinate up to 1,000 Seniors in Chinatown Senior Living Facilities (Mar. 26, 2021), https://www.sfdph.org/dph/alerts/files/03.26.21_Mobile_Vaccinations.pdf [https://perma.cc/D6N6-PXEW]. After seven months of vaccination efforts, as of June 11, 2021, over 80% of San Francisco residents were vaccinated. See Matt Charnock, *Day Around the Bay: 80% of San Francisco Residents Now Vaccinated Against COVID-19*, SFIST (June 11, 2021), <https://sfist.com/2021/06/11/day-around-the-bay-80-of-san-francisco-residents-now-vaccinated-against-covid-19/> [https://perma.cc/E5EV-HPRY].

80. See, e.g., Brandon Anaya & Sheila Hodges, *Philadelphia Organizations Work to Educate and Provide Vaccines to At-Risk Populations*, DAILY PA. (Mar. 29, 2021, 2:07 AM), <https://www.thedp.com/article/2021/03/philadelphia-vaccine-rollout-inequities-community-leaders-penn-experts> [https://perma.cc/9FFT-NFBH]; Jessica D'Onofrio & Sarah Schulte, *Chicago Takes New Approach to Vaccinate Hard-To-Reach Residents as Mass Vaccination Sites Close*, EYEWITNESS NEWS (May 31, 2021), <https://abc7chicago.com/chicago-covid-vaccine-after-near-me/10721998/> [https://perma.cc/3DZH-8NG6]; Veronica Zaragovia, *Miami Tries To Make Vaccinations Easy: 'Wherever People Are That's Where We Will Be'*, NPR (May 17, 2021, 5:00 AM), <https://www.npr.org/2021/05/17/996912899/miami-tries-to-make-vaccinations-easy-wherever-people-are-thats-where-we-will-be> [https://perma.cc/RT46-4LDW]. New York placed pop-up vaccination sites in subway stations. See Jennifer Millman, *Love Free Stuff? NY Rolls Out Suite of Incentives to Get People Vaccinated as Rates Plunge*, NBC N.Y. (May 10, 2021, 11:58 PM), <https://www.nbcnewyork.com/news/coronavirus/fauci-hints-at-seasonal-future-for-masks-as-nys-rolling-covid-positivity-rate-drops-for-34th-straight-day/3045707/> [https://perma.cc/FQX3-M6A6]. Any persons vaccinated at these locations can obtain free subway rides. *Id.*

81. See Ellie Rushing & Oona Goodin-Smith, *Mobile Vaccine Clinics Ramp up Efforts to Reach Philly's Most Vulnerable Communities: 'Let's Bring Vaccine to*

accommodate working minorities, Jersey City offered COVID-19 vaccine appointments on Saturdays and evenings.⁸² Rideshare companies Uber® and Lyft® gave free rides to vaccination sites.⁸³ Nearly 50 urban school districts, including those in New York City, Los Angeles, Cleveland, and Detroit, administered COVID-19 vaccines in school buildings to students and their families.⁸⁴

Many states targeted communications to promote vaccine education, awareness, and trust in urban communities disproportionately impacted by the COVID-19 virus.⁸⁵ Tailoring to

Them, PHILA. INQUIRER (Mar. 23, 2021), <https://www.inquirer.com/health/coronavirus/mobile-covid-vaccine-philadelphia-coronavirus-20210323.html> [<https://perma.cc/G6C9-9PRM>].

82. See, e.g., Teri West, *Jersey City and Religious Leaders Take on the Racial Disparity in Vaccination of City Residents*, JERSEY J. (Apr. 30, 2021), <https://www.nj.com/hudson/2021/04/jersey-city-and-religious-leaders-take-on-the-racial-disparity-in-vaccination-of-city-residents.html> [<https://perma.cc/W6YM-596X>].

83. See Press Release, White House, FACT SHEET: President Biden to Announce Additional Efforts to Get America Vaccinated, Including Free Rides to Vaccination Sites from Lyft and Uber, Vaccination Clinics at Community Colleges, and Additional Resources for States' Community Outreach Efforts (May 11, 2021), <https://www.whitehouse.gov/briefing-room/statements-releases/2021/05/11/fact-sheet-president-biden-to-announce-additional-efforts-to-get-america-vaccinated-including-free-rides-to-vaccination-sites-from-lyft-and-uber-vaccination-clinics-at-community-colleges-and-addit/> [<https://perma.cc/J6GE-8BXA>].

84. See Yoree Koh, *Can Schools Mandate Covid-19 Vaccines for Children? What We Know*, WALL ST. J. (June 11, 2021, 8:00 AM), <https://www.wsj.com/articles/can-schools-mandate-covid-19-vaccines-for-children-what-we-know-11623412802> [<https://perma.cc/MAD6-NK6U>].

85. To increase vaccine confidence and knowledge in major cities and underserved communities, beginning in February 2021, the Massachusetts Department of Public Health disseminated linguistically and culturally relevant education materials to individuals in its cities most detrimentally impacted by COVID-19. Press Release, Mass. Dep't of Pub. Health, Baker-Polito Administration Launches Targeted Outreach Initiative in 20 Hardest Hit Communities to Increase Equity in COVID-19 Vaccine Awareness and Access; \$1m to Support Vaccination in Historically Underserved Communities (Feb. 16, 2021), <https://www.mass.gov/news/baker-polito-administration-launches-targeted-outreach-initiative-in-20-hardest-hit> [<https://perma.cc/SAD2-6PHZ>]. In February and March 2021, officials in the Ohio Department of Health hosted virtual town halls to address concerns among Black, Hispanic, Asian, and Pacific Islander residents. Lisa Ryan, *Ohio Health Officials Tackle COVID-19 Vaccine Myths in Virtual Town Halls*, WOUB (Feb. 22, 2021), <https://woub.org/2021/02/22/ohio-health-officials-tackle-covid-19-vaccine-myths-in-virtual-town-halls/> [<https://perma.cc/N5YP-8ZJZ>]. In April 2021, New Jersey health officials partnered with trusted community leaders to organize group vaccinations and hold frequent vaccine information sessions including information distributed in multiple languages. West, *supra* note 82. In May 2021, Maryland's Department of Health redeployed its mobile public health education unit within neighborhoods most impacted by the pandemic to share information about the COVID-19 vaccine in English and Spanish. *Maryland Department of Health Redeploys COVID-19 Mobile Vaccination Public Education Unit in Baltimore*

multicultural and linguistically diverse urbanites, information was offered in multiple languages and catered to specific concerns about safety among ethnic groups.⁸⁶ Community leaders engaged in similar vaccine promotions among urban dwellers.⁸⁷

To boost COVID-19 vaccinations, public and private entities crafted direct incentives or rewards in exchange for receiving the vaccine.⁸⁸ Innovative programs included free food, alcohol, marijuana joints,⁸⁹ movie and event tickets, raffles, giveaways, and vaccine lotteries.⁹⁰ Private industries and businesses incentivized employees and customers to get vaccinated through direct payments or rewards.⁹¹ Large urban corporations like Amazon⁹² provided

Communities, MD. DEP'T HEALTH (May 26, 2021), <https://health.maryland.gov/newsroom/Pages/Maryland-Department-of-Health-redeploys-COVID-19-mobile-vaccination-public-education-unit-in-Baltimore-communities.aspx> [https://perma.cc/YQ5U-2SZF].

86. Local leaders shared their own experiences with the vaccine to alleviate concerns about the vaccine's safety. *See* West, *supra* note 82.

87. For example, in May 2021, members of Black fraternities and sororities partnered with doctors and nurses in Miami to hold recruitment events encouraging vaccination. *See* Zaragovia, *supra* note 80. Throughout the spring and summer in Chicago, local citizens created teams that went door to door to encourage vaccination in communities with the lowest vaccination rates in the city. Becky Vevea, *Chicago Workers Are Going Door to Door to Improve Vaccination Rates*, WBEZ CHI. (June 4, 2021, 12:11 PM), <https://www.wbez.org/stories/chicago-workers-are-going-door-to-door-to-improve-vax-rates/3dd49445-4418-48e0-88aa-549b0a820042> [https://perma.cc/B7X4-X68P].

88. *See* Christine Vestal, *States Ply COVID Unvaccinated with Cash, Beer, Scholarships*, PEW TRS. (June 4, 2021), <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2021/06/04/states-ply-covid-unvaccinated-with-cash-beer-scholarships> [https://perma.cc/GH8B-Y428].

89. Jesus Jiménez, *Washington State Allows for Free Marijuana with Covid-19 Vaccine*, N.Y. TIMES (June 7, 2021), <https://www.nytimes.com/2021/06/07/us/washington-marijuana-covid-vaccine.html> [https://perma.cc/5TRY-EB3M].

90. *See* Vestal, *supra* note 88. Among other states, California, Colorado, Maryland, New Mexico, New York, Oregon, Washington, and West Virginia launched lottery opportunities for individuals receiving vaccinations. *Id.* New Jersey residents who obtain vaccination can sign up for a chance to win a dinner with the Governor. *Id.* The first 100,000 Minnesotans to get vaccinated by June 30, 2021, can choose awards such as park passes, fishing licenses, and tickets to summer attractions. Press Release, Off. of Governor Tim Walz, Governor Walz Launches 'Your Shot to Summer' Incentives Campaign Encouraging COVID-19 Vaccinations by July 1 (May 27, 2021), <https://mn.gov/governor/news/?id=1055-483312> [https://perma.cc/5ZSX-BASL]. In May 2021, Ohio Governor Mike DeWine announced that any adult resident who receives a COVID-19 vaccine may enter drawings to win \$1 million or several full-ride scholarships to one of Ohio's state colleges. *See* Mervosh, *supra* note 15.

91. *See* Hodge et al., *supra* note 13. Krispy Kreme® announced that anyone who showed their vaccination card could get a free doughnut every day through 2021. *Be*

COVID-19 vaccines on site for their employees. Collectively, these incentives or accommodations offset indirect costs of transportation or childcare underlying COVID-19 vaccination that might otherwise deter low-income, urban communities.⁹³ The immediate hope was for these incentives to increase COVID-19 vaccination rates, but long-term effects on vaccine confidence were forecast as well despite doubts and suggestions that funds be used to directly address vaccine hesitancy.⁹⁴

With more than half the nation still unvaccinated as of mid-June 2021,⁹⁵ mandates surfaced in the public and private sectors. The state of New York introduced digital proof-of-vaccination passes for business use among persons seeking admission to large events.⁹⁶

Sweet to Your Community: Covid-19 Vaccine Offer, KRISPY KREME, <https://www.krispykreme.com/promos/vaccineoffer> [https://perma.cc/9RYV-Q6UJ] (last visited June 18, 2021). NASCAR[®] announced that vaccinated individuals could win tickets to the 2022 Daytona 500 race. *NASCAR Supports Vaccine Awareness with Daytona 500 Ticket Giveaways*, NASCAR (May 7, 2021, 1:00 PM), <https://www.nascar.com/news-media/2021/05/07/nascar-supports-vaccine-awareness-with-daytona-500-ticket-giveaways/> [https://perma.cc/37M6-TNKE]. Anheuser-Busch[®] indicated it would provide a free beer to all vaccinated adults as soon as the nation reaches the President's 70% vaccination goal. *Anheuser-Busch Teams Up with The White House to Support Goal of Getting 70% of Adults Partially Vaccinated by July 4th*, PR NEWSWIRE (June 2, 2021), <https://www.prnewswire.com/news-releases/anheuser-busch-teams-up-with-the-white-house-to-support-goal-of-getting-70-of-adults-partially-vaccinated-by-july-4th-301303832.html> [https://perma.cc/L8KQ-J85B].

92. *Amazon Starts On-Site COVID-19 Vaccination for U.S. Employees*, REUTERS (Mar. 25, 2021, 12:05 PM), <https://www.reuters.com/article/us-health-coronavirus-amazon-com-vaccine/amazon-starts-on-site-covid-19-vaccination-for-u-s-employees-idUSKBN2BH317> [https://perma.cc/VNR6-WSWC].

93. Kevin G. Volpp & Carolyn C. Cannuscio, *Incentives for Immunity – Strategies for Increasing COVID-19 Vaccine Uptake*, NEW ENG. J. MED. (May 26, 2021), <https://www.nejm.org/doi/pdf/10.1056/NEJMp2107719?articleTools=true> [https://perma.cc/M4HF-SHD3].

94. See, e.g., Allan J. Walkey, Anica Law & Nicholas A. Bosch, *Lottery-Based Incentive in Ohio and COVID-19 Vaccination Rates*, JAMA (July 2, 2021), <https://jamanetwork.com/journals/jama/fullarticle/2781792> [https://perma.cc/PME3-Z262] (finding no evidence of an association between increased COVID-19 vaccinations and Ohio's lottery-based vaccine incentive).

95. Dan Levin & Julie Bosman, *U.S. Nears 600,000 Virus Deaths Despite Progress from Vaccines*, N.Y. TIMES (June 17, 2021), <https://www.nytimes.com/2021/06/15/us/virus-deaths.html> [https://perma.cc/Q6S2-STXH].

96. Sharon Otterman, *Will the Excelsior Pass, New York's Vaccine Passport, Catch On?*, N.Y. TIMES (June 15, 2021), <https://www.nytimes.com/2021/06/01/nyregion/excelsior-pass-vaccine.html> [https://perma.cc/9AC6-J3P2]. Additionally, some U.S. airlines are already testing digital health and vaccine programs. See Linda Chiem, *As CDC Eases Travel*

Over 1,000 private and public universities planned to require students and others to get vaccinated before attending in-person class in fall 2021.⁹⁷ Individuals avoiding the COVID-19 vaccine in other higher education institutions may have to submit to regular testing or donning of face masks.⁹⁸ Once the COVID-19 vaccine is approved for all ages, vaccine mandates in K-12 schools may emerge, barring contrary state legislation or other legal roadblocks.⁹⁹

IV. UNDERLYING AND EMERGING LAW AND POLICY ISSUES

Dispensing and administering COVID-19 vaccines across urban environments entail several key legal and policy complications. Equity in COVID-19 vaccination allocation is a primary concern.¹⁰⁰ As explained above, state allocation schemes varied in terms of their prioritization of marginalized communities. Only 21 states and D.C., for example, expressly included homeless shelters in Phase One priority vaccination groups.¹⁰¹ The Centers for Disease Control and Prevention (CDC) recognized the importance of prioritizing homeless populations for COVID-19 vaccines but did not *require* states to do so.¹⁰² When public health authorities in Dallas, Texas, set aside COVID-19 vaccines for at-risk, minority populations in urban

Guidance, Are ‘Vaccine Passports’ Next?, LAW360 (Apr. 2, 2021, 8:20 PM), <https://www.law360.com/articles/1371784> [<https://perma.cc/99XX-345Y>].

97. See Thomason & O’Leary, *supra* note 14.

98. See, e.g., *ASU Policy Expecting Students to Be Fully Vaccinated Against COVID-19 Met with Backlash*, FOX10 PHX. (June 15, 2021), <https://www.fox10phoenix.com/news/asu-policy-expecting-students-to-be-fully-vaccinated-against-covid-19-met-with-backlash> [<https://perma.cc/69LU-98ZC>].

99. See Koh, *supra* note 84.

100. *Tensions over Vaccine Equity Pit Rural Against Urban America*, MOD. HEALTHCARE (Mar. 1, 2021, 7:30 PM), <https://www.modernhealthcare.com/safety-quality/tensions-over-vaccine-equity-pit-rural-against-urban-america> [<https://perma.cc/R6AT-A2Y6>].

101. See *State Plans for Vaccinating Their Populations Against COVID-19*, NAT’L ACAD. FOR ST. HEALTH POL’Y (Apr. 19, 2021), <https://www.nashp.org/each-states-plan-for-vaccinating-its-populations-against-covid-19/> [<https://perma.cc/CWN9-J8QF>] (outlining state priority distribution plans as of April 2021 for COVID-19 vaccination, including homeless shelters).

102. *Interim Guidance on COVID-19 Vaccination Implementation*, CTRS. FOR DISEASE CONTROL & PREVENTION (Apr. 30, 2021), <https://www.cdc.gov/coronavirus/2019-ncov/community/homeless-shelters/vaccination-guidance.html> [<https://perma.cc/YJR5-49MX>] (“Vaccination for people experiencing homelessness is important Because of the increased risk . . . some states have prioritized people experiencing homelessness and homeless service staff in earlier vaccination phases.”).

settings, they were met with claims of discriminatory practices.¹⁰³ New Hampshire Governor Sununu was sued on equal protection grounds over his administration's plans to prioritize vaccines toward populations most affected by the COVID-19 virus.¹⁰⁴

Intense legal issues undergirding vaccination mandates¹⁰⁵ may particularly affect urban populations, given the high concentration of persons, jobs, entertainment venues, government centers, businesses, and universities in urban areas. Public-sector vaccination mandates have been upheld by the U.S. Supreme Court since 1905 in *Jacobson v. Massachusetts*.¹⁰⁶ Despite the proven safety of FDA-authorized COVID-19 vaccines, individuals nationally have filed lawsuits challenging COVID-19 vaccine mandates. The primary claim is that people cannot be required to take experimental vaccines available solely through FDA's emergency use authorization.¹⁰⁷

103. See Emma Platoff & Juan Pablo Garnham, *Dallas County Axes Plan to Prioritize Vaccinating Communities of Color After State Threatens to Slash Allocation*, TEX. TRIB. (Jan. 20, 2021, 6:00 PM), <https://www.texastribune.org/2021/01/20/dallas-vaccine-plan-communities-of-color/> [<https://perma.cc/MV7K-A9V2>].

104. See, e.g., Complaint at 10–14, *Pietrangelo v. Sununu*, No. 1:21-cv-00124 (D.N.H. Feb. 4, 2021) (challenging New Hampshire's vaccine allocation scheme as violating equal protection by prioritizing on the basis of equity).

105. See Daniel Funke, *Fact Check: Federal Law Does Not Prevent States, Businesses, Employers from Requiring COVID-19 Vaccines*, USA TODAY (May 25, 2021, 10:51 AM), <https://www.usatoday.com/story/news/factcheck/2021/05/25/fact-check-federal-law-doesnt-prohibit-covid-19-vaccine-mandates/5062104001/> [<https://perma.cc/Y769-52GW>] (“There is a legal gray area for requiring vaccines approved for emergency use versus those that are FDA-approved, although legal experts say there is no explicit distinction in the law.”); see also Dorit Rubinstein Reiss, *Can Employers Mandate a Vaccine Under Emergency Use Authorization?*, BILL HEALTH (Feb. 24, 2021), <https://blog.petrieflom.law.harvard.edu/2021/02/24/employer-mandate-covid-vaccine-eua/> [<https://perma.cc/L9SC-C852>].

106. 197 U.S. 11 (1905) (rejecting a challenge to a Massachusetts city's requirement for residents to get the smallpox vaccine or pay a \$5 fine, holding that state police powers encompass the power to mandate vaccination, subject to certain legal constraints, including the requirement that those with medical contraindications to vaccination be allowed to abstain).

107. See Isaac Stanley-Becker, *Resistance to Vaccine Mandates Is Building. A Powerful Network Is Helping*, WASH. POST (May 26, 2021, 1:28 PM), <https://www.washingtonpost.com/health/2021/05/26/vaccine-mandate-litigation-siri-glimstad-ican/> [<https://perma.cc/KH9S-ZK55>]. Language in the federal Food, Drug, and Cosmetic Act empowers the Secretary of the U.S. Department of Health and Human Services to set “[a]ppropriate conditions” to ensure patients “are informed . . . of the *option to accept or refuse administration* of the product, of the consequences, if any, of refusing administration of the product, and of the alternatives to the product . . .” 21 U.S.C.A. § 360bbb-3(e)(1)(A)(ii)(III) (emphasis added).

Challengers are partially right. No autonomous person can be forcibly compelled to receive the COVID-19 vaccine.¹⁰⁸ Yet, mandates present COVID-19 vaccinations as conditional choices — not compulsions. On June 12, 2021, a federal judge in Texas¹⁰⁹ rejected a claim filed by a nurse against her previous employer, Houston Methodist Hospital, challenging its mandate policy.¹¹⁰ Approving the Hospital’s vaccine requirement, the court explained that the nurse could “freely choose to accept or refuse a COVID-19 vaccine; however, if she refuses, she will simply need to work somewhere else.”¹¹¹ While the case is on appeal¹¹² and similar challenges have been filed,¹¹³ the court in *Bridges v. Houston Methodist Hospital* essentially got it right. On August 2, 2021, the Seventh Circuit preliminarily confirmed this conclusion in refusing to grant an injunction pending appeal in the case.¹¹⁴

Vaccine mandates also face legislative and executive resistance. Several states have proposed banning COVID-19 vaccine requirements in the interest of preserving individual freedom.¹¹⁵

108. Jennifer L. Piatt, James G. Hodge, Jr. & Leila Barraza, *When Can You Be Required to Get a COVID-19 Vaccine?*, SLATE (Apr. 5, 2021, 9:00 AM), <https://slate.com/technology/2021/04/covid-vaccination-law-mandates-requirements.html> [<https://perma.cc/Z2TD-M9BS>].

109. Order on Dismissal, *Bridges v. Hous. Methodist Hosp.*, 2021 WL 2399994 (S.D. Tex. June 12, 2021) (No. 4:21-cv-01774), <https://int.nyt.com/data/documenttools/houston-methodist-court-ruling/3468984fc566cea5/full.pdf> [<https://perma.cc/CMY5-X2B4>].

110. *See id.*

111. *Id.* at 4.

112. *Attorneys for Houston Methodist Employees File Appeal After Judge Dismisses Their Lawsuit*, KHOU 11 (June 15, 2021, 3:38 PM), <https://www.khou.com/article/news/local/houston-methodist-employees-vaccine-lawsuit-appeal/285-59c308b0-0586-4ed8-93f3-f15c88856693> [<https://perma.cc/U5PS-AGTV>]; *see also* Dan Diamond, *153 People Resigned Or Were Fired from a Texas Hospital System After Refusing to Get Vaccinated*, WASH. POST (June 22, 2021, 5:40 PM), <https://www.washingtonpost.com/health/2021/06/22/houston-methodist-loses-153-employees-vaccine-mandate/> [<https://perma.cc/Q7VE-LSLQ>].

113. *See, e.g.*, Complaint, *Neve v. Birkhead*, No. 1:21-CV-00308 (M.D.N.C. Apr. 16, 2021); Complaint, *Legaretta v. Macias*, 2021 WL 833390 (D.N.M. Feb. 28, 2021) (No. 2:21-CV-00179).

114. *See* *Klaassen v. Trs. of Ind. Univ.*, No. 21-2326 (7th Cir. Aug. 2, 2021).

115. *See State Lawmakers Submit Bills to Ban Employer COVID-19 Vaccine Mandates*, NAT’L ACAD. FOR STATE HEALTH POL’Y (June 21, 2021), <https://www.nashp.org/state-lawmakers-submit-bills-to-ban-employer-vaccine-mandates/> [<https://perma.cc/PRN6-HT9K>] (tracking state bills banning COVID-19 vaccine employer mandates); *see also* Elliott Davis, *States Are Banning COVID-19 Vaccine Requirements*, US NEWS (Apr. 30, 2021, 4:54 PM), <https://www.usnews.com/news/best-states/articles/2021-04-30/these-states-are-banning-covid-19-vaccine-requirements> [<https://perma.cc/H5J7-UNCL>] (addressing

These actions include proposed or enacted prohibitions on university- or college-based vaccine mandates¹¹⁶ for employees and students returning to highly-populated school campuses in fall 2021.¹¹⁷ State laws previously left mandates to the discretion of employers and universities, subject to federal and state civil rights protections,¹¹⁸ but more states have introduced limitations aimed at preventing the implementation of mandates.¹¹⁹

“Vaccine passports” — requirements proposed by the government, employers, or others, as prerequisites to venue/business entry or service provision — face similar debates.¹²⁰ Some states with large

measures across several states to prevent vaccination requirements in public- and private-sectors); James G. Hodge, Jr. & Jennifer L. Piatt, *COVID’s Counterpunch: State Legislative Assaults on Public Health Emergency Powers*, *BYU J. PUB. LAW* (forthcoming 2021) (manuscript at 5) (“[F]ormal messaging supporting COVID-19 counterpunch legislation is often framed via the need to (1) correct power imbalances among legislative and executive branches or (2) protect economic and other freedoms against wanton infringements.”).

116. See Jacqueline Howard, *Some States Move to Block COVID-19 Vaccine Requirements in Public Schools*, CNN (July 13, 2021, 11:36 AM), <https://www.cnn.com/2021/07/13/health/covid-19-vaccine-requirements-schools-analysis-wellness/index.html> [<https://perma.cc/TW39-Z94U>].

117. See, e.g., Ariz. Exec. Order No. 2021-15 (June 15, 2021) (preventing state universities from imposing COVID-19 vaccine mandates).

118. See generally JARED P. COLE & KATHLEEN S. SWENDIMAN, CONG. RSCH. SERV., NO. 7-5700, *MANDATORY VACCINATIONS: PRECEDENT & CURRENT LAWS* (2014), https://digital.library.unt.edu/ark:/67531/metadc306495/m1/1/high_res_d/RS21414_2014May21.pdf [<https://perma.cc/Z2FX-32M9>] (confirming private sector employer vaccine mandates, particularly in the health care industry); I. Glenn Cohen & Dorit Rubinstein Reiss, *Can Colleges and Universities Require Student COVID-19 Vaccination?*, HARV. L. REV. BLOG (Mar. 15, 2021), <https://blog.harvardlawreview.org/can-colleges-and-universities-require-student-covid-19-vaccination/> [<https://perma.cc/S2ZK-ZC9E>] (confirming general power of universities and colleges to impose vaccine requirements). See also *What You Should Know About COVID-19 and the ADA, the Rehabilitation Act, and Other EEO Laws*, U.S. EQUAL EMP. OPPORTUNITY COMM’N (May 28, 2021), <https://www.eeoc.gov/wysk/what-you-should-know-about-covid-19-and-ada-rehabilitation-act-and-other-eeo-laws> [<https://perma.cc/2E33-LW5D>] (outlining EEOC’s concerns in employer COVID-19 vaccine mandates).

119. See, e.g., *Governor Ducey Bans Vaccine Passports*, OFF. GOV. DOUG DUCEY (Apr. 19, 2021), <https://azgovernor.gov/governor/news/2021/04/governor-ducey-bans-vaccine-passports> [<https://perma.cc/2RWD-YL9Z>].

120. See Sheryl Gay Stolberg & Adam Liptak, *Likely Legal, ‘Vaccine Passports’ Emerge as the Next Coronavirus Divide*, N.Y. TIMES (Apr. 26, 2021), <https://www.nytimes.com/2021/04/06/us/politics/vaccine-passports-coronavirus.html> [<https://perma.cc/8VMR-9DU9>]; see also Elliott Davis, *These States Have Banned Vaccine Passports*, US NEWS (June 1, 2021, 3:13 PM), <https://www.usnews.com/news/best-states/articles/which-states-have-banned-vaccine-passports> [<https://perma.cc/VBV5-UDA4>] (tracking states banning vaccine “passports”).

urban population centers, such as California and New York, support the use of COVID-19 vaccine passports through electronic data-storing applications.¹²¹ Other states like Florida have undertaken legislative and executive efforts to ban them,¹²² which could ultimately increase risks in communal spaces, absent renewed closures during COVID-19 outbreaks. Widespread, digital applications underlying passports also pose ethical quandaries. Those unable to access the internet, master digital technology, or receive vaccines could be excluded from access and benefits that the passports are designed to assure.¹²³ Further concerns arise regarding the privacy and security of information stored in applications.¹²⁴

Attempts to incentivize, rather than require, vaccination among urban populations engender other concerns. Increasing the vaccinated population is a laudable goal, but incentives like lotteries raise the specter of coercion and could ultimately increase vaccine skepticism.¹²⁵ Others question whether offering high-value incentives

121. See *Excelsior Pass Frequently Asked Questions*, N.Y. St., <https://covid19vaccine.health.ny.gov/excelsior-pass-frequently-asked-questions> [<https://perma.cc/2HEZ-4ALH>] (last visited Oct. 29, 2021) (“Excelsior Pass is a free, voluntary platform that provides secure, digital proof of COVID-19 vaccination or negative test results.”); see also Paresh Dave, *California Launches Digital COVID-19 Vaccine Pass but Won’t Require It*, REUTERS (June 18, 2021, 10:04 AM), <https://www.reuters.com/world/us/california-launches-digital-covid-19-vaccine-pass-wont-require-it-2021-06-18/> [<https://perma.cc/C69T-8DA7>] (“California officials on Friday unveiled a website to access or download a digital copy of COVID-19 immunization records, though they stressed the state would not make it mandatory to carry the vaccine credentials.”).

122. See Fla. Exec. Order No. 21-81 (Apr. 2, 2021), <https://www.flgov.com/wp-content/uploads/2021/04/EO-21-81.pdf> [<https://perma.cc/V3E9-JXYA>] (preventing Florida government entities and businesses from requiring proof of COVID-19 vaccination); see also S.B. 2021-2006, 2021 Leg., Reg. Sess. (Fla. 2021) (codifying Governor DeSantis’ executive order restricting vaccine passports).

123. See, e.g., Lawrence O. Gostin, Glenn Cohen & Jana Shaw, *Digital Health Passes in the Age of COVID-19: Are “Vaccine Passports” Lawful and Ethical?*, JAMA NETWORK (Apr. 7, 2021), <https://jamanetwork.com/journals/jama/fullarticle/2778526> [<https://perma.cc/62FV-QCA3>] (“As long as there is supply scarcity, DHPs would unfairly exclude individuals who cannot access vaccines.”).

124. See Jake Holland, Jacquie Lee & Robert Iafolla, *Big Tech Unleashes Vaccine Passports as Privacy Questions Loom*, BLOOMBERG L. (Apr. 19, 2021, 5:31 AM), <https://news.bloomberglaw.com/us-law-week/big-tech-unleashes-vaccine-passports-as-privacy-questions-loom> [<https://perma.cc/RFL2-3ZD3>] (“Health or other personal information should be encrypted within apps when it’s sent elsewhere Like all things digital, vaccine passport apps could theoretically be hacked, which means a single or handful of standards in the U.S. and internationally could help . . .”).

125. See Emily A. Largent & Franklin G. Miller, *Problems with Paying People To Be Vaccinated Against COVID-19*, JAMA NETWORK (Jan. 6, 2021), <https://jamanetwork.com/journals/jama/fullarticle/2775005> [<https://perma.cc/65H5->

is a misuse of federal relief funds,¹²⁶ even though federal authorities have allowed it.¹²⁷ Marginalized urban populations may lack transportation or internet access to obtain a COVID-19 vaccination, blocking their chance at lottery winnings.¹²⁸

Profound issues surrounding vaccine hesitancy may be exacerbated through broadening religious liberty interpretations from the U.S. Supreme Court. The Court's recent cases addressing extensive social distancing orders during the pandemic have upheld free exercise challenges to COVID-19 protective measures without substantial analysis,¹²⁹ leading some to infer a new favored legal status for religious institutions.¹³⁰ Pre-COVID-19 arguments that states must provide religious liberty exemptions to vaccine mandates have not succeeded,¹³¹ but the Court's COVID-19 jurisprudence is shifting. In

WXE6] (“[S]ome might feel that a substantial monetary incentive for vaccination is coercive In a climate characterized by widespread distrust of government and propensity to endorse conspiracy theories, those who are already COVID-19 vaccine hesitant might perceive that the government would not be willing to pay people to get vaccinated if the available vaccines were truly safe and effective”).

126. See Anders Bright, *Ohio's Vaccine Lottery Scheme Is Working — So Why Does It Bother Us?*, WASH. POST (June 1, 2021, 6:00 AM), <https://www.washingtonpost.com/outlook/2021/06/01/ohios-vaccine-lottery-scheme-is-working-so-why-does-it-bother-us/> [https://perma.cc/VE8S-M7EG] (“House Democratic Minority Leader Rep. Emilia Strong Sykes opined that ‘using millions of dollars in relief funds in a drawing is a grave misuse of money.’”).

127. See Maureen Groppe, *Federal Government Gives OK for States to Offer Lotteries, Cash Incentives for Vaccinations*, USA TODAY (May 26, 2021, 12:48 PM), <https://www.usatoday.com/story/news/politics/2021/05/25/covid-vaccine-feds-ok-lotteries-cash-incentives-vaccinations/7436394002/> [https://perma.cc/46ZU-4CPQ].

128. See Claire Parker & Sammy Westfall, *Lotteries as Public Health Incentives Began Before Covid-19*, WASH. POST (June 20, 2021), <https://www.washingtonpost.com/world/2021/06/20/health-lotteries-global/> [https://perma.cc/4W3L-H6R5] (“Lotteries won’t fix logistical problems, such as finding transportation to vaccination sites”).

129. See, e.g., *S. Bay United Pentecostal Church v. Newsom*, 141 S. Ct. 716 (2021) (mem.); *Tandon v. Newsom*, 141 S. Ct. 1294 (2021); *Roman Cath. Diocese of Brooklyn v. Cuomo*, 141 S. Ct. 63 (2020).

130. See Brendan Pierson, *How COVID and Shadow Docket Exploded SCOTUS' Scope of Religious Freedom*, REUTERS (June 17, 2021, 4:33 PM), <https://www.reuters.com/legal/government/how-covid-shadow-docket-exploded-scotus-scope-religious-freedom-2021-06-16/> [https://perma.cc/77G2-WTGK].

131. See, e.g., *C.F. v. N.Y.C. Dep't of Health & Mental Hygiene*, 138 N.Y.S.3d 273, 292 (App. Div. 2020) (concluding that a resolution requiring mandatory measles vaccination of individuals over the age of six months and residing in certain areas of Brooklyn was within the authority of the Board of Health, and did not violate any right of petitioners, including the freedom of religion); *F.F. v. New York*, 114 N.Y.S.3d 852, 869 (Sup. Ct. 2019) (concluding that New York's repeal of the state's religious exemption for school vaccine requirements did not violate the free exercise clause).

a future case, the Court could foreseeably require religious-based exemptions to COVID-19 vaccinations pursuant to First Amendment free exercise rights despite major public health repercussions.¹³²

V. LEGAL OPTIONS SUPPORTING URBAN VACCINATION UPTAKE

Varied legal and policy issues confront an evolving campaign to vaccinate urban U.S. residents against a deadly, stealthy condition like COVID-19. Large, urban vaccination sites once administering thousands of doses daily have closed as demand dwindled.¹³³ For many U.S. residents, COVID-19 vaccines are increasingly available through pharmacists, primary care providers, health clinics, and soon, pediatricians.¹³⁴ Existing COVID-19 vaccines are undergoing trials to assess their safety for persons under 12 years old.¹³⁵ Once authorized, vaccinating the nation's urban youth will add yet another test for the national campaign.

Strategic shifts in national goals to vaccinate millions more U.S. residents are underway. County and city health departments are switching tactics, deploying outreach efforts to groups with low vaccination rates and higher risks of infection,¹³⁶ particularly minority urban populations where long-standing governmental distrust contributes to exceedingly low vaccination rates.¹³⁷ Legal

132. See Hodge et al., *supra* note 13.

133. See Stolberg, *supra* note 63 (describing how traffic at several mass vaccination sites is tapering and several state sites are closing).

134. See, e.g., *Pharmacies Participating in the Federal Retail Pharmacy Program*, CTRS. FOR DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/vaccines/covid-19/retail-pharmacy-program/participating-pharmacies.html> [https://perma.cc/8U79-G75J] (last visited July 19, 2021) (describing a program in which pharmacies receive COVID-19 vaccines from the federal government).

135. See, e.g., Tarun Jain & Sony Salzman, *Pfizer Launches COVID Vaccine Trial for Kids Under 12*, ABC NEWS (Mar. 25, 2021, 12:31 PM), <https://abcnews.go.com/Health/pfizer-launches-covid-vaccine-trial-kids-12/story?id=76674873> [https://perma.cc/6BGW-V2N4] (following Moderna®, Pfizer® announced in March 2021 that it would begin enrolling children under 12 in a clinical trial for the COVID-19 vaccine).

136. See Stolberg, *supra* note 63. For example, canvassers in New Jersey are going door-to-door in areas with low vaccination rates to inform people about nearby vaccination sites. *Id.*

137. COVID-19 vaccination rates among Black Americans are particularly low. See *COVID Data Tracker: Demographic Trends of People Receiving COVID-19 Vaccinations in the United States*, CTRS. FOR DISEASE CONTROL & PREVENTION, <https://covid.cdc.gov/covid-data-tracker/#vaccination-demographics-trends> [https://perma.cc/QA7G-X66J] (last visited July 19, 2021). While over 55% of all eligible Americans have been vaccinated (at least one dose) as of June 22, 2021, only 24.7% of Black Americans received at least one dose by the same date. *Id.* Lower vaccination rates among Black Americans are specifically acute in urban areas where

interventions alone cannot solve these or other entrenched issues in urban administrations of life-saving inoculations. However, the law can be an effective tool in ameliorating conditions inhibiting effective execution in four critical areas: *health equity*, *vaccine hesitancy*, *incentives*, and *emergency powers*.

HEALTH EQUITY. The COVID-19 pandemic has opened the curtain wide on the United States's gross health disparities, particularly among urban populations.¹³⁸ The Biden Administration is working to curb health inequities beginning with fair and equal practices underlying the national vaccine campaign.¹³⁹ Adherence to health equity, however, requires more. Law- and policy-makers and health authorities must commit to the promotion of health equity, not just in principle, but as a way out of the COVID-19 pandemic.¹⁴⁰ As increasing numbers of U.S. residents are vaccinated, COVID-19 may threaten specific, unvaccinated populations left behind in urban locations.¹⁴¹ Obviating localized outbreaks requires sustained efforts to vaccinate individuals through lawful efforts targeting those at greatest risk. From a public health perspective, devoting resources and efforts toward persons at heightened peril is central to disease mitigation.¹⁴² Similar perspectives must be reflected legally, avoiding

approximately 90% of Black Americans reside. See Alana Semuels, *No, Most Black People Don't Live in Poverty — Or Inner Cities*, ATLANTIC (Oct. 12, 2016), <https://www.theatlantic.com/business/archive/2016/10/trump-african-american-inner-city/503744/> [<https://perma.cc/E5BC-9CBC>]. When D.C. Mayor Muriel E. Bowser and infectious disease icon, Dr. Anthony Fauci, went door-to-door in a publicized outreach effort among largely Black neighborhoods in Anacostia in June 2021, they were met with some skepticism. See Stolberg, *supra* note 63. Despite offering residents easy access to free COVID-19 vaccines, prizes and giveaways, and reliable information, some residents still resisted. See *id.*

138. See *Provisional COVID-19 Deaths by Week and Urbanicity*, *supra* note 20; see also Berkowitz et al., *supra* note 21.

139. See White House, Press Briefing, *supra* note 68.

140. See, e.g., ANDREA THOUMI, HEMI TEWARSON & KATE JOHNSON, WASHINGTON D.C.: DUKE-MARGOLIS CENTER FOR HEALTH POLICY & NATIONAL GOVERNORS ASSOCIATION CENTER FOR BEST PRACTICES, *PRIORITIZING EQUITY IN COVID-19 VACCINATIONS: PROMISING PRACTICES FROM STATES TO REDUCE RACIAL AND ETHNIC DISPARITIES* 7 (2021), https://www.nga.org/wp-content/uploads/2021/03/Duke-NGA_Equity-in-Covid-19-Vaccination.pdf [<https://perma.cc/WA4A-3Z4T>].

141. See Danny Westneat, *The 'Two Societies': 97% of New COVID Cases Are Among People Who Haven't Gotten the Shots*, SEATTLE TIMES (June 5, 2021, 6:38 AM), <https://www.seattletimes.com/seattle-news/health/the-two-societies-97-of-new-covid-cases-are-among-people-who-havent-gotten-the-shots/> [<https://perma.cc/8CND-KRK8>] (describing recent COVID-19 outbreaks among the unvaccinated in Seattle-King County).

142. See Sean Bland, *Focus on Vulnerable Populations in the Public Health Response to COVID-19*, O'NEILL INST. FOR NAT'L & GLOB. HEALTH (Mar. 11,

potential equal protection violations or denials of equitable access (as noted above).¹⁴³

VACCINE HESITANCY. Perhaps the greatest remaining threat to the vitality of the national COVID-19 vaccination campaign is not access, costs, or safety but hesitancy. U.S. residents' collective unwillingness to receive a safe COVID-19 vaccine against a real risk of death and morbidity is remarkable and remediable. Although factors contributing to vaccine hesitancy are diverse, misinformation and permissive exemptions are primary causes.¹⁴⁴ Under the First Amendment, misinformation publicized for commercial purposes through social media sites or other venues is owed little to no protection.¹⁴⁵ Federal and state authorities are increasingly seeking greater accountability of social media hosts,¹⁴⁶ cracking down on charlatans peddling false claims,¹⁴⁷ and engaging in truthful information efforts.¹⁴⁸ Legislators, executives, and judges must also ascertain the impact of allowing extensive exemptions from vaccine requirements under the guise of protecting liberty. Such views are antithetical to public health promotion and constitutional parlance. As the U.S. Supreme Court acknowledged in *Jacobson* over 115 years ago: "Even liberty itself, the greatest of all rights, is not unrestricted license to act according to one's own will. It is only freedom from restraint under conditions essential to the equal enjoyment of the

2020), <https://oneill.law.georgetown.edu/focus-on-vulnerable-populations-in-the-public-health-response-to-covid-19/> [<https://perma.cc/7U5B-AJDB>] ("To effectively respond to COVID-19, it is important to focus on vulnerable populations.").

143. See Platoff & Garnham, *supra* note 103.

144. See, e.g., Chiu & Bever, *supra* note 65 (discussing anti-vax misinformation and vaccine distrust).

145. See Gostin et al., *supra* note 9, at e14 ("In the same way that states limit malicious hate speech and violent images, they can sensibly regulate patently false or misleading vaccine information.").

146. See *id.* (discussing how governments at the 2019 G20 Summit asked social media companies to remove terrorism-related messages and how Facebook agreed to review policies regarding anti-vaccination information on its website); see also Sheryl Gay Stolberg & Davey Alba, *Misinformation on Health Is Called an 'Urgent Threat,'* N.Y. TIMES, July 16, 2021, at A14 (stating that U.S. Surgeon General Dr. Vivek Murthy called on social media sites and other outlets to address rampant COVID-19 vaccination and other related misinformation on their sites).

147. See Amy Maxmen, *Desperate to Receive Covid Care*, N.Y. TIMES, June 22, 2021, at D1. During the COVID-19 pandemic, the FDA (together with the Federal Trade Commission (FTC)) systematically addressed false, misleading, and dangerous claims that specific drugs or other products were effective cures. *Id.*

148. See *The HHS COVID-19 Public Education Campaign*, U.S. DEP'T HEALTH & HUM. SERVS., <https://www.hhs.gov/coronavirus/education-campaign/index.html> [<https://perma.cc/W96K-RT7W>] (last visited July 19, 2021).

same right by others. It is, then, liberty regulated by law.”¹⁴⁹ Governmental efforts to counter vaccine hesitancy rest on firm constitutional ground recognizing clear limits on perceived freedoms of speech and liberty interests.

INCENTIVES. As discussed above, vaccinating urban dwellers in the United States has led to a plethora of creative incentives: free vaccines, lotteries, raffles, giveaways, tuition discounts, and direct payments, among others.¹⁵⁰ These benefits may motivate millions to get vaccinated, but they can also jeopardize the efficacy of lawful vaccine mandates long-term. Urbanites may resist outright mandates untethered to incentives in the future. Adherence to school vaccination mandates has already been in decline in some states for years due to permissive exemptions or lax enforcement.¹⁵¹ What are some potential legal options? Affirm the legitimacy of lawfully constructed mandates, clarify that these incentives are not a substitute for mandates, tie incentives directly to health equity goals noted above, and target incentives to at-risk communities only when proven beneficial toward improving vaccination rates.

EMERGENCY POWERS. One of the understated facets of the national campaign to vaccinate U.S. residents to date has been the virtual alliance of federal, state, and local governments in their invocations of various states of emergency in response to COVID-19. Since March 2020, every level of government has maintained their declared emergencies.¹⁵² These declarations facilitate numerous interventions beneficial to vaccination efforts — e.g., licensure reciprocity, shifts in health care scopes of practice, deployment of health volunteers, liability protections, and allowed uses of property

149. *Jacobson v. Massachusetts*, 197 U.S. 11, 26–27 (1905) (citing *Crowley v. Christensen*, 137 U.S. 86, 89 (1890)).

150. Memorandum from the Nat’l Governors Ass’n on COVID-19 Vaccine Incentives to Governors & Staff (June 23, 2021), <https://www.nga.org/wp-content/uploads/2021/10/Vaccine-Incentives-Memo-10.19.21.pdf> [<https://perma.cc/72KU-L68P>].

151. *See generally States with Religious and Philosophical Exemptions from School Immunization Requirements*, NAT’L CONF. ST. LEGISLATURES (Apr. 30, 2021), <https://www.ncsl.org/research/health/school-immunization-exemption-state-laws.aspx> [<https://perma.cc/A52H-UALN>]; Michael Devitt, *Study Finds Disturbing Trends in Vaccination Exemptions*, AAFP (June 20, 2018, 2:34 PM), <https://www.aafp.org/news/health-of-the-public/20180620vaccineexempts.html> [<https://perma.cc/Z23X-A95M>].

152. *See* NETWORK FOR PUB. HEALTH L., COVID-19 EMERGENCY LEGAL PREPAREDNESS PRIMER 13 (2021), <https://www.networkforphl.org/wp-content/uploads/2021/02/Western-Region-Primer-COVID-2-1-2021.pdf> [<https://perma.cc/B4T4-VCG4>].

for vaccine sites.¹⁵³ While federal emergency declarations are expected to remain in place for months ahead, the status of state-based emergency declarations is changing. As of July 15, 2021, 27 states have rescinded or cancelled their COVID-19 emergency declarations.¹⁵⁴ Others will soon follow, necessitating shifts in real-time vaccination efforts reliant on non-emergency public health powers. A resulting slowdown in vaccine uptake,¹⁵⁵ especially in cities, may contribute to upshots in outbreaks.

CONCLUSION

The unprecedented, real-time development of safe and extremely effective COVID-19 vaccinations has resulted in the full or partial inoculation of millions of U.S. residents since January 2021. Yet, urban populations disproportionately affected by COVID-19 remain underserved for multiple reasons, including initial supply-related issues, inequitable allocations, and access barriers. Governments have confronted these challenges in different ways. Incentives and mandates were introduced to increase vaccination rates. Specific allocation schemes expressly prioritize at-risk populations. Implementing these and other measures among urban populations generated a plethora of complex law and policy issues in a changing legal environment. Emerging legal options in four key areas — *health equity*, *vaccine hesitancy*, *incentives*, and *emergency powers* — may help increase COVID-19 vaccination rates and contribute to herd immunity among U.S. urban populations.

153. See JAMES G. HODGE, JR., PUBLIC HEALTH LAW IN A NUTSHELL 350, 361–65 (3d ed. 2018) (describing various powers available to federal and state governments during emergency declarations).

154. *COVID-19 Policy Tracker: COVID-19 Statewide Emergency Declarations*, MULTISTATE, <https://www.multistate.us/issues/covid-19-policy-tracker> [https://perma.cc/98Y5-LXTD] (last visited July 19, 2021).

155. See Stolberg, *supra* note 63 (describing reduced traffic in mass vaccination sites).