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TABLE OF CONTENTS

I. INTRODUCTION	582
A. The COVID-19 Vaccines	582
B. Hesitancy and Reluctance to Vaccinate Against COVID-19	583
C. The Impacts of Remaining Unvaccinated Against COVID-19	586
D. Vaccine Mandates: A Solution to COVID-19 Vaccine Hesitancy	589
II. VACCINE MANDATES AND THE CURRENT LEGAL LANDSCAPE	590
A. Challenges to Federal Vaccine Mandates	590
B. Statewide COVID-19 Vaccine Mandates	592
C. Vaccine Mandates are a Valid Exercise of a State's Police Power	594
D. Recent Legal Claims Involving COVID-19 State Vaccine Mandates	595
i. Substantive Due Process Arguments are Ineffective Against Va	ccine
Mandates	596
ii. Governments Should be Prepared to Defend Against Free Exe	rcise
Clause Challenges	597
a. Generally, Courts are Unwilling to Heighten the Standard or	f
Review Involving Vaccine Mandates, Even When Mandates Lack a R	eligious
Exemption	
b. Religious Exemptions Fall Under Strict Scrutiny When They	are
Evaluated Individually	
III. RECENT TRENDS IN COVID-19 VACCINE HESITANCY	
A. The Anti-Vax Movement and Disinformation	603
B. Failure to Agree on the Severity of COVID-19 May Have Affected	
Vaccine Hesitancy	607
C. Vaccine Opponents' Safety Concerns Evidence Distrust Toward the	
Government	608
D. The Choice to Vaccinate Has Political Underpinnings	610
E. Legal Claims Against Vaccination Are Not Based Solely on Autonomy	
and Religion	
IV. PUBLIC HEALTH ETHICS AND VACCINE MANDATES	613
A. The Public Health Code of Ethics	
B. Public Policy Supports Limiting Autonomy for the Safety of All	616
V CONCLUSION	618

I. INTRODUCTION

The imminent threat of COVID-19 presented a contentious debate as to whether federal and state governments can, and should, mandate vaccination. The objective of this paper is twofold: (1) to review how governments can legally require vaccination and examine emerging case law that may limit this authority, and (2) to examine whether governments should mandate vaccination by examining emerging societal trends in vaccine hesitancy and reflecting on how vaccination requirements align with the ethical principles of public health. This interdisciplinary approach uses legal, sociological, and public health lenses to dive into a matter that has divided the United States.

A. The COVID-19 Vaccines

In 2020, SARS-CoV-2, better known as COVID-19 was the underlying or contributing cause of 377,883 deaths in the United States.¹ One year later, with overwhelming support from the medical community, an mRNA vaccine was given Emergency Use Authorization (EUA) by the United States Food and Drug Administration (FDA).² The expedited process concerned the public, but the vaccine's initial efficacy rates were persuasive. COVID-19 vaccines were initially shown to decrease the risk of infection by 91% and lower the potential for developing symptoms by 60%.³ It wasn't long before variants emerged. By the fall of 2021, the highly transmissible B.1.617.2 (Delta) and B.1.1.529 (Omicron) variants caused breakthrough infections in vaccinated individuals.⁴ Delta was believed to be twice as contagious as previous COVID-19 variants and responsible for more emergency complications.⁵ It became evident that a booster shot was needed to strengthen the body's immune response. Although the necessity for boosters was initially debatable, studies show that boosters restore vaccine effectiveness and reduce the severity of symptoms, hospitalization, and death.⁶ Vaccine technology

^{1.} Farida B. Ahmad et al., *Provisional Mortality Data – United States, 2020*, 70 U.S. DEP'T HEALTH & HUMAN SERVS. CTRS. FOR DISEASE CONTROL & PREVENTION MMWR 519, 520 (Apr. 9, 2021), https://www.cdc.gov/mmwr/volumes/70/wr/pdfs/mm7014e1-H.pdf.

^{2.} News Release, Food & Drug Admin., FDA Takes Key Action in Fight Against COVID-19 By Issuing Emergency Use Authorization for First COVID-19 Vaccine (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.

^{3.} Press Release, Ctrs. For Disease Control & Prevention, COVID-19 Study Shows mRNA Vaccines Reduce Risk of Infection (June 7, 2021), https://www.cdc.gov/media/releases/2021/p0607-mrna-reduce-risks.html.

^{4.} Katherine J. Siddle et al., *Transmission from Vaccinated Individuals in a Large SARS-CoV-2 Delta Variant Outbreak*, 185 Cell, 485, 486 (2022); Marta C. Nunes et al., *SARS-CoV-2 Omicron Symptomatic Infections in Previously Infected or Vaccinated South African Healthcare Workers*, 10 VACCINES, 459, 468 (2022).

^{5.} Kathy Katella, 5 Things to Know About the Delta Variant, YALE MED. (Mar. 1, 2022), https://www.yalemedicine.org/news/5-things-to-know-delta-variant-covid.

^{6.} Adeel A. Butt et al., *Relative Vaccine Effectiveness of a SAR-CoV-2 mRNA Vaccine Booster Dose Against the Omicron Variant*, 75 CLINICAL INFECTIOUS DISEASES 2161 (2022).

continued to develop, and by the end of 2021, the World Health Organization (WHO) approved nine COVID vaccinations. The new vaccines utilized relatively new mRNA technology as well as more traditional approaches, such as an inactivated virus, the replicating viral vector, and protein subunit approaches to increase immunity.8 By early 2022, mRNA vaccines were approved by governmental departments and agencies in over 137 countries, and 138 countries approved the replicating viral vector vaccine. 9 Unfortunately, two-thirds of the COVID-19 related deaths to date occurred since December 2020, 10 at the introduction of the mRNA vaccines. Nearly one quarter of the deaths that occurred since June 2021 could have been prevented through vaccination.¹¹

B. Hesitancy and Reluctance to Vaccinate Against COVID-19

Despite the individual and collective risks that COVID-19 infections pose, 9.99% of the U.S. adult population indicated they "probably or definitely will not be vaccinated."12 This reluctance is known in public health as vaccine hesitancy. Vaccine hesitancy is defined as a "delay in acceptance or refusal of vaccination despite the availability of vaccination services."13 It remains an obstacle to achieving vaccination goals in all parts of the world.14 The WHO EURO Vaccine Communications Working Group has established the "three Cs" to define vaccine hesitancy: complacency, confidence, and convenience. 15 Complacency occurs when

^{7.} News Release, World Health Org., WHO lists 9th COVID-19 Vaccine for Emergency Use With Aim to Increase Access to Vaccination in Lower-Income Countries (Dec. 17, 2021), https://www.who.int/news/item/17-12-2021-who-lists-9th-covid-19-vaccine-for-emergency-use-withaim-to-increase-access-to-vaccination-in-lower-income-countries.

^{9. 11} Vaccines Granted Emergency Use Listing (EUL), WORLD HEALTH ORG. (Dec. 2, 2022), https://covid19.trackvaccines.org/agency/who/.

^{10.} COVID-19 Vaccinations in the United States, CTRS. FOR DISEASE CONTROL & PREVENTION, https://covid.cdc.gov/covid-data-tracker/#vaccinations_vacc-people-onedose-pop-5yr (last visited Dec.15, 2022).

^{11.} Krutika Amin et al., COVID-19 Mortality Preventable by Vaccines, Peterson-KFF Health Sys. TRACKER (Apr. 21, 2022), https://www.healthsystemtracker.org/brief/covid19-and-other-leading-causesof-death-in-the-us/.

^{12.} Trends in COVID-19 Vaccine Confidence in the U.S., CTRS. FOR DISEASE CONTROL & PREVENTION, https://covid.cdc.gov/covid-data-tracker/#vaccine-confidence (last visited Mar. 26, 2022).

^{13.} Noni E. MacDonald, Vaccine Hesitancy: Definition, Scope and Determinants, 33 VACCINE 4161, 4164 (2015).

^{14.} Cf. Silas P. Trumbo et al., Strengthening Legal Frameworks for Vaccination: The Experiences of Armenia, Georgia, and Moldova, 37 VACCINE 4840, 4841 (2019) (discussing vaccine hesitancy in Eastern Europe).

^{15.} MacDonald, supra note 13, at 4162.

vaccination is not deemed necessary in relation to its risk.¹⁶ It can be due to competing demands on an individual's time or a perceived lack of risk due to age, living situation, or health status. In recent judicial filings against university vaccine mandates, plaintiff students cited the lack of risk due to age as a key reason for challenging the mandate.¹⁷

Confidence is a bit more complicated. It is based on *trust* in (i) the vaccine's safety and effectiveness; (ii) the competence of the "system" of healthcare professionals and services; and (iii) the motivations of policymakers. ¹⁸ In the context of COVID-19, trust has been eroded by conflicting messages from political leaders, rapid dissemination of COVID-19 critical rhetoric through social networking sites, and disagreement on scientifically established facts related to the virus and vaccine safety. These nuances will be explored in detail in Part III.

It is important to note that vaccine hesitancy may not look the same for everyone. Communities of color, especially Black Americans, have deeply rooted distrust for government interventions due to a long history of institutional and tacitly sanctioned racism, even by individuals entrusted with protecting the public's health.¹⁹ Historically, White Americans have been more concerned about the competence of those behind the creation of vaccines, but Black Americans tend to be skeptical in regard to the government's *motive* behind procuring vaccines and whether the "price" of free vaccines involves detrimental health effects.²⁰ This distinction highlights the impact that long-standing inequality has on the psyche of oppressed groups, and the degree to which public health organizations need to redress the effects of institutional racism. Given these facts, it is surprising and encouraging to know that disparities in vaccination rates among all races has reduced since the onset of the pandemic.²¹ This is yet another indication that

^{16.} Id.

^{17.} Emergency Appl. for Writ of Inj. at 4–7, Klaassen v. Trs. of Ind. Univ., 7 F.4th 592 (7th Cir. 2021), cert. denied, ____ U.S. ___ (Aug. 12, 2021) (No. 21-A15), https://www.supremecourt.gov/DocketPDF/21/21A15/186877/20210806095541542_IU%20VAX%20S COTUS%20writ%20of%20inj%20app%20FINAL.pdf.

^{18.} MacDonald, supra note 13, at 4162.

^{19.} One study showed that "[w]hite medical trainees harbored at least one false belief about differences in pain sensitivity among Black and White patients." Lauren Bunch, A Tale of Two Crises: Addressing COVID-19 Vaccine Hesitancy as Promoting Racial Justice, 33 HEC FORUM 147–49 (2021) (citing Kelly M. Hoffman et al., Racial Bias in Pain Assessment and Treatment Recommendations, and False Beliefs About Biological Differences Between Blacks and Whites, 113 PNAS 4296 (2016)). Another study found that "Black newborn babies are three times more likely than White babies to die when under the care of a White physician." Id. (citing Brad N. Greenwood et al., Physician-Patient Racial Concordance and Disparities in Birthing Mortality for Newborns, 117 PNAS 21194 (2020)).

^{20.} See Bunch, supra note 19, at 147.

^{21.} Nambi Ndugga et al., *Latest Data on COVID-19 Vaccinations by Race/Ethnicity*, KFF (July 14, 2022), https://www.kff.org/coronavirus-covid-19/issue-brief/latest-data-on-covid-19-vaccinations-by-race-ethnicity/ (This site compiles CDC data, which shows that overall white people have account for the largest number of unvaccinated individuals, and any disparity in vaccination rates between Black, Hispanic and White counterparts has become narrower); Beth Howard, *Talking to Vaccine Skeptics in Rural Conservative America*, AAMCNEWS (Dec. 21, 2021), https://www.aamc.org/news-insights/talking-

COVID-19 vaccine hesitancy and opposition has departed from many of the wellestablished theories that surround vaccine hesitancy.

The federal government has done its part to address the third "C," convenience, by removing logistical and monetary obstacles to vaccination. Federal initiatives have allowed vaccines to be free, available, and accessible by employing the National Guard to administer vaccines, funding vaccination sites, and providing funding to states to improve vaccination rates.²² Some states have incentivized vaccination by giving gift cards and lottery entries, but the results have been inconsistent.²³ Efforts in rural areas have focused on engaging faith-based leadership and respected community members.²⁴ Yet, even these approaches have largely failed to persuade individuals who are strongly opposed to the COVID-19 vaccine.²⁵

vaccine-skeptics-rural-conservative-america (According to University of Pittsburg Graduate School of Public Health Associate Professor of Epidemiology Wendy C. King, Ph.D., "[P]eople in very rural counties are 23% more likely to be vaccine hesitant than someone living in a city.").

22. See President Joe Biden, Remarks by President Biden on the 100 Million Shot Goal, THE WHITE HOUSE (Mar. 18, 2021, 3:26 PM), https://www.whitehouse.gov/briefing-room/speeches-remarks/2021/03/18/remarks-by-president-biden-on-the-100-million-shot-goal/; Fact Sheet: Biden Administration Announces COVID-19 Winter Preparedness Plan, THE WHITE HOUSE (Dec. 15, 2022), https://www.whitehouse.gov/briefing-room/statements-releases/2022/12/15/fact-sheet-biden-administration-announces-covid-19-winter-preparedness-plan/; Jennifer Steinhauer, Overwhelmed, More States Turn to National Guard for Vaccine Help, N.Y. TIMES (Jan. 14, 2021), https://www.nytimes.com/2021/01/14/us/politics/coronavirus-vaccine-national-guard.html.

23. Compare Megan Cerullo, State Vaccine Incentives Do Little to Boost Vaccination Rates, Research Shows, CBS News (Sept. 8, 2021, 6:16 PM), https://www.cbsnews.com/news/statewide-vaccine-incentives-lotteries-do-not-boost-vaccination-rates/, with Bryan Anderson, North Carolina's \$100 Reward Offer Ignited COVID Vaccine Interest, ABC 13 News (Aug. 11, 2021), https://wlos.com/news/local/north-carolinas-100-reward-offer-ignited-covid-vaccine-interest-data-shows.

24. See World Health Org., Practical Considerations and Recommendations for Religious Leaders and Faith-based Communities in the Context of COVID-19: Interim Guidance (2020), https://apps.who.int/iris/bitstream/handle/10665/331707/WHO-2019-nCoV-Religious_Leaders-2020.1-eng.pdf. Communities of color and other marginalized populations were approached by the American Medical Association and civil rights organizations in efforts to increase vaccinations rates. On April 21, 2021, the Black Coalition Against COVID-19 (BCAC) and American Hospital Association held a town hall to address COVID-19 in rural communities. Making It Plain: Rural Hospitals and the Healthcare Delivery System, Am. Hosp. Ass'n, https://www.aha.org/2021-04-16-making-it-plain-rural-hospitals-and-healthcare-delivery-system (last visited May 3, 2022).

25. Josie Fischels, *Get \$100 for a Vaccine? Cash Incentives Work for Some, Others Not So Much,* NPR (July 30, 2021, 6:00 AM), https://www.npr.org/2021/07/30/1022567245/vaccine-cash-incentives-100-dollars-lotteries-effectiveness.

C. The Impacts of Remaining Unvaccinated Against COVID-19

Across the U.S., hospitals experienced: critical staff shortages, being filled beyond capacity, delayed care for non-COVID related injuries and illnesses, increased costs for pandemic related supplies, increased mental health needs, and staff burnout. ²⁶ One of the biggest challenges cited by a 2021 Department of Health and Human Services survey is the worsening of pre-existing health disparities in low-income, rural and socially vulnerable populations.²⁷ Disabled individuals and communities of color were especially affected by the pandemic's strain on the healthcare system. In these groups, pre-existing health inequalities contributed to extraordinarily high mortality and hospitalization rates. American Indian and Alaska Native communities have experienced mortality rates that are two times higher than white, non-Hispanic persons, with three times the hospitalization rates for COVID-19.28 These are the highest rates of mortality from COVID-19 in the United States, followed by Pacific Islander and Black Americans.²⁹ This is due in part to the clinical challenges associated with comorbidities that disparately impact communities of color, such as heart and lung ailments and diabetes.³⁰ Disabled individuals encountered significant care issues due to health worker shortages, and experienced higher risks of being triaged out of COVID-19 care when supplies and beds were scarce.³¹ Additionally, even non-COVID elderly patients have been noted to have significant increases in mortality as a consequence of the COVID-19-related strain on the health care system. 32 This pandemic magnified the inherent health

^{26.} U.S. DEP'T OF HEALTH AND HUMAN SRVCS, OFFICE OF INSPECTOR GEN. OEI-09-21-00140, HOSPITALS REPORTED THAT THE COVID-19 PANDEMIC HAS SIGNIFICANTLY STRAINED HEALTH CARE DELIVERY 10–12, 16–18 (2021).

^{27.} Id. at 7.

^{28.} Risk of COVID-19 Infection, Hospitalization and Death by Race/Ethnicity, CTRS. FOR DISEASE CONTROL & PREVENTION (Mar. 25, 2022), https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html. American Indian and Alaska Native communities have experienced 447 deaths per 100,000 as opposed to white populations, with 322 deaths per 100,000. Elisabeth Gawthrop, The Color of Coronavirus: Deaths by Race and Ethnicity in the U.S, APM RSCH. LAB (Apr. 12, 2022), https://www.apmresearchlab.org/covid/deaths-by-race#counts – over - time.

^{29.} Gawthrop, supra note 2828.

^{30.} U.S. Dep't of Health and Human Servs., supra note 26, at 8.

^{31.} NAT'L COUNCIL ON DISABILITY, THE IMPACT OF COVID-19 ON PEOPLE WITH DISABILITIES 14 (2021). "People with intellectual and developmental disabilities, and those who were medically fragile and technology dependent, faced a uniquely high and explicit risk of being triaged out of COVID-19 treatment when hospital beds, supplies, and personnel were scarce, denied the use of their personal ventilator devices after admission to a hospital, and at times, denied the assistance of critical support persons during hospital stays. Informal and formal Crisis Standards of Care (CSC), documents that guided the provision of scare healthcare in surge situations, targeted people with certain disabilities for denial of care." Id.

^{32.} Laura C. Myers & Vincent X. Liu, *The COVID-19 Pandemic Strikes Again and Again and Again,* JAMA NETWORK OPEN (Mar. 19, 2022) (describing a retrospective study of greater than 8.4 million Medicare admitted patients spanning pre-COVID-19 to September 2021 involving over 4600 US hospitals

inequalities that have pervaded low-income and rural communities, highlighting the importance of widespread vaccination to reduce hospitalization.

Treating severe cases of COVID-19, often involving unvaccinated individuals, has left a mark on hospital staff.³³ Increased workloads and treating seriously ill and dying COVID-19 patients have caused staff burnout and trauma.³⁴ This burnout and trauma has resulted in increased turnover, leading many nurses to pursue positions in staffing agencies, to retire early, or to seek jobs outside of healthcare.³⁵ Staffing shortages have affected standards of care.

Numerous states addressed strains to their hospital systems by officially declaring crisis standards of care (CSC). According to the National Academy of Medicine definition, CSC occurs "when resources are so depleted that functionally equivalent care is no longer possible." However, CSC may also require a formal declaration by a state government. A timely and accurate declaration of CSC ensures that the public is aware that the health care system is overwhelmed, and alerts the public that hospitals lack adequate space, staff or supplies to meet the needs of patients. During surges in the pandemic, some states officially declared CSC, while others may have been operating within crisis standards without the transparency of a CSC declaration.

During the Omicron surge in January 2022, Washington physicians acknowledged a state of crisis, and nurses encountered staffing models consistent with crisis, but no official state CSC declaration ever came. On January 6, 2022, the Washington State Medical Association (WSMA), which represents over 12,000

36. Nat'l Acad. of Sci., Eng'g & Med., Rapid Expert Consultation on Crisis Standards of Care for the COVID-19 Pandemic 3–4, 9 (Mar. 28, 2020).

that evaluated the 30-day risk-adjusted mortality of non-COVID patients, which increased >20% in mortality from 9.43% pre-COVID to 11.48% during COVID.).

^{33.} Paige M. Farrenkopf, *The Cost of Ignoring Vaccines*, 95 YALE J. OF BIOLOGY & MED. 265, 265 (Jun. 30, 2022) ("The vast majority of cases, hospitalizations, and deaths related to COVID-19 are among unvaccinated individuals."). Across America, millions of healthcare providers worked double shifts, treated exceptionally high volumes of patients, and risked their own health to treat patients during the pandemic. *Id.*

^{34.} U.S. DEP'T OF HEALTH AND HUMAN SRVCS., supra note 26, at 9.

^{35.} *Id.* at 10.

^{37.} INST. OF MED. CRISIS STANDARDS OF CARE: A SYSTEMS FRAMEWORK FOR CATASTROPHIC DISASTER RESPONSE: VOLUME 1: INTRODUCTION AND CSC FRAMEWORK 1-1 (2012).

^{38.} NAT'L ACAD. OF SCI., ENG'G & MED., supra note 36, at 3, 5.

^{39.} TRACIE, CRISIS STANDARDS OF CARE DURING COVID-19: SUMMARY OF STATE ACTIONS 2 (2022) https://files.asprtracie.hhs.gov/documents/csc-actions-by-states-summary.pdf ("Crisis conditions were experienced during COVID-19 surges in almost every state," with nine such states at some point having officially declared CSC. However, "In 15 states, crisis care apparently occurred, but no official declaration was made. . . . ") (emphasis in original).

physicians and medical personnel in the State of Washington, pleaded with the Governor and Secretary of Health to declare CSC.⁴⁰

The time has come to officially make the call; we are in a state of crisis. As physicians, we know when we can do no more for our patients, and that time is now. We are effectively operating crisis capacity strategies throughout our health care system. Our emergency departments are overrun, our hospitals are full. We are emotionally and physically exhausted.⁴¹

Even after receiving this desperate letter, the State of Washington did not issue a CSC declaration. However, Governor Jay Inslee did acknowledge WSMA's plea in Emergency Proclamation 20-24.3 to justify the imposition of restrictions on non-urgent procedures, stating:

WHEREAS, on January 6, 2022, the Washington State Medical Association (WSMA) sent a letter to the Governor and Secretary of Health declaring that "we are in a state of crisis". In this letter, WSMA, while noting that ceasing or delaying electives services alone is not enough to address this crisis, called on the state to help overwhelmed emergency departments and hospitals statewide. 42

Mitigation strategies were employed, which at times included hospital nurses being subjected to crisis staffing levels.⁴³

The reason for the State of Washington refusing to issue a CSC declaration is unclear, but the authors suggest this style of avoidance may contribute to overall distrust of public health recommendations, government authority, and COVID-related matters in general. Washington was not alone in avoiding a declaration of CSC whereas "some state health officials . . . were loath to implement CSC—or even admit it was needed" absent a clear-cut trigger. 44

In contrast, Idaho was one state that did openly declare CSC during both the Delta and Omicron surges. During the Delta surge, the Idaho Department of Health and Welfare Director was transparent about their inability to meet the needs of patients by explaining their CSC situation and encouraging people to get vaccinated:

42. Wash. Emergency Proclamation 20-24.3 (Jan. 13, 2022), https://www.governor.wa.gov/sites/default/files/proclamations/20-24.3%20-%20Restrictions%20On%20Non-Urgent%20Medical%20Procedures%20%28tmp%29.pdf.

^{40.} Letter from Washington State Medical Association to Jay Inslee, Governor., WA and Umair A. Shah, Sec. of Health 1 (May 2, 2022), https://wsma.org/doc_library/news/letter-to-inslee-shah-crises-resources.pdf.

^{41.} Id.

^{43.} Arielle Dreher, Washington Hospitals Hoping to Avoid Crisis Standards of Care, SPOKESMAN REV., Jan. 18, 2022 ("Hospitals are moving from contingency to crisis staffing models routinely, depending on how many staff are available to care for patients.").

^{44.} James G. Hodge Jr. et al., *Navigating Legalities in Crisis Standards of Care*, 25 J. HEALTH CARE L. & POL'Y 171, 174 (2022) (CSC declarations were not consistently invoked among states and may have contributed to poor health outcomes).

The best way to end crisis standards of care is for more people to get vaccinated. It dramatically reduces your chances of having to go to the hospital if you do get sick from COVID-19.... The situation is dire – we don't have enough resources to adequately treat the patients in our hospitals, whether you are there for COVID-19 or a heart attack or because of a car accident.⁴⁵

Ultimately, treating volumes of unvaccinated patients contributed to compromised standards of care beyond just patients infected with COVID-19 and even beyond state borders. 46

Hospital staff valiantly rallied to address the crisis, but some may have indirectly contributed to it through poor vaccination rates which contributed to the problem. A report has shown that up to one third of hospital staff at hospitals throughout the country declined vaccination in 2021 out of concern for the vaccine's rapid development and effectiveness. ⁴⁷ If there is significant distrust in vaccination lingering within the walls of the hospital, it is only logical that the public will harbor many of the same concerns which contribute to vaccine hesitancy. With the majority of surges behind us, there is nothing to suggest that vaccine hesitancy involving a future pandemic would go any differently.

D. Vaccine Mandates: A Solution to COVID-19 Vaccine Hesitancy

Concluding that further vaccination was necessary to protect the health of our nation, but that all reasonable avenues for incentivization had been exhausted, the Biden Administration called upon federal agencies to implement emergency vaccine mandates.⁴⁸ States and the private sector followed suit, with proof of

^{45.} Idaho Expands Crisis Standards of Care Statewide Due to Surge in COVID-19 Patients Requiring Hospitalization, Newsroom Articles: IDAHO DEP'T OF HEALTH & WELFARE (Sept. 16, 2021), https://healthandwelfare.idaho.gov/news/idaho-expands-crisis-standards-care-statewide-due-surge-covid-19-patients-requiring-0.

^{46.} See Farrenkopf, supra note 33, at 266 ("Countless stories have emerged on how providing treatment to the unvaccinated was often to the detriment of other patients. Hospitals have been overburdened to the point where patients arriving for non-COVID related issues are being transferred to hospitals in other states. Patients in need of immediate operations have had to wait days to be seen by a doctor. Hospitals have had to turn away cancer patients because there were no more hospital beds available in the facility. One hospital was forced to dismiss a brain cancer patient because the hospital had reached maximum capacity, with 90% of beds having been taken by unvaccinated patients sick with COVID-19.").

^{47.} Fischels, supra note 25, at 14.

^{48.} Remarks on the COVID-19 Response and National Vaccination Efforts, 2021 Daily Comp. Pres. Doc. 2 (Sept. 9, 2021) ("We're going to protect vaccinated workers from unvaccinated coworkers."); Exec. Order No. 14,043, 86 Fed. Reg. 50,989 (Sept. 9, 2021) (Order mandating vaccination for federal

vaccination mandates and vaccination policies for private employers, such as increased insurance premiums for unvaccinated employees.⁴⁹ When federal agencies promulgated their vaccine mandates, 65% of the United States supported the concept of a universal mandate, 50 but opinions varied dramatically from state to state. While the District of Columbia (83%), Connecticut (76%), New Jersey (76%), Massachusetts (75%), and New York (75%) show overwhelming approval, there were only 47–48% approval rates in Montana, North Dakota, and Idaho. 51 Although, overall approval for mandates has held steady or slightly increased, 27% strongly or somewhat disapprove of vaccine mandates for employees.⁵² Healthcare workers have a similar disapproval rating: 17% strongly disapprove of mandates and 9% somewhat disapprove of mandates.53 The judicial system has become the forum for resolving these differences of opinion, and vaccine opponents have filed numerous legal claims to prevent the enforcement of mandates. Section II examines judicial holdings in recent COVID-19 vaccine mandate cases. Section III summarizes emerging trends in COVID-19 vaccine hesitancy. Section IV includes an examination of public health decision-making principles using the American Public Health Association's (APHA) Public Health Code of Ethics, providing insight into the impact that vaccine mandates can have on self-determination and autonomy. This section will conclude with a discussion on how public policy, ethics, and the law intersect to support enforcing vaccine mandates.

II. VACCINE MANDATES AND THE CURRENT LEGAL LANDSCAPE

To date, COVID-19 vaccine mandates have been challenged in various courts across the country. The next subsection presents a brief analysis of two cases challenging federal vaccine mandates: *National Federation of Independent Business v. Department of Labor*, and *Biden v. Missouri*. ⁵⁴ The following subsections examine well-established precedent and recent holdings involving state COVID-19 vaccine mandate litigation.

A. Challenges to Federal Vaccine Mandates

employees); Exec. Order No. 14,042, 86 Fed. Reg. 50,985 (Sept. 9, 2021) (Order mandating vaccination for federal contractors).

^{49.} Bridget Balch, *The Cost of Being Unvaccinated is Rising — Will People Be Willing to Pay the Price?*, Ass'N OF AM. MED. COLLS.: NEWS (Oct. 26, 2021), https://www.aamc.org/news-insights/cost-being-unvaccinated-rising-will-people-be-willing-pay-price.

^{50.} Baum et al., A 50-State COVID-19 Survey, Report #64: Continued High Public Support for Mandating Vaccines, 1 THE COVID STATES PROJECT: REPORTS 9 (2021), https://www.covidstates.org/reports/continued-high-public-support-for-mandating-vaccines.

^{51.} Id. at 20.

^{52.} Id. at 7.

^{53.} David Lazer et al., A 50-State COVID-19 Survey: Report #65: COVID-19 Vaccine Attitudes Among Healthcare Workers, 1 THE COVID STATES PROJECT: REPORTS 6 (2021), https://osf.io/rh3vp/.

^{54.} Nat'l Fed'n of Indep. Bus. v. Dep't of Lab., Occupational Safety & Health Admin., 142 S. Ct. 661 (2022); Biden v. Missouri, 142 S. Ct. 647 (2022).

To help boost vaccination rates, the Biden Administration called upon federal agencies to promulgate emergency vaccine mandates. The Centers for Medicare and Medicaid Services (CMS) complied and created a mandate requiring all healthcare workers in Medicare and Medicaid funded hospitals to be vaccinated, with exemptions for individuals with disabilities, medical reasons, and "sincerely held religious beliefs."55 The mandate cautioned that a facility's failure to comply may result in exclusion from Medicaid and Medicare funding, as well as monetary penalties. 56 Healthcare workers in multiple states filed suit. 57 On January 13, 2022, the U.S. Supreme Court upheld the CMS mandate in Biden v. Missouri, holding that the Secretary of Health and Human Services (HHS) has the authority to impose conditions, including infectious disease controls like a vaccine mandate, as a condition of receiving Medicare and Medicaid funds.⁵⁸ The Court reasoned that minimizing risks to patients is a longstanding practice of HHS to "address the safe. . . provision of healthcare," 59 and that vaccination is a core component of infection control within hospitals. 60 Additionally, the Secretary of HHS has emphasized that "pre-existing state requirements are a major reason the agency has not previously adopted vaccine mandates as a condition of participation,"61 yet that does not preclude the agency from doing so. Thus, at least for now, COVID-19 vaccination is mandatory for employees working in facilities that receive Medicaid or Medicare funding.62

On September 9, 2021, the Occupation Health and Safety and Administration (OSHA) issued an Emergency Temporary Standard requiring employers with 100 or more employees to develop, implement, and enforce a mandatory COVID-19 vaccination policy.⁶³ Shortly thereafter, multiple states and businesses filed suit

60. Id. at 652-53.

^{55.} Fact Sheet: Biden Administration Announces Details of Two Major Vaccination Policies, THE WHITE HOUSE (Nov. 4, 2021), https://www.whitehouse.gov/briefing-room/statements-releases/2021/11/04/fact-sheet-biden-administration-announces-details-of-two-major-vaccination-policies/; Omnibus COVID-19 Health Care Staff Vaccination, 86 Fed. Reg. 61,555, 61,659 (Nov. 5, 2021) (to be codified at 42 C.F.R. pts. 416, 418, 441, 460, 482–86, 491 & 494).

^{56.} Omnibus COVID-19 Health Care Staff Vaccination, 86 Fed. Reg. at 61,574.

^{57.} Missouri v. Biden, 571 F. Supp. 3d 1079 (E.D. Mo. 2021), vacated and remanded, No. 21-3725, 2022 WL 1093036 (8th Cir. Apr. 11, 2022), cert. denied, 143 S. Ct. 94 (2022); Louisiana v. Becerra, 571 F. Supp. 3d 516 (W.D. La. 2021), vacated and remanded, No. 21-30734, 2022 WL 2116002 (5th Cir. June 13, 2022).

^{58.} Biden v. Missouri, 142 S. Ct. 647, 652 (2022).

^{59.} *Id.*

^{61.} Id. at 653 (citing 86 Fed. Reg. 61567-68).

^{62.} Id. at 654.

^{63.} Remarks on the COVID-19 Response and National Vaccination Efforts, 2021 DAILY COMP. OF PRES. Doc. 2 (Sept. 9, 2021) ("We're going to protect vaccinated workers from unvaccinated coworkers."). The Occupational Health and Safety Act created an emergency order consistent with the

against OSHA's mandate, claiming that it unconstitutionally imposed a financial burden on their businesses by forcing unwilling employees to "take their shots, take their tests, or hit the road."64 Petitions across multiple jurisdictions were consolidated before the Sixth Circuit, and, upon review, the U.S. Supreme Court concluded that OSHA's vaccine mandate was overly broad and halted its enforcement.⁶⁵ The issue was that the mandate did not distinguish between specific occupational hazards associated with COVID-19, which would be within the purview of OSHA, and the general risk of contracting the virus, which would not.⁶⁶ Since the vaccine mandate covered all federal jobs, even those taking place outdoors where risks are somewhat limited, it was found to be an inappropriate expansion of OSHA's authority. 67 Theoretically, an OSHA vaccine mandate might have survived a legal challenge if exposure to COVID-19 "pose[d] a special danger because of particular features of an employee's job or workplace," and the OSHA vaccine mandate was limited to high-risk work conditions.⁶⁸ However, since OSHA seemingly overstepped its authority by regulating on general public health concerns, 69 the OSHA vaccine mandate has since been withdrawn from the Code of Federal Regulations.⁷⁰

B. Statewide COVID-19 Vaccine Mandates

Immunization requirements are typically under the purview of state governments and state agencies in the context of school vaccination requirements for attendance.⁷¹ Regulating school immunization requirements remains a

592

Executive Order requirements: employers with 100 or more employees must require vaccination or use preventative testing practices. Exec. Order No. 14043, 86 Fed. Reg. 50,989, 50,990 (Sept. 9, 2021) ("Each agency shall implement, to the extent consistent with applicable law, a program to require COVID-19 vaccination for all its Federal employees."); Exec. Order No. 14043, 86 Fed. Reg. 50,989 (Sept. 9, 2021); Exec. Order No. 14042, 86 Fed. Reg. 50,985 (Sept. 9, 2021); COVID-19 Vaccination and Testing; Emergency Temporary Standard, 29 C.F.R. § 1910 (2022) (later removed).

^{64.} Petitioners include multiple businesses and the states of Texas, Idaho, Kentucky, Kansas, Ohio, Oklahoma, Tennessee, West Virginia, Mississippi, South Carolina, and Utah. BTS Holdings v. OSHA, 17 F. 4th 604 (5th Cir. Nov. 6, 2021) (order granting stay), cert. granted, Nat'l Fed'n of Indep. Bus. v. Dep't of Labor, 142 S. Ct. 661 (2022).

^{65.} Nat'l Fed'n of Indep. Bus., 142 S. Ct. at 665.

^{66.} *Id.* at 665–66.

^{67.} Id. at 664.

^{68.} Id. at 665.

^{69.} Id. at 666.

^{70. 29} C.F.R. § 1910 (2022) (Removing and reversing § 1910.501 effective Jan. 26, 2022).

^{71.} All fifty states require specific vaccines to be administered to students as a condition of school attendance, typically in accordance with the recommendations in the national Advisory Committee on Immunization Practices within the CDC. Each state permits medical exemptions to the requirements, but not all states permit religious or philosophical exemptions. *States With Religious and Philosophical Exemptions from School Immunization Requirements*, NAT'L CONF. OF STATE LEGISLATURES (May 25, 2022), https://www.ncsl.org/research/health/school-immunization-exemption-state-laws.aspx.

contentious topic despite its longstanding practice. ⁷² Many of the same legal challenges, specifically related to religious freedom and substantive due process violations, ⁷³ are being applied to COVID-19 vaccine mandates. Using state emergency powers, many governors have introduced vaccine mandates in healthcare and school settings. ⁷⁴ As of February 10, 2022, 18 states have applied a COVID-19 vaccine mandate to healthcare workers, employees of city and states, and individuals who work in education. ⁷⁵ Thus far, Washington D.C., California, and Louisiana will require a COVID-19 vaccination for students in 2022. ⁷⁶ In contrast, 14 states fall on the far right, conservative side of the spectrum, enacting legislation and executive orders to expressly *prohibit* state and local governments from requiring COVID-19 vaccination as a condition of employment, school attendance, or as a condition for obtaining goods and services. ⁷⁷ There have been several notable cases, many of which will be discussed in the following sections, that dispute the legal authority of state COVID-19 vaccine mandates.

72. In 2019, California Senator Richard Pan, M.D., drafted Senate Bill 277 to eliminate philosophical exemptions from school immunization requirements. S. 276, 2019–2020 Leg., Reg. Sess. (Cal. 2019). Anti-vaccine activists accosted Pan and one threw menstrual blood from the Senate gallery. Taryn Luna, Vaccine Bill Protester Threw Blood on California Senators, L.A. Times (Oct. 2, 2019), https://www.latimes.com/california/story/2019-10-02/vaccine-law-protester-blood-california-state-senate. This year, Senator Pan presented The Keep Schools Open and Safe Act to remove the personal belief exemption for school-based vaccination requirements for COVID-19. Dr. Richard Pan Introduces Measure to Keep Schools Open and Safe, Dr. Richard Pan Cal. State Senator (Jan. 24, 2022), https://democrats.senate.ca.gov/caucus-news/dr-richard-pan-introduces-measure-keep-schools-open-and-safe. This has been proposed because Governor Newsom added the COVID-19 vaccine to the school immunization schedule via an administrative process rather than through the legislature. Id. Medical and philosophical exemptions must remain available for all administratively added vaccines. Id.

73. Love v. State Dep't of Ed., 240 Cal. Rptr. 3d 861 (Cal. Ct. App. 2018) (California parents brought suit against state for pulling religious vaccine exemption for school attendance. They sued for violations of their children's rights to education and privacy under the due process clause of the California constitution.); F.F. ex rel. Y.F. v. State, 194 A.D.3d 80 (N.Y. App. Div. 2021) (Plaintiffs challenge New York's repeal of a public health law permitting religious exemptions for children attending school. Their claims are based on free exercise under the First Amendment and Equal Protection).

74. See, e.g., Wash. Proclamation No. 21-14.1 (Aug. 20, 2021), https://www.governor.wa.gov/sites/default/files/proclamations/21-14.1%20-%20COVID-19%20Vax%20Washington%20Amendment.pdf; see also California Becomes First State in Nation to Announce COVID-19 Vaccine Requirements for Schools, OFFICE OF GOV. GAVIN NEWSOME (Oct. 1, 2021), https://www.gov.ca.gov/2021/10/01/california-becomes-first-state-in-nation-to-announce-covid-19-vaccine-requirements-for-schools/.

75. State COVID-19 Data and Policy Actions, KFF (Feb. 10, 2022), https://www.kff.org/report-section/state-covid-19-data-and-policy-actions-policy-actions/.

76. NAT'L CONF. OF STATE LEGISLATURES, *supra* note 71; D.C. Mayor's Order No. 2022-029 5–6 (Feb. 14, 2022).

77. Lazer et al., supra note 53.

C. Vaccine Mandates are a Valid Exercise of a State's Police Power

The constitutional authority for states to exercise police powers through mandatory vaccination laws was firmly established by the U.S. Supreme Court in Jacobson v. Massachusetts. The case arose from a Massachusetts resident's refusal to follow a state statute requiring vaccination during an ongoing smallpox epidemic.⁷⁸ Adults who failed to comply with the Massachusetts vaccine mandate were required to pay a \$5 fine.⁷⁹ When Appellant Jacobson asserted a violation of his 14th Amendment individual liberties and refused the vaccine, he was fined.80 The Court held that vaccine mandates are a valid exercise of a state's police power in order to protect the public's health and safety, and that individual liberties otherwise secured by the Constitution may be curtailed to achieve this end.81 Applying this standard, a vaccine mandate should be deemed valid, so long as it is rationally related to a public health interest, and so long as the statute includes a medical exemption.⁸² Seventeen years later in Zucht v. King, the Court reaffirmed Jacobson, holding that vaccination requirements to attend school are constitutional, even if there is no immediate outbreak or threat of illness.83 Relying on Jacobson, the Court in Zucht found that an ordinance mandating that school children be vaccinated against smallpox was a valid exercise of state police powers to protect public health.⁸⁴ The Zucht plaintiffs' claims for 14th Amendment Due Process and Equal Protection Clause violations were therefore rejected.⁸⁵ For the past century, Jacobson and Zucht have continued as good law, upholding the constitutional authority of states to use their police powers to enforce vaccination requirements, and having survived numerous legal challenges.⁸⁶

^{78.} Jacobson v. Massachusetts, 197 U.S. 11, 25 (1905) (Jacobson refused his vaccine and was consequently charged with a criminal citation and monetary penalty. Jacobson challenged the Massachusetts' law under the liberty provision in the Preamble of the Constitution).

^{79.} Id. at 12.

^{80.} Id. at 21.

^{81.} Id. at 25-26.

^{82.} Id. at 30 (The Court specifically references medical exemptions for children).

^{83.} Zucht v. King, 260 U.S. 174, 176 (1922) (relying on *Jacobson*, the Court in *Zucht* held that a Texas ordinance requiring a certificate of vaccination for school children was a valid exercise of state police powers to protect public health. The Court rejected claims for violations of 14th Amendment Due Process and Equal Protection).

^{84.} Id. at 176.

^{85.} Id. at 177.

^{86.} F.F. ex rel Y.F. v. State, 194 A.D.3d 80 (N.Y. App. Div. 2021) (holding that the 2019 repeal of New York's religious exemption for school immunizations was not a violation of the free exercise clause of the First Amendment. The Court held that the act of repealing the religious exemption was neutral and generally applicable, subjecting it to rational basis review. Citing to *Zucht*, the Court reiterated that there is no equal protection violation where children are not permitted to attend school without a vaccination. "The right to free exercise does not include the liberty to expose the community or a child to communicable disease."); Doe v. San Diego Unified Sch. Dist., 21-CV-1809-CAB-LL, 2021 WL 5396136, at *6 (S.D. Cal. Nov. 18, 2021) (relying on *Jacobson* and *Employment Div. v. Smith*, the court declined a temporary restraining order to a student claiming a free exercise violation due to her school's vaccine

D. Recent Legal Claims Involving COVID-19 State Vaccine Mandates

In the past year, plaintiffs have brought legal claims in opposition of COVID-19 vaccine mandates based on allegations of a failure to honor informed consent, 87 violations of bodily autonomy, integrity, and medical choice under the Due Process Clause of the Fourteenth Amendment, 88 and violations of religious exercise under the First Amendment. 89 The majority of cases have failed in their crusade to secure preliminary injunctions, thus most mandates continue to be enforced. 90 Four cases will be reviewed. The first is a case out of the Seventh Circuit, Klaassen v. Trustees of Indiana University, which is based on students' claims that their University's vaccine and masking requirements violated their rights to bodily autonomy, bodily integrity, and medical choice. 91 The second is Does v. Mills, where healthcare workers in Maine sued the Governor, Maine's Department of Health and Human Services, and Maine's CDC director for removing religious and philosophical exemptions from hospital vaccine requirements. 92 The third is Keil v. City of New York Department of Education, where a group of teachers sought to enjoin New York's vaccine mandate claiming that the religious exemptions were discriminatory and in violation of their First Amendment rights. 93 Klaassen was denied injunctive

mandate); Kozlov v. City of Chicago, No. 21 C 6904, 2022 WL 602221, at *5 (N.D. III Mar. 1, 2022) (examining plaintiff's substantive due process claim against the progeny of *Jacobson*); Workman v. Mingo Cnty. Bd. Of Educ., 419 F. App'x 348, 353 (4th Cir. 2011) (unpublished), cert. denied, 565 U.S. 1036 (2011) (citing *Zucht* and *Jacobson*, the Fourth Circuit held that proactive vaccination requirements for school aged children can be upheld in the absence of an outbreak.); Maricopa Cnty. Health Dep't v. Harmon, 750 P.2d 1364 (Ariz. Ct. App. 1987) (upholding a health department directive prohibiting non-immunized students from attending school despite the absence of a confirmed case at the school); Phillips v. City of New York, 775 F.3d 538, 543 (2d Cir. 2015), *cert denied*, 136 S. Ct. 104 (2015) (holding that temporarily excluding unvaccinated children from school during a chicken pox outbreak is a reasonable exercise of power); Viemeister v. White, 72 N.E. 97 (N.Y. 1904) (upholding compulsory vaccination for schoolchildren despite New York's constitutional duty to provide a system of free public schools, and despite absence of a recent outbreak).

^{87.} Klaassen v. Trs. of Ind. Univ., 549 F. Supp. 3d 836 (N.D. Ind. 2021), vacated and remanded to dismiss as moot, 24 F.4th 638 (7th Cir. 2022).

^{88.} *Id.* at 859.

^{89.} Kane v. De Blasio, 19 F.4th 152 (2d Cir. 2021); Does v. Mills, 16 F.4th 20 (1st Cir. 2021), cert. denied, 142 S. Ct. 1112 (2021).

^{90.} A preliminary injunction is considered a drastic remedy. The following elements must be proven by the moving party: (1) a likelihood of succeeding on the merits of the claims; (2) a likelihood of suffering irreparable harm; (3) the balance of equities tip in the moving party's favor; and (4) "an injunction is in the public interest." Winter v. Nat. Res. Def. Council, Inc., 555 U.S. 7, 20 (2008).

^{91.} Klaassen, 549 F. Supp. 3d at 867.

^{92.} Mills, 16 F.4th at 24 (affirming denial of preliminary injunction).

^{93.} Keil v. City of New York, 21-3043-cv, 2022 WL 619694 (2d Cir. Mar. 3, 2022), cert. denied, 142 S. Ct. 1226 (2022).

relief, while *Mills and Keil* were denied review by the U.S. Supreme Court.⁹⁴ The Sixth Circuit bucked the trend in *Dahl v. Board of Trustees of Western Michigan University,* maintaining an injunction in favor of the student-athletes' claim that the University's refusal to grant religious exemptions violated the student-athletes' First Amendment rights.⁹⁵ The summaries below examine some of the claims made in these cases.⁹⁶

i. Substantive Due Process Arguments are Ineffective Against Vaccine Mandates

Student Plaintiffs in *Klaassen* claimed that their University's vaccine mandate deprived them of their rights to bodily autonomy, bodily integrity, and medical choice. The Plaintiff students based their argument on the Fourteenth Amendment of the U.S. Constitution which states, "no state may deprive any person of life, *liberty*, or property without due process of law. In cases involving a fundamental right, the standard of review is strict scrutiny. In there is not a fundamental right at issue, the state's action need only be rationally related to a legitimate state interest. In this case, the parties debated whether there was a fundamental right to remain free from vaccination. In the Court held that there is not a fundamental right to remain free from vaccination, and relying on *Jacobson*, the University's power to mandate vaccination was rationally related to their interest of preventing the spread of COVID-19. In their Application for Injunction to the U.S. Supreme Court, Plaintiff students argued that a heightened standard of review should apply, pleading with the Court to consider the right to refuse vaccination as a *personal choice* that "has been mandated by the government,

596

^{94.} Klaassen was denied injunctive relief by Justice Barrett on Aug. 12, 2021. Amy Howe, *Barrett Leaves Indiana University's Vaccine Mandate in Place*, SCOTUSBLOG (Aug. 12, 2021, 9:40 PM), https://www.scotusblog.com/2021/08/barrett-leaves-indiana-universitys-vaccine-mandate-in-place/. Students requested the Court examine Indiana University's vaccine mandate under heightened scrutiny, but the Court refused to do so. *Id.*; Mills, 142 S. Ct. 1112; Keil, 142 S. Ct. 1226.

^{95.} Dahl v. Bd. of Trs. of W. Mich. Univ., 15 F.4th 728, 730 (6th Cir. 2021).

^{96.} This is not an exhaustive list. There have been claims for violations of procedural due process rights, Title VII, and equal protection. Kozlov v. City of Chicago, No. 21-C6904, 2022 WL 602221 (N.D. III. Mar. 1, 2022) (holding Plaintiff's Equal Protection claim failed because vaccine refusal does not qualify for membership in a "suspect class" traditionally reserved for discriminatory treatment based on race, national origin or alienage); Garland v. N.Y.C. Fire Dep't, 574 F. Supp. 3d 120 (E.D.N.Y. 2021) (Plaintiff fire department employees claimed their employer violated 42 U.S.C. § 1983 on procedural due process grounds when employees were terminated for refusing to vaccinate. The court denied the preliminary injunction—finding the grievance procedures were adequate and that vaccination was an important condition of employment. The balance of equities and the public interest were in favor of denying the injunction.); *Mills*, 16 F.4th at 36 (Title VII does not require hospitals to accommodate religious exemptions if it would cause undue hardship.).

^{97.} Id. at 867.

^{98.} U.S. Const. amend. XIV, § 1 (emphasis added).

^{99.} Klassen, 549 F. Supp. 3d at 860.

^{100.} Id. at 861.

^{101.} Klaassen, 549 F. Supp. 3d at 867-68.

^{102.} Klaassen v. Trs. of Ind. Univ., 7 F.4th 592, 593 (7th Cir. 2021).

contrary to the decision of the person" and attempted to draw comparisons to prior holdings that prevented forced pre-trial administration of anti-psychotic drugs against unwilling individuals. ¹⁰³ They also cited to a case holding that an incompetent individual has a right to consent to or refuse medical treatment. ¹⁰⁴ The Indiana District Court differentiated the personal, individualized choices for accepting or denying medical care from collective responsibility, emphasizing that "[v]accines address a collective enemy, not just an individual one." ¹⁰⁵ This reasoning has since been extended to other cases, ¹⁰⁶ and the U.S. Supreme Court has not intervened.

ii. Governments Should be Prepared to Defend Against Free Exercise Clause Challenges

The Free Exercise Clause of the First Amendment provides that "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof "107 Courts have consistently rejected free exercise challenges to vaccine mandates based on precedent set forth in *Prince v. Massachusetts,* which states that "the right to practice religion freely does not include the liberty to expose the community or the child to communicable disease, or the latter to ill

103. Brief of Plaintiff–Appellants at 19, Klaassen v. Trs. Of Ind. Univ., 24 F.4th 638 (7th Cir. 2022) (No. 21-2326) (citing to Riggins v. Nevada, 504 U.S. 127, 135 (1992)); Sell v. United States, 539 U.S. 166, 186 (2003) ("pre-trial forced administration of antipsychotic drugs"). These types of parallels are also drawn in Mary Holland, Compulsory Vaccination, the Constitution, and the Hepatitis B Mandate for Infants and Young Children, 12 YALE J. HEALTH POL'Y, L. & ETHICS 40, 60–61 (2012) (Holland draws comparisons to mandatory sterilization laws in Skinner v. Oklahoma and rights to marital privacy in Griswold v. Connecticut.).

104. Brief of Plaintiff–Appellants, *supra* note 103, at 19 (citing to Cruzan v. Dir., Mo. Dep't of Health, 497 U.S. 261, 278 (1990) ("right to consent to or refuse medical treatment for incompetent person")).

105. Klaassen, 549 F. Supp. 3d at 869.

106. See, e.g., Troogstad v. City of Chicago, 571 F. Supp. 3d 901, 906, 908 (N.D. III. 2021) (finding the employees unlikely to succeed on the merits of their challenge to the governor's mandatory vaccination policy on substantive due process grounds, as a violation of the fundamental right to refuse medical treatment, because "[w]hen an individual's behavior directly affects the health and welfare of others in the community, she cannot rely on the Supreme Court's longstanding protection of 'intimate and personal choices' to the utter exclusion of all other interests.") (quoting Planned Parenthood of Se. Pa. v. Casey, 505 U.S. 833, 851 (1992) (citation omitted)); Kozlov v. City of Chicago, No. 21-C6904, 2022 WL 602221 at *4 (N.D. III. Mar. 1, 2022) (holding that bodily autonomy in the context of vaccination is not a fundamental right, and distinguishing between compelling vaccination (e.g., mandated vaccination or testing upon threat of termination) and requiring vaccination in order to participate in a particular activity).

107. U.S. CONST. amend. I; see Cantwell v. Connecticut, 310 U.S. 296, 303 (1940).

health or death." ¹⁰⁸ Courts use the test set forth in *Employment Division, Department of Human Resources of Oregon v. Smith* ¹⁰⁹ to examine mandates for free exercise violations. *Smith* requires that a law which burdens a plaintiff's religious beliefs, practices, or observances must be "a neutral law of general applicability," otherwise it is subject to strict scrutiny. ¹¹⁰ A law that is (1) neutral and (2) generally applicable is reviewed under the rational basis standard, requiring that a law only be rationally related to a legitimate government interest. ¹¹¹ This is the lowest threshold, and puts the burden of proof on the plaintiff to prove the law fails the standard. ¹¹² Strict scrutiny, however, requires the government to prove that the law is narrowly tailored to serve a compelling government interest. ¹¹³ This is a much more stringent standard which generally fails to apply in vaccine mandate cases. ¹¹⁴

Rational basis review applies to neutral, generally applicable laws. 115 Neutrality requires an examination of the text to ensure there is no facial

598

^{108.} Prince v. Massachusetts, 321 U.S. 158, 166–67, (1944) ("The right to practice religion freely does not include the liberty to expose the community or the child to communicable disease or the latter to ill health or death."); Phillips v. City of New York, 775 F.3d 538, 543 (2d Cir. 2015); Workman v. Mingo City Bd. of Educ., 419 F. App'x 348, 353–54 (4th Cir. 2011).

^{109.} Emp't Div., Dep't of Hum. Res. of Or. v. Smith, 494 U.S. 872, 879 (1990), superseded in part by statute, Religious Freedom Restoration Act, 42 U.S.C. § 2000bb-1 (1993) (RFRA only applies to federal government).

^{110.} *Id.* at 872; Tandon v. Newsom, 141 S. Ct. 1294, 1297 (2021) (finding that California Governor Gavin Newsom's restrictions on in-home Bible studies to no more than three families at one time triggered strict scrutiny because the California Governor treated other secular activities differently, and holding such restrictions was a violation of the Free Exercise clause); Church of the Lukumi Babalu Aye, Inc. v. City of Hialeah, 508 U.S. 520, 531 (1993).

^{111.} Tandon, 141 S. Ct. at 1295.

^{112.} We The Patriots USA, Inc. v. Hochul, 17 F.4th 266, 273, 280, 290 (2d Cir. 2021), opinion clarified, 17 F.4th 368 (2d Cir. 2021), app. for injunctive relief denied, 132 S. Ct. 734 (Dec. 13, 2021) (No. 21A125), cert. denied sub nom., 142 S. Ct. 2569 (2022) (holding that New York's emergency rule requiring healthcare workers to be vaccinated, despite religious objections, was a neutral law of general applicability under Empl. Div. v. Smith. The healthcare workers claimed that the vaccines were developed or produced using cell lines obtained from voluntarily aborted fetuses); Wise v. Inslee, No. 2:21-CV-0288-TOR at 7 (E.D. Wash Oct. 25, 2021).

^{113.} *Tandon*, 141 S. Ct. at 1298 (2021); Kane v. De Blasio, 19 F.4th 152, 171 (2d Cir. 2021) (citing to Roman Cath. Diocese of Brooklyn v. Cuomo, 141 S. Ct. 63, 67 (2020)); see Fulton v. City of Philadelphia, 141 S. Ct. 1868, 1881 (2021). In *Fulton*, a Catholic foster care agency would not certify same-sex couples as placement families based on their religious belief that "marriage is a sacred bond between a man and woman." *Id.* at 1875. In an effort to prevent discrimination against same-sex couples, the City proposed a foster care contract stating in part "provider shall not reject a child or family . . . based upon their sexual orientation . . . unless an exemption is granted by the Commissioner." *Id.* at 1878. Fulton holds that granting an exemption based on the Commissioner's approval automatically renders the exemption as individualized, and therefore not generally applicable. *Id.*

^{114.} We The Patriots, 17 F.4th at 288–89.

^{115.} Id. at 280.

discrimination.¹¹⁶ "'[S]ubtle departures' from religious neutrality," include a review of the historical background of the challenge, "statements made by members of the decision-making body," and events leading up to the enactment or policy in question.¹¹⁷ To be generally applicable, a law may not: (1) invite the government to consider the particular reasons for a person's conduct by providing individualized exceptions, or (2) treat any comparable secular activity more favorably than religious exercise.¹¹⁸ The asserted government interest should be considered when establishing this comparison.¹¹⁹

a. Generally, Courts are Unwilling to Heighten the Standard of Review Involving Vaccine Mandates, Even When Mandates Lack a Religious Exemption

With the exception of one Sixth Circuit case, *Dahl v. Board of Trustees of Western Michigan University*, courts have generally remained unwilling to apply strict scrutiny to vaccine mandate cases. ¹²⁰ In *Kane*, a group of teachers and school administrators challenged the New York Department of Education's vaccine mandate on its face, and the way religious exemption policies were applied under an arbitration award. ¹²¹ On appeal, the Second Circuit found the vaccine mandate to be both neutral and generally applicable, thus qualifying for rational basis review. ¹²² The text of the mandate required that all Department staff and contractors who work in Department schools or buildings be vaccinated within a set timeframe. ¹²³ The text was neutral because it applied to all Department staff, and it was generally applicable because the exempt individuals (including first

^{116.} Kane, 19 F.4th at 164 (2d Cir. 2021) (citing Church of the Lukumi Babalu Aye, Inc. v. City of Hialeah, 508 U.S. 520, 533 (1993)).

^{117.} *Id.* at 164 (citing Church of the Lukumi, 508 U.S. at 540); see We The Patriots, 17 F.4th at 282 (drafting a policy without including a religious mandate does not compromise neutrality. The Court considers how the public health board followed the emergency rule-making requirements such as "process, public input, and support . . . that would be effective for 90 days." Additional procedures such as "develop[ing] and issu[ing] specific findings and a regulatory impact statement.").

^{118.} Emp't Div., Dep't of Hum. Res. of Or. v. Smith, 494 U.S. 872, 884 (1990); *Tandon*, 141 S. Ct. at 1295; Fulton, 141 S. Ct. at 1877.

^{119.} Tandon, 141 S. Ct. at 1295.

^{120.} See generally We The Patriots, 17 F.4th at 266; Dr. A. v. Hochul, 142 S. Ct. 2569 (June 30, 2022), cert. denied; Wise v. Inslee, No. 2:21-CV-0288-TOR, 2021 WL 4951571 (E.D. Wash Oct. 25, 2021).

^{121.} *Kane*, 19 F.4th at 160. The arbitration award also included the option to leave without pay, with benefits intact, up to one year. *Id.* at 161.

^{122.} Id. at 166.

^{123.} Id. at 159.

responders, delivery drivers, and repairmen) remained objective. ¹²⁴ Plaintiffs argued that permitting these exempt groups favored secular conduct over religious conduct, but the court was not persuaded, and emphasized that allowing this type of exempt visitor does not conflict with the City's interest in stymieing the spread of COVID-19. ¹²⁵ The City's vaccination requirement for Department staff was found to be rationally related to the City's legitimate interest of safely reopening schools. ¹²⁶ Therefore, the vaccine mandate was constitutional. ¹²⁷

Vaccine mandates do not have to include a religious exemption. ¹²⁸ In *Does v. Mills*, plaintiff healthcare workers claimed that Maine's law requiring vaccination for healthcare workers substantially burdened their religious beliefs when the state removed religious exemptions in 2019. ¹²⁹ Plaintiff healthcare workers objected to the COVID-19 vaccine because they believed fetal cell lines from elective abortions were used in the development, research, testing, and/or production. ¹³⁰ Upon review in the First Circuit, the law was deemed neutral because philosophical objections were also removed and generally applicable because permitting medical exemptions aligns with Maine's interests in ensuring a healthy workforce and protecting the health of those who cannot be vaccinated. ¹³¹ Thus, the mandate was only subject to rational basis review. ¹³² The Court also considered all of Maine's preventative efforts, the effects on Maine's limited workforce, and the goal of protecting vulnerable populations in hospital settings. ¹³³ Vaccinating healthcare workers was determined to be rationally related to the legitimate interest of preventing harm within healthcare facilities. ¹³⁴

b. Religious Exemptions Fall Under Strict Scrutiny When They are Evaluated Individually

If a religious exemption is individually evaluated, strict scrutiny applies, and the state must prove that the law at issue was narrowly tailored to serve a

^{124.} Id. at 162-63, 166.

^{125.} Id.

^{126.} Id. at 166-67.

^{127.} See Kane, 19 F.4th at 166-67.

^{128.} We the Patriots USA, Inc. v. Hochul, 17 F.4th 266, 273 (2nd Cir. 2021) (holding that the Plaintiffs' claim for violation of the Free Exercise clause based on the lack of a religious exemption would be unlikely to succeed). Looking to Smith, the court found that "a neutral law of general applicability" can still be subject to rational basis review even if the law incidentally burdens religious practice, and religious-based exemptions are not automatically entitled. *Id*.

^{129.} Does v. Mills, 16 F.4th 20, 24 (1st Cir. 2021), cert. denied, 142 S.Ct. 1112 (Feb. 22, 2022) (renumbered No. 21-717).

^{130.} Id. at 13-14.

^{131.} Id. at 30-31.

^{132.} *Id.* at 32–33.

^{133.} *Id.* Maine made significant efforts to prevent transmission with non-pharmaceutical alternatives, but accurate tests took too much time. *Id.* at 33. Maine offered multiple incentives for workers to get vaccinated prior to issuing a mandate. *Id.* at 26.

^{134.} Id. at 32.

compelling interest. 135 This rule has been extended to vaccine mandate cases in the Second and the Sixth Circuits. 136 The Kane and Dahl cases provide examples of how religious exemptions can fail tests for neutrality and general applicability. In Kane, the process for evaluating religious exemptions was not generally applicable or neutral, and when reviewed under strict scrutiny, the laws at issue did not pass constitutional muster.¹³⁷ The religious accommodations process requested proof such as a request "documented in writing by a religious official," and requests must be related to "recognized and established religious organizations (e.g., Christian Scientists)." ¹³⁸ Each request was individually evaluated, ¹³⁹ and if a religious leader had spoken out in favor of vaccination, either publicly or in an on-line source, the organization denied the request. 140 One of the plaintiffs in Kane, Matthew Keil, is an ordained deacon in the Catholic church and cited scripture quotes that commanded abstaining from injecting any substance into his body. 141 When Keil's application was under review, an arbitrator commented that Keil's beliefs "were merely personal, [because] there are other Orthodox Christians who choose to get vaccinated."142 The Second Circuit found that evaluating Keil's application in a way that invalidates his views, and hinging approval based on a religious leader's public statements, is not a neutral practice. The court also found that the process was not generally applicable, because there were varied, individualized outcomes for granting the exemptions. 143 The accommodation standards failed strict scrutiny because requiring "a letter from a religious official" and validating the plaintiffs' beliefs based on a religious leader's public comments were not narrowly tailored to the city's interest in preventing the spread of COVID-19. 144

In Dahl v. Board of Trustees of Western Michigan University, the Sixth Circuit noted that the University's religious exemption stated that "[m]edical or religious exemptions and accommodations will be considered on an individual basis." 145

^{135.} Emp. Div., Dep't of Hum. Res. of Or. v. Smith, 494 U.S. 872, 884 (1990) ("'[W]here the State has in place a system of individual exemptions, it may not refuse to extend that system to cases of 'religious hardship' without compelling reason."); Fulton v. City of Philadelphia, 141 S. Ct. 1868, 1876–77 (2021).

^{136.} Dahl v. Bd. of Trs. of W. Mich. Univ., 15 F.4th 728, 733 (6th Cir. 2021); Kane v. De Blasio, 19 F.4th 152, 164 (2d Cir. 2021).

^{137.} Kane, 19 F.4th at 169.

^{138.} *Id.* at 160.

^{139.} *Id.*

^{140.} Id. at 168.

^{141.} Joint Brief and Special Appendix for Plaintiffs-Appellants at 7, Keil v. City of New York, 2022 WL 619614 (March 3, 2022) (21-3043-cv, 21-3047-cv); Kane v. De Blasio, 19 F. 4th 152, 168 (2nd Cir. 2021).

^{142.} Kane, 19 F.4th at 168 (citations omitted).

^{143.} Id. at 168-69.

^{144.} Id. at 169.

^{145.} Dahl, 15 F.4th at 730.

Should the student-athletes decline vaccination, they would not be able "to maintain full involvement in the athletic department," or in other words, attend practice and play in games. He Because the mandate was evaluated on an individualized basis, the University's mandate policy was subject to strict scrutiny. Here, the Court agrees that preventing the spread of COVID-19 is compelling, but found that the mandate was not narrowly tailored. He "[P]ublic health measures are not narrowly tailored if they allow similar conduct that 'create[s] a more serious health risk." He court reasoned that it was more likely that a non-athlete student would spread COVID-19, and this probability combined with the high risk of COVID-19 spread in communal living situations qualifies as similar conduct that created a more serious health risk. The court failed to consider the potentially greater likelihood that COVID-19 transmission might occur amongst fellow teammates and other teams outside of Michigan due to close contact and routine travel. Still, the Sixth Circuit held in favor of students.

In summary, courts across multiple jurisdictions continue to apply the U.S. Supreme Court's reasoning from *Jacobson*, in addition to its progeny, when evaluating vaccine mandate substantive due process claims. The COVID-19 pandemic has served to reinforce the police powers of states, which include the authority to implement vaccine mandates to protect the public's health and safety during this public health emergency. Thus far, constitutional claims have largely been unsuccessful. Courts have shown elevated concern for the status of a state's healthcare systems and vulnerable populations when denying injunctions, suggesting that courts are balancing the interests of the public in a way that is proportionate to the severity of the pandemic. While the states have general authority to promulgate vaccine mandates, the exemption processes, which typically includes a process of granting religious exemptions, remain controversial and are likely to continue being debated in the courts.

III. RECENT TRENDS IN COVID-19 VACCINE HESITANCY

A web-based study by the American Academy of Family Physicians has shown that there has been a decline in vaccine confidence since the onset of the pandemic.¹⁵² The same study found that individuals are seeking vaccine related information from TV, radio news, print, internet, and social media instead of their

^{146.} *Id.* at 730–34.

^{147.} Id. at 733.

^{148.} Id. at 735.

^{149.} Id. (citing Lukumi Babalu Aye, 508 U.S. at 544-45).

^{150.} Id.

^{151.} Dahl, 15 F.4th at 736.

^{152.} Bellinda K. Schoof et al., Surveying the Effect of the COVID-19 Pandemic on Public Confidence in Vaccines and Vaccine Messengers, Am. Acad. OF FAM. Physicians 5 (2021), https://www.aafp.org/dam/AAFP/documents/patient_care/immunizations/vaccine-survey-pandemic.pdf ("A smaller, but not insignificant number of respondents reported a decrease, 20.8%, in vaccine confidence.").

usual source of care, such as their medical providers.¹⁵³ A separate longitudinal study from March 16 through August 16, 2020 examined vaccination attitudes as the pandemic progressed.¹⁵⁴ The panel, ranging in age, gender identity and location examined participant's stated intention to get the covid-19 vaccine, perceived threat of covid-19, and overall trust in governments and media.¹⁵⁵ Political affiliation ended up showing significant trends, with Democrats being more favorable to vaccination generally, as well as a sharp divergence in the perceived threat of covid-19 between democrats and republicans.¹⁵⁶ Democrats reported greater trust in the media than Republicans, and this remained unchanged during the course of the study. Republicans' trust, however, decreased as the pandemic progressed.¹⁵⁷ Reviewing these trends may shed light on how society could respond to a future pandemic.

A. The Anti-Vax Movement and Disinformation

While not specific to COVID-19, the anti-vaccination movement was reinvigorated during the COVID-19 pandemic and is worth examining to understand current anti-vaccination motivations. When people hear about vaccine hesitancy, the term "anti-vax" often comes to mind. The "anti-vax" movement was popularized in the early 2000s following an article linking the measles, mumps, rubella (MMR) vaccine to autism in children. The 1998 Wakefield article in the prestigious British medical journal *The Lancet* was later retracted, but several celebrities had already jumped on the bandwagon, going public with claims that Big Pharma and the government were "covering up" the effects of the MMR vaccine. 159

155. *Id.* at 3 (The panel ranged from 18 to 82 years old, identified as 53% male, 46% female, and .6% as other, and included participants from all 50 states).

^{153.} *Id.* (Respondents reported a decrease in vaccine information coming from their usual source of care during the pandemic, down approximately 10% and a 10% increase in vaccine information coming from TV, print, or radio news, a 4% increase from the internet, and a 3% increase from social media.); Ariel Fridman et al., *COVID-19 and Vaccine Hesitancy: A Longitudinal Study*, PLOS ONE, April 16, 2021, at 4, https://doi.org/10.1371/journal.pone.0250123 (finding that following COVID-19, there has been a general decline in vaccine attitudes and intentions of getting the influenza vaccine).

^{154.} Fridman et al., supra note 153.

^{156.} *Id.* at 6 (finding Democrats expressed greater perceived threat of COVID-19 and became more concerned over time whereas Republicans did not express a greater level of concern over time).

^{157.} *Id.* at 7 (finding trust in local government was lower in Democrats than Republicans, and while Democrats did not evidence a decreasing trend over time, Republicans did. Trust in the federal government was also lower in Democrats, and both Democrats and Republicans had decreased trust over time).

^{158.} Elena Conis, *Measles and the Modern History of Vaccination*, 134 Pub. Health Rep. 118, 122 (2019); JONATHAN M. BERMAN, ANTI-VAXXERS: HOW TO CHALLENGE A MISINFORMED MOVEMENT 77–81 (2020).

^{159.} Conis, *supra* note 158, at 122–23; Berman, *supra* note 158158, at 77–81.

COVID-19 vaccine opponents do not self-identify as "anti-vaxxers," ¹⁶⁰ but they share many of the same justifications and reasoning. Prior research has identified common tropes in anti-vaccinationist rhetoric, such as "skewing science," "attacking the opposition," and proposing alternative remedies. ¹⁶¹ "Skewing science" occurs when individuals or groups reject data or conclusions that do not support their theories. ¹⁶² Despite scientifically sound data on efficacy and safety, an October 2021 poll showed that vaccine opponents continue to believe misinformation over facts. ¹⁶³ Approximately 18% of those polled believed that the government is covering up deaths caused by the COVID-19 vaccine, 17% believed pregnant women should not get the vaccine, 14% believed that "Ivermectin is a safe and effective treatment," 7% believed the vaccine contains a microchip, and 8% believed the vaccine changes DNA structures. ¹⁶⁴

These statistics are unsurprising considering former President Trump's statements at the onset of the pandemic. In the spring of 2020, former President Trump knowingly downplayed the severity and prevalence of COVID-19 in a seemingly political move "to reduce panic," undermining CDC recommendations which urged mask wearing. 165 At a time when public health experts were predicting a worsening of the public health emergency, both within and beyond the U.S., Former President Trump declared that the U.S. should be opening up for business by Easter 2020 against his task force's advice. 166 These declarations created further complications for public health officials such as Dr. Anthony Fauci, a member of the

^{160.} In a symbolic gesture against President Biden's federal vaccine mandate, legislators took to the floor and voted against it. Democratic Senator Chuck Schumer questioned the motivation of the opponents, addressing them as "anti-vaxxers." The group responded by claiming that they are not against vaccines, but against government mandates. Brian Naylor, *In a Largely Symbolic Move, the Senate Votes to Block Biden's Vaccine-or-Test Mandate*, NPR (Dec. 8, 2021, 8:23 PM), https://www.npr.org/2021/12/08/1062391085/in-a-largely-symbolic-move-the-senate-votes-to-block-bidens-vaccine-or-test-mand; People's Convoy leader Brian Brase states "We're not anti-vaxxers. We're not. We just want freedom We just want the choice." Edward Helmore, *Truck Convoy Loops Around Washington, D.C. to Protest COVID Restrictions*, The Guardian (Mar. 6, 2022, 14:47), https://www.theguardian.com/us-news/2022/mar/06/washington-dc-truck-convoy-protest-covid-restrictions; Dr. A v. Hochul, 142 S. Ct. 552, 552–53 (2021), *application. for injunctive relief denied*, (Gorsuch, J., dissenting).

^{161.} Anna Kata, Anti-Vaccine Activists, Web 2.0, and the Postmodern Paradigm – An Overview of Tactics and Tropes Used Online by the Anti-Vaccination Movement, 30 VACCINE 3778, 3781 tbl.1, 2 (2012).

^{162.} Id. at 3781-82.

^{163.} KAISER FAM. FOUND., KFF COVID-19 Vaccine Monitor 19 (2021), https://files.kff.org/attachment/TOPLINE-KFF-COVID-19-Vaccine-Monitor-October-2021.pdf.

^{164.} Id.

^{165.} Juana Sommers, *Timeline: How Trump Has Downplayed the Coronavirus Pandemic*, NPR (Oct. 2, 2020, 8:09 AM), https://www.npr.org/sections/latest-updates-trump-covid-19-results/2020/10/02/919432383/how-trump-has-downplayed-the-coronavirus-pandemic.

^{166.} Annie Karni & Donald G. McNeil Jr., *Trump Wants U.S. 'Opened Up' by Easter, Despite Health Officials' Warnings*, N.Y. TIMES (Mar. 24, 2020), https://www.nytimes.com/2020/03/24/us/politics/trump-coronavirus-easter.html.

White House coronavirus task force, in trying to advocate for social distancing practices to contain the spread of COVID-19.¹⁶⁷

Some anti-vaccinationists, driven not by public health or epidemiology, are seeking COVID-19 infection and alternative remedies and treatments, while foregoing the overwhelming public health and medical community recommendations for COVID-19 vaccinations and therapies. Popular amongst antivaccination circles, is the idea that it is safer to get sick, where the immune system is "exercised," or made stronger, as opposed to getting vaccinated. 168 Going hand in hand with this theory is a preference for alternative remedies and therapies that fall outside of the scope of traditional Western medicine. 169 While there are undoubtedly many individuals using alternative remedies for COVID-19 symptoms and prevention, ¹⁷⁰ the more common practice in the COVID-19 era is the off-label use of certain medications. This movement gained traction when former President Trump made 11 tweets and 65 statements in White House briefings that falsely claimed that hydroxychloroquine, chloroquine, and azithromycin could effectively treat COVID-19.171 These conclusions were not scientifically vetted, but that did not stop an anxious public from seeking the treatments. 172 Top Spotify podcaster and vaccine skeptic Joe Rogan has used his platform to feature "expert" guest, Dr. Robert Malone, who made conspiratorial safety claims against mRNA technology. 173 The far-reaching podcast cast enough doubt about COVID-19 vaccine

^{167.} Maggie Haberman & David E. Sanger, *Trump Says Coronavirus Cure Cannot 'Be Worse Than the Problem Itself'*, N.Y TIMES (March 23, 2020), https://www.nytimes.com/2020/03/23/us/politics/trump-coronavirus-restrictions.html.

^{168.} Bernice Hausman, *Immunity, Modernity and the Biopolitics of Vaccine Resistance*, 25 CONFIGURATIONS 279, 293 (2017).

^{169.} Among a pool of H1N1 vaccine opponents, the idea that "exercising" the immune system by "playing outside in the cold" or catching the flu is healthier, or better long-term, than vaccination. In the pool of pertussis vaccine opponents, the symptoms of the illness were accepted as a part of life and treatment with alternative remedies was preferable to vaccination. Hausman, *supra* note 168, at 293–94.

^{170.} See, e.g., Thybulle Explains Why He Is Not Fully Vaxed, Will Miss Games In Toronto, NBC Phil. (Apr. 11, 2022, 2:18 PM) https://www.nbcphiladelphia.com/news/sports/nbcsports/sixers-thybulle-explains-covid-vaccine-toronto/3203664/. NBA player Matisse Thybulle cites his belief and upbringing in holistic treatments, such as Traditional Chinese Medicine, as the reason for abstaining from the second COVID-19 vaccine. Id. He got the first vaccine "for the greater good," but once it was clear that a person could remain contagious even with the vaccine, he decided to avoid the second dose. Id.

^{171.} Kacper Niburski & Oskar Niburski, *Impact of Trump's Promotion of Unproven COVID-19 Treatments and Subsequent Internet Trends*, 22 J. MED. INTERNET RSCH. (2020).

^{172.} Id.

^{173.} Angelo Fichera & Josh Kelety, *Unfounded Theory Used to Dismiss COVID Measures*, AP News (Jan. 8, 2022), https://apnews.com/article/coronavirus-pandemic-science-health-joe-rogan-ap-fact-check-a87b1044c6256968dcc33886a36c949f. A December 31, 2021 episode of The Joe Rogan

606

safety that hundreds of healthcare professionals responded by penning an open letter demanding that Spotify take responsibility for the misinformation that Rogan was spreading.¹⁷⁴ Rogan also encouraged the use of Ivermectin, despite FDA warnings, and advised young people to remain unvaccinated.¹⁷⁵

In total, anti-vaccine messages on Facebook, YouTube, Instagram, and Twitter have been found to reach more than 59 million followers.¹⁷⁶ A research group discovered that even though anti-vaccine groups are a numerical minority compared to pro-vaccination groups, they have been able to form more Facebook pages (termed "clusters"), which has allowed them to reach more undecided individuals.¹⁷⁷ Moreover, these undecided individuals are actively sharing, reposting, and engaging with the material on these pages.¹⁷⁸ The pages have been found to have a variety of narratives, such as safety concerns, conspiracy theories, and alternative medicines to appeal to a range of COVID-19 vaccine opponents,¹⁷⁹ and pro-vaccine groups labor to redress this excessive, inaccurate messaging.

There have been attempts to monitor and counter the spread of misinformation that has rapidly disseminated, largely through social media. The Center for Countering Digital Hate (CCDH), a misinformation prevention nonprofit, found that twelve influential individuals are responsible for 65% of anti-vaccine content on Facebook and Twitter. The CCDH has called on the social media platforms to "de-platform" these influencers and their organizations and also to provide better misinformation warnings for users. The Various medical organizations have helped to counteract the spread of COVID-19 misinformation by promoting provider-to-patient awareness campaigns. For example, the American College of

Experience featured former mRNA scientist Dr. Robert Malone who claimed that the reason why millions of people believe that COVID-19 is legitimate and that vaccines are safe is because they are affected by "mass formation psychosis," or hypnotization. *Id.* Psychology experts have completely discredited this theory. *Id.*

179. Id.

^{174.} Letter from healthcare professionals to Spotify, An Open Letter to Spotify: A call from the global scientific and medical communities to implement a misinformation policy, https://spotifyopenletter.wordpress.com/2022/01/10/an-open-letter-to-spotify/ (last visited Feb. 9, 2023).

^{175.} Shannon Bond, What the Joe Rogan Podcast Controversy Says About the Online Misinformation Ecosystem, NPR, (Jan 21, 2022, 5:11 AM), https://www.npr.org/2022/01/21/1074442185/joe-rogan-doctor-covid-podcast-spotify-misinformation.

^{176.} CTR. FOR COUNTERING DIGITAL HATE, THE DISINFORMATION DOZEN, WHY PLATFORMS MUST ACT ON TWELVE LEADING ONLINE ANTI-VAXXERS 4 (2021), https://www.counterhate.com/_files/ugd/f4d9b9_b7cedc0553604720b7137f8663366ee5.pdf. [Hereinafter CCDH)

^{177.} Neil F. Johnson et al., *The Online Competition Between Pro- and Anti-vaccination Views*, 582 NATURE 230, 233 (2020).

^{178.} Id.

^{180.} CCDH, *supra* note 176, at 5.

^{181.} *Id.*

Emergency Physicians (ACEP)'s¹⁸² Diversity and Inclusion Section has developed health care provider tools (e.g., a webinar, posters, and flyers), "to help clinicians address common vaccine concerns."183 By emergency physicians educating their patients one-by-one on the safety and effectiveness of COVID-19 vaccination, an increasing number of patients can learn the truth, which serves to counteract misinformation being spread through social media and the internet. Not surprisingly social media and internet misinformation generally spread more quickly than a one-on-one counteracting educational method. However, through education, these patients may learn the safety and effectiveness of COVID-19 vaccination, so they are able to make informed decisions for themselves about whether or not to get vaccinated.

The biggest influence on pro-vaccine attitudes is having factual knowledge, 184 but that factor may be impacted by the quantity of information involved. Unfortunately, repeating factual information has actually served to dissuade antivaccinationists from pro-vaccine information. 185 The more effective, albeit more complex, approach to combatting vaccine hesitancy is to examine antivaccinationists' underlying beliefs. 186 Evaluating these beliefs could help lead to understanding why so many individuals gravitate toward anti-vaccination tropes despite organizational efforts to provide accessible fact sharing about the benefits of vaccination.

B. Failure to Agree on the Severity of COVID-19 May Have Affected Vaccine Hesitancy

Although pre-COVID and COVID-19 era anti-vaccination messaging may be quite similar, their timeframes regarding public acceptance have starkly differed based on well-established research models. CDC vaccine safety expert Robert Chen created a model illustration to describe how the public generally responds to vaccines. 187 The first phase involves public acknowledgment and acceptance of an emerging vaccine, usually because most people are affected by the disease or know

187. Marian Olpinski, Anti-Vaccination Movement and Parental Refusals of Immunization of Children in the USA, 87 PEDIATRIA POLSKA 381, 382 fig. 1 (2012).

^{182.} ACEP is a non-profit organization that represents over 38,000 medical providers (emergency medicine physicians, medical students, and emergency medicine residents) and advocates and educates to promote high quality emergency care. See generally About ACEP, Am. Coll. of Emergency Physicians, https://www.acep.org/who-we-are/about-us/ (last visited Feb. 9, 2023).

^{183.} Reach Vaccine Hesitant Populations with New ACEP Tools, Am. Coll. OF EMERGENCY PHYSICIANS (June 9, 2021), https://www.acep.org/vaccinehesitancyresources.

^{184.} Staci L. Benoit & Rachel F. Mauldin, The "Anti-Vax" Movement: A Quantitative Report on Vaccine Beliefs and Knowledge Across Social Media, BMC Pub. HEALTH, Nov. 17, 2021, at 1, 2.

^{185.} Matthew J. Hornsey et al., The Psychological Roots of Anti-Vaccination Attitudes: A 24-Nation Investigation, 37 HEALTH PSYCHOLOGY 307, 308 (2018).

^{186.} Id.

someone who is.¹⁸⁸ When the vaccine becomes available, many are enthusiastic about the vaccine and choose to vaccinate. Once most of the population has been vaccinated, the threat of the disease fades, and the threat of perceived side effects of the vaccines take precedence. 189 Researchers call this second phase the "plateau," where the "vaccine has become a victim of its own success." 190 The third phase is the "anti-vaccination" movement, when distrust of the government, conspiracy theories, and concerns over profit become widely discussed amongst anti-vaccination groups. 191 In the fourth phase, the disease re-emerges, death rates rise again, and people typically decide to vaccinate. 192 In the fifth phase, "the disease may be eradicated and vaccination can be stopped." 193

This model has not been the case for COVID-19. In the beginning of the COVID-19 pandemic, instead of a recognition of a common threat, many opponents to the COVID-19 vaccine did not acknowledge the virus's legitimacy. According to the CDC, individuals who will "probably not or definitely will not get vaccinated" have consistently expressed low concern for COVID-19 generally. 194 The pre-vaccine phase that unites most of the population failed to get off the ground with COVID-19. For many, there was no shared experience to motivate the majority to become vaccinated. Groups disagreed on the existence of the threat that the vaccine would prevent, and varying outcomes of those infected with COVID-19 further complicated matters.¹⁹⁵ What put one person in the hospital went unnoticed in another. Other than acknowledging that seniors and immuno-compromised individuals formed a high-risk population, many Americans did not believe that COVID-19 posed much of a risk. Differences of opinion on the legitimacy of COVID-19, and the capacity for damage, have been significant roadblocks in the public's willingness to vaccinate.

C. Vaccine Opponents' Safety Concerns Evidence Distrust Toward the Government

A recent study by the U.S. Census Bureau found that nearly half of those surveyed acknowledged concerns for COVID-19 vaccine side effects as a factor in declining vaccination. 196 The December 2021 survey found that 42.4% do not trust

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188. Id.
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189. Id.

190. Id.

191. Id.

192. Olpinski, supra note 187, at 382.

194. CTRS. FOR DISEASE CONTROL AND PREVENTION, TRENDS IN COVID-19 VACCINE CONFIDENCE IN THE US, COVID DATA TRACKER, https://covid.cdc.gov/covid-data-tracker/#vaccine-confidence (last visited Dec. 19, 2022).

195. Fridman et al., supra note 153, at 8. Republicans expressed lower levels of concern over the threat of COVID-19, and this concern decreased over a six-month time frame. Id. Democrats expressed higher levels of concern over the threat of COVID-19, and the trend increased over time. Id.

196. Lindsay M. Monte, Household Pulse Survey Shows Many Don't Trust COVID Vaccine, Worry U.S. 28, 2021), About Side Effects, CENSUS BUREAU (Dec.

the vaccine, 35.4% do not trust the government, and 27.9% "plan to wait and see if it is safe." ¹⁹⁷ Safety has been a concern since the inception of vaccination, dating back to early attempts at variolation. Early anti-vaccinationists questioned the process for smallpox variolation, which involved taking the pus from one person's sore and inserting it into a cut made on another person. ¹⁹⁸ People were rightfully concerned that this unhygienic practice could disfigure and sicken communities, most notably the poor, who did not have access to clean water and wound care. ¹⁹⁹ Fast forward to today, brewing distrust in governments and media may add another layer to the public's skepticism as to the safety of the COVID-19 vaccine.

Public health has a long history of professional mistakes and egregious safety failings. In 1822, a federal vaccine agent sent a live batch of the smallpox virus to North Carolina instead of the cowpox vaccine, resulting in ten deaths.²⁰⁰ In the 1930s, initial attempts to vaccinate against polio used a live virus, resulting in six deaths and ten instances of paralysis.²⁰¹ In 1955, an oversight by Cutter and Wyeth Laboratories resulted in 100,000 doses of the improperly inactivated polio, causing "250 cases of paralytic polio and 11 deaths."²⁰² These incidences likely contribute to the outrage and distrust anti-vaccinationists feel to date.

The tragic instances mentioned above were not overlooked by United States officials. The governmental response to these events was stricter oversight for testing and manufacturing, in addition to the formation of the Advisory Committee on Immunization Practices to ensure proper formulation and deployment of vaccinations. ²⁰³ It would be unfair to present the prior failings in specific instances involving vaccines without also discussing the remarkable benefits that vaccines have made on our society. According to the World Health Organization (WHO), due to immunization, the mortality rate in children under five has "declined by nearly a

https://www.census.gov/library/stories/2021/12/who-are-the-adults-not-vaccinated-against-covid.html.

198. Berman, supra note 158, at 24-25.

199. *Id.* at 30. The first vaccine ever created was for smallpox (variola). *Id.* at 25. Smallpox had a 30% mortality rate and left many disfigured. *Id.* at 14. Benjamin Jesty, a rural farmer, discovered an immune response in his family members after inserting the puss of a cowpox pustule into their arms. *Id.* at 22–23. Cowpox was a different illness, but similar enough to create an immune response. *Id.* at 24.

200. Tess Lanzarotta & Marco A. Ramos, *Mistrust in Medicine: The Rise and Fall of America's First Vaccine Institute*, 108 Am. J. Pub. Health 741, 742 (2018). In March of 1822, federal vaccine agent and pro-vaccine physician James Smith was dismissed from his position after he accidentally sent smallpox scabs to Tarboro, North Carolina instead of the bovine virus used to vaccinate against smallpox. *Id.* The error resulted in 10 deaths and was the beginning and end of the federal Act to Encourage Vaccination of 1822. *Id.*

201. Berman, *supra* note 158, at 51; *see also* Linda C. Fentiman, *Sex, Science, and the Age of Anxiety*, 92 NEB. L. REV. 455, 480 (2014).

203. Fentiman, supra note 201, at 481.

^{197.} *Id.*

^{202.} Berman, supra note 158, at 52-53.

quarter;" the measles vaccine has prevented 25.5 million deaths since 2000, and the polio vaccine has brought cases down by 99% since 1988.²⁰⁴ With the current pandemic, the WHO has issued a joint statement with the International Coalition of Medicines Regulatory Authorities that COVID-19 vaccines are safe and effective.²⁰⁵

D. The Choice to Vaccinate Has Political Underpinnings

Vaccine critical rhetoric generally focuses on two issues: concerns about vaccine safety, and threats to individual rights in the context of vaccine mandates. Per Events in 2022 suggest that some vaccine opponents may object on political affiliation alone. Thus, vaccine opponents' concerns may be more nuanced, straying from civil liberty arguments to focus on impacts to the private sector and overall dissatisfaction with the government. Research has shown a connection between political affiliation and COVID-19 vaccine hesitancy, noting that "participants who identify as Republicans, who showed a negative trend in vaccines attitudes and intentions, whereas Democrats remained largely stable." Trucking protests at the start of 2022 suggest that vaccine mandate opposition in

204. Counting the Impact of Vaccines, WORLD HEALTH ORG. (Apr. 22, 2021), https://www.who.int/news-room/feature-stories/detail/counting-the-impact-of-vaccines.

205. Statement for Healthcare Professionals: How COVID-19 Vaccines are Regulated for Safety and Effectiveness, WORLD HEALTH ORG. (May 17, 2022), https://www.who.int/news/item/17-05-2022-statement-for-healthcare-professionals-how-covid-19-vaccines-are-regulated-for-safety-and-effectiveness ("As of March 2022, about 11 billion doses of COVID-19 vaccines have been administered globally, and so there is an immense global data base on the safety of these vaccines. The benefit-risk ratio remains overwhelmingly positive.").

206. James Colgrove & Sara J. Samuel, *Freedom, Rights, and Vaccine Refusal: The History of an Idea*, 112 Am. J. Pub. Health 234, 234 (2022) ("Historically and in the present day, vaccine-critical rhetoric has rested on two principal claims (1) that vaccination is a dangerous procedure . . . and (2) that efforts to pressure or compel people to be vaccinated (or to vaccinate their children) violate individual rights").

207. On December 8, 2021, the U.S. Senate approved a Republican measure that would overturn President Biden's vaccine or test mandate for private businesses. Senators claimed that it was an infringement on private business practices. David Morgan, *U.S. Senate Passes Republican Bill to Overturn Biden Vaccine Mandate*, REUTERS (Dec. 9, 2021, 3:52 AM), https://www.reuters.com/world/us/senate-republican-push-block-bidens-vaccine-mandate-secures-democratic-support-2021-12-08/.

208. In 2022, trucking convoys involving far-right organizers protested vaccine mandates, mask requirements, and democratic leadership. Madeleine Ngo, Adam Bednar & Esha Ray, *Led by Truckers, Hundreds of Vehicles Protesting COVID Mandates Encircle Washington*, N.Y. TIMES (Mar. 6, 2022), https://www.nytimes.com/2022/03/06/us/trucker-convoy-dc-beltway.html; Leyland Cecco, *Ottawa Protests: Conspiracy Theories and Accusations of Betrayal as Police End Blockade*, THE GUARDIAN (Feb. 20, 2022), https://www.theguardian.com/world/2022/feb/20/ottawa-protests-capital-police-clear-blockade.

209. Fridman et al., *supra* note 153, at 1, 8 (finding that following the COVID-19, there has been a general decline in vaccine attitudes and intentions of getting the influenza vaccine); *see also A 50-state COVID-19 Survey, Report #64: Continued High Public Support for Mandating Vaccines*, THE COVID STATES PROJECT (2021), https://www.covidstates.org/reports/continued-high-public-support-for-mandating-vaccines (finding an extraordinarily large party gap between democrats (83%) and republicans (43%) overall support for vaccine mandates as a condition of returning to school).

the COVID-19 era was merely an opportunity to express deeper political concerns. ²¹⁰ In February 2022, truck drivers, far-right organizations and activists led a convoy from California to Washington, D.C. to protest the government's response to COVID-19 and to call for an end to the national emergency and vaccine mandates. ²¹¹ This convoy was based on the January convoy in Ottawa, Canada that blockaded some of the most well trafficked routes between Canada and the U.S., occupied parts of Parliament Hill, and resulted in one of Canada's largest police operations. ²¹²

Both convoys echoed dissatisfaction with Democratic leadership. 213 It seems plausible that the choice to vaccinate may be symbolic of alliance with the Democratic party, leading many non-Democrats to disregard the benefits of vaccination due to ideological division. This type of ideological conflict has been seen before in the context of the human papilloma virus (HPV) vaccine, when Republicans resisted mandates associated with it. The CDC had recommended that girls ages 11 to 12 receive the Gardasil vaccine to prevent HPV, a sexually transmitted disease found to cause 70% of cervical cancer cases.²¹⁴ Many states responded by attempting to add the HPV vaccine to their school entry requirements.²¹⁵ This sparked staunch opposition, primarily from parents concerned that mandating a vaccine for an STD would lead to sexual proclivity. 216 This seemingly challenged their moral position on abstinence before marriage. By providing the vaccine, they would implicitly acknowledge that their daughters may be sexually active before marriage. ²¹⁷ The debate became more about sexual mores than the risks and benefits of vaccination, and these concerns had a major impact. Although 42 U.S. jurisdictions introduced legislation in 2019 to require the HPV vaccine, only five jurisdictions ended up requiring HPV vaccination for school admission.218

^{210.} See Fridman et al., supra note 153, at 3 ("A closer look at the data revealed that political orientation explains more variance than any other socio-demographic variable. Specifically, participants who identify as Republican showed a decrease in their intention to get the COVID-19 vaccine and the influenza vaccine as well as a general decrease in pro-vaccine attitudes, whereas Democrats' responses to these measures did not show a significant change during this period."); Ngo et. al, supra note 208.

^{211.} Many of the members are not truck drivers, but far-right organizations and activists. Organizers "shared a supportive post from a prominent QAnon" member. Ngo et. al, supra note 208.

^{212.} Cecco, supra note 208.

^{213.} Id.; Helmore, supra note 160.

^{214.} R. Alta Charo, *Politics, Parents, and Prophylaxis – Mandating HPV Vaccination in the United States*, 356 New Eng. J. Med. 1905, 1905 (2007).

^{215.} Id. at 1905-06.

^{216.} Id. at 1907.

^{217.} Id.

^{218.} School Entry Requirements for HPV Vaccine, NAT'L HPV VACCINATION ROUNDTABLE 1 (2019) http://hpvroundtable.org/wpcontent/uploads/2019/09/05_School_Entry_Requirements_for_HPV_Vac

E. Legal Claims Against Vaccination Are Not Based Solely on Autonomy and Religion

Anti-vaccination groups have a long history of making personal liberty and religious ideology arguments to oppose compulsory vaccination. ²¹⁹ In recent cases, plaintiffs have stated the following reasons for opposing the COVID-19 vaccine in their filings: (1) COVID-19 does not pose a serious risk of harm to them due to their age, so they should not be required to be vaccinated; ²²⁰ (2) mandatory vaccination should not be required in "recovery" phases; ²²¹ (3) the risks to the COVID-19 vaccine outweigh the benefits; ²²² and (4) the collective benefits of vaccination do not justify an infringement on sincerely held religious beliefs, which are founded upon the mRNA vaccine's alleged connection to abortion. ²²³ The veracity of these "sincerely held religious beliefs"—the core of Free Exercise claim—is worth exploring. Vaccine law expert Dorit Rubinstein Reiss suggests that threats to "sincerely held religious beliefs" are actually thinly veiled safety concerns, making claims for religious exemptions superficial. ²²⁴ Reiss found that many major religions actually advocate

cination_WEB_updated.pdf. Puerto Rico, Virginia, Rhode Island, the District of Columbia (D.C.), and Hawaii (as of 2020) require the HPV vaccine as a condition of school entry. *Id*.

219. Freedom and liberty arguments were used to oppose some of the first public health laws mandating vaccination for infants against smallpox in the 1850s. Colgrove & Samuel, *supra* note 206, at 235; Klaassen v. Trs. Of Ind. Univ., 549 F. Supp. 3d 836 (N.D. Ind. 2021); Kane v. De Blasio, 19 F.4th 152 (2d Cir. 2021); Does v. Mills, 16 F.4th 20 (1st Cir. 2021) *cert denied* 142 S. Ct. 1112 (2021); We The Patriots USA, Inc. v. Hochul, 17 F.4th 266 (2d Cir. 2021), *opinion clarified*, 17 F.4th 368 (2d Cir. 2021), *app. for injunctive relief denied*, 132 S. Ct. 734 (Dec. 13, 2021) (No. 21A125), *cert. denied sub nom.*, 142 S. Ct. 2569 (2022); Dahl v. Bd. of Trs. of W. Mich. Univ., 15 F.4th 728 (6th Cir. 2021).

220. Emergency Appl. for Writ of Inj., Klaassen, supra note 17 at 8–9.

221. *Id*.

222. *Id.* at 10 (stating that there are risks from the vaccine such as: myocarditis, Bell's Palsy, Pulmonary Embolus, Pulmonary Immunopathology, and severe allergic reactions.").

223. Doe v. City Univ. of N.Y., No. 21-Civ. 9544 (NRB), slip op. at 2 (S.D.N.Y. Dec. 1, 2021) Plaintiff's request was "based on the fact that each of the available vaccines was produced and/or tested using aborted human fetal cell lines, and, as a Christian, he objected to the use of human fetal cell lines derived from voluntary abortion and to receiving a vaccine produced and/or tested in reliance on such cell lines." *Id.* His request stated that "in good conscience, he cannot participate in or accept practices that perpetuate and encourage the relationship between abortion, medicine and human trafficking[.]" *Id.* at 1; *Mills*, 16 F.4th at 28 (Plaintiff healthcare workers objected to the COVID-19 vaccine because they believed fetal cell lines from elective abortions were used in the development, research, testing, and/or production.); Joint Brief and Special App. for Plaintiff-Appellants, *supra* note 141, at 7 (Kane/Keil's namesake plaintiff, Matthew Keil, has firmly held religious beliefs against injecting substances into his blood stream. Keil is an ordained deacon in the Catholic church, and after an established religious practice throughout his life, he believes he shares the blood of Christ and that scriptures "command not to profane God's holy temple" or to inject in substances into his blood stream, vaccine or otherwise. He has abstained from all vaccinations in his adult life and all 6 of his children are unvaccinated.).

224. Dorit Rubinstein Reiss, Thou Shalt Not Take the Name of the Lord Thy God in Vain: Use and Abuse of Religious Exemptions from School Immunization Requirements, 65 HASTINGS L. J. 1551, 1585 (2014).

for vaccination, ²²⁵ which calls in to question whether plaintiffs' vaccination-related concerns are in fact a tenuous attempt to establish a legitimate religious connection. It may be that underlying distrust and false beliefs regarding the severity of COVID-19 contribute to plaintiffs' reasoning. These arguments largely fail to appreciate reasonable boundaries when such autonomy is increasing the risk to others in society by threatening the public's health. "The focus of public health is directed to populations, communities and the broader social and environmental influences of health," and prioritizes protecting the public's health over individual autonomy. ²²⁶ The COVID-19 pandemic has demonstrated the need to place boundaries on individual autonomy to protect the health of populations and communities. The difficulty is in addressing, and often correcting, underlying safety concerns while re-establishing trust in the public health system.

IV. PUBLIC HEALTH ETHICS AND VACCINE MANDATES

Public health ethical issues involving COVID-19 vaccine mandates have drawn international attention and warrant further discussion. As noted in Annals of African Medicine, "vaccinating the world is a moral and ethical obligation to produce herd immunity that will ensure everyone is protected."²²⁷ Due to vaccine hesitancy and poor vaccination rates, the Association of Bioethics Program Directors stated:

Even in normal times, of course, choices have consequences. In particular, some personal choices have the potential to harm others. When one person's choice might harm others, it can be ethical for that choice to be limited. That's why we have speed limits and stop signs; both limit your right to drive as you might wish, but they are necessary for public safety. If you choose to drive recklessly and put others at risk, you should expect to pay a fine, possibly lose your license to drive, or maybe even go to jail . . . Limiting personal freedom when it is necessary to prevent harm to others is widely agreed to be ethical under a wide variety of secular and religious worldviews and traditions. In terms of limiting people's choices about vaccination during the COVID-19 pandemic, we must consider whether one person going unvaccinated today is likely to cause harm to other people. Nearly all people interact and come into physical contact with others on a daily basis, and a person with COVID-19 can infect several others even before showing

^{225.} *Id.* at 1574, 1578, 1580–83. Even Jehovah's Witnesses and Christian Scientists do not explicitly prohibit vaccination. *Id.* at 1583–84.

^{226.} R.E.G. Upshur, Principles for the Justification of Public Health Intervention, 93 CAN. J. OF PUB. HEALTH, 101, 101 (2002).

^{227.} Alhaji Aliyu, *Public Health Ethics and the COVID-19 Pandemic*, 20 ANNALS OF AFR. MED. 157, 160 (2021).

symptoms. The risk of one person harming many others, even inadvertently, provides ethical justification for limiting the choice to go unvaccinated during a pandemic. . . . Only vaccines are capable of halting viral transmission to the degree of stopping COVID-19 from continuing as a pandemic-level threat. Herd immunity for COVID-19 will only occur through vaccination. . . . While voluntary vaccination is preferable . . . education and incentives have not worked to increase COVID-19 vaccination rates. Mandatory vaccination, therefore, is now the least restrictive way to minimize the virus's damage. 228

In contrast, there is an ethical argument to be made against mandatory vaccination based on the historical oppression of marginalized populations by public health professionals, as exemplified by the Tuskegee Syphilis Study.²²⁹ The unethical practices in the study, including failure to get informed consent and withholding treatment, were not uncovered by the public until 1972. 230 The 40 years of sanctioned violations practiced in the name of public health have increased questions, and raised distrust, about motives of public health officials, especially among Black and marginalized communities.²³¹ Among Native American communities, COVID-19 vaccine hesitancy is rooted in intergenerational trauma from the early days of colonization. Infectious diseases brought by Europeans decimated indigenous populations, which made pilgrimages and colonization possible. Trading blankets laced with smallpox, and later forcing tribes to vaccinate in the interest of moving them off of their lands, are pillars of trauma that are still relevant to tribe members today.²³² Public health's tainted history has led to the evolution of public health ethical standards. To grasp this progression, a review of public health professional and ethical standards is necessary.

A. The Public Health Code of Ethics

The American Public Health Association (APHA) updated their 2002 Public Health Code of Ethics in November of 2019 prior to the beginning of the COVID-19 outbreak and pandemic.²³³ This treatise examines whether vaccine mandates comply with the APHA 2019 *Public Health Code of Ethics*. In 2002 the APHA released the initial public health professional standards with the publication of *Principles of*

231. Simar Singh Bajaj & Fatima Cody Stanford, *Beyond Tuskegee—Vaccine Distrust and Everyday Racism*, NEW ENGL. J. OF MED., Feb. 4, 2021, at 1.

^{228.} Matthew K. Wynia et al., *Why a Universal COVID-19 Vaccine Mandate Is Ethical Today*, HEALTH AFFAIRS FOREFRONT (Nov. 3, 2021), https://www.healthaffairs.org/do/10.1377/forefront.20211029.682797/.

^{229.} *The Syphilis Study at Tuskegee Timeline*, CTRS. FOR DISEASE CONTROL & PREVENTION (Dec 5. 2022), https://www.cdc.gov/tuskegee/timeline.htm.

^{230.} Id.

^{232.} Dana Hedgpeth, *How Native Americans Were Vaccinated Against Smallpox, Then Pushed off Their Land*, WASH. POST (Mar. 28, 2021, 7:00 AM), https://www.washingtonpost.com/history/2021/03/28/native-americans-vaccine-smallpox-covid/.

^{233.} Am. Pub. Health Ass'n, Public Health Code of Ethics 1 (2019), https://www.apha.org/-/media/files/pdf/membergroups/ethics/code_of_ethics.ashx [hereinafter Code of Ethics].

the Ethical Practice of Public Health as a guide for making public health decisions. Updated in 2019, to reflect the prioritization of the social determinants of health and the importance of health equity, the Public Health Code of Ethics is being used to measure the response to the COVID-19 pandemic. In addition to the eighty-seven codes divided into twelve domains, the document includes core values and obligations, as well as guidance for ethical analysis. Associated articles have provided frameworks for logistical concerns, and concerns, principles to justify public health interventions, and an intervention ladder, in addition to roadmaps for applying the code of ethics. Specifically, the Code of Ethics provides guidance for ethical analysis centered on respect, reciprocity, effectiveness, proportionality, and responsible use of scarce resources.

The twelve domains in the *Code of Ethics* organize the codes in an actionable format. Germane to the mandate of vaccinations, Domain 1 focuses on conducting and disseminating assessments. Specifically, code 4.1.3 introduces the balancing of perceived needs with "expert-defined needs to improve community health." ²⁴⁰ Similarly, codes 4.9.3 and 4.9.4 focus on the development of plans with goals, targets, and evaluations. ²⁴¹ Domain 2 focuses on investigating health problems while protecting the community. ²⁴² Code 4.2.8 prompts public health officials to use the least restrictive options to protect the public. ²⁴³ In Domains 4 and 5, codes 4.4.5, 4.4.7, and 4.5.1 encourage responsiveness to community perspectives and sensitivity to local values while promoting shared decision making in code 4.4.8. ²⁴⁴ Respect of civil liberties is required in codes 4.5.4 and 4.6.3. ²⁴⁵

The above codes are further complemented by the code 4.5.6, which aims to improve the health and healthcare of vulnerable populations. ²⁴⁶ Code 4.5.9 expects that reasonable alternatives are considered with the most effective course

241. Id. at 26.

242. Id. at 13.

243. Id. at 15.

244. Id. at 18.

245. CODE OF ETHICS, supra note 233, at 20, 22.

246. Id.

^{234.} Nancy E. Kass, An Ethics Framework for Public Health, 91 Am. J. Pub. HEALTH 1776, 1776 (2001).

^{235.} James F. Childress et al., *Public Health Ethics: Mapping the Terrain*, 30 J. OF LAW, MED. & ETHICS 170 (2002).

^{236.} See generally Upshur, supra note 226.

^{237.} Nuffield Council on Bioethics, Pub. Health: Ethical Issues 31, 41–42 (2007), https://www.nuffieldbioethics.org/publications/public-health.

^{238.} CODE OF ETHICS, supra note 233, at 1.

^{239.} CODE OF ETHICS, supra note 233, at 8–10.

^{240.} Id. at 12.

chosen.²⁴⁷ Code 4.7.3 discourages the use of stigmatization and shaming.²⁴⁸ Further complementing those positions, code 4.10.5 focuses on assessing the value of changing and incomplete assumptions and evidence.²⁴⁹ As a unifying theme, code 4.12.4, "encourage[s] policy development to protect the public's health."²⁵⁰

Using the frameworks provided, we can consider vaccine mandates in the light of the *Public Health Code of Ethics*. From a logistical and moral perspective, federal and state vaccine mandates highlight the widespread appreciation of the effectiveness and minimal burdens, including biological and social risks, of COVID-19 vaccinations. State vaccination requirements follow the central tenant of Justice John Marshall Harlan's majority opinion in *Jacobson*, which honors the government's authority to set boundaries on individual liberty and self-determination to prevent the spread of infection to others. This aligns with public health ethics. The government has the authority and responsibility to balance the interests of public health with ethical considerations related to law-making and enforcement. ²⁵²

There are, however, two distinct shortcomings from a public health perspective. First, many of the federal and state requirements fail to define clear outcome measures to determine whether the mandates are working and should be continued or are no longer necessary and need to be revoked. Adding clear outcome measures to the requirements would satisfy the need for goals, targets, and evaluations to quantitatively measure a requirement's success.²⁵³

Secondly, the state and federal requirements pay minimal attention to the impacts of vaccination mandates on self-determination. Public health depends on an overall "respect for personal autonomy, self-determination, and privacy." ²⁵⁴ When autonomy clashes with a vaccination requirement, regardless of whether the theory of autonomy has a political basis, trust in public health is compromised. Ethical considerations such as sensitivity to local values and respect for civil liberties may be compromised when individuals feel the societal and institutional pressure to vaccinate. While mandates may be necessary in the future, trust in public health may be compromised as a result.

B. Public Policy Supports Limiting Autonomy for the Safety of All

Public health ethics are rooted in honoring ethical integrity. ²⁵⁵ The truth is that evidence-based medicine indicates COVID-19 vaccines are generally safe and

^{247.} Id. at 20.

^{248.} Id. at 23.

^{249.} Id. at 27.

^{250.} Id. at 30.

^{251.} Jacobson v. Massachusetts, 197 U.S. 11, 25 (1905).

^{252.} CODE OF ETHICS, supra note 233, at 21.

^{253.} Id. at 16.

^{254.} Id. at 6.

^{255.} Id. at 28.

effective, by decreasing transmission, suffering, and death related to COVID-19.²⁵⁶ The vaccines have been endorsed by numerous state health departments,²⁵⁷ the NIH,²⁵⁸ and the CDC.²⁵⁹ To prevent COVID-19—associated hospitalization, all eligible persons should stay up to date with vaccination, including those with previous SARS-CoV-2 infection.²⁶⁰ Public policy supports accurately and effectively communicating that message, but due to robust misinformation, the U.S. has lagged in attaining herd immunity. Thus, public policy supports implementation of vaccine mandates because improved vaccination rates are the surest way to lessen the impact of the pandemic.²⁶¹

The ethical principles of autonomy, respect for civil liberties, sensitivity to local customs, and using the least restrictive options to protect the public are at odds with this concept. Vaccine hesitant individuals have challenged vaccine mandates and requirements repeatedly in the COVID-19 pandemic, their legal claims centering on these very principles. While public health ethical principles may superficially support their argument, a deeper dive demonstrates distinguishing facts that cannot be overlooked. First, an individual's autonomy to make medical decisions is based on the premise that the individual has received

^{256.} See, e.g., Fernando Polack et al., Safety and Efficacy of the BNT162b2 mRNA Covid-19 Vaccine, 27 NEW ENGL. J. OF MED. 2603 (Dec. 31, 2020); see also Kristina L. Bajima et al., Effectiveness of COVID-19 mRNA Vaccines Against COVID-19 Associated Hospitalization, 70 MORBIDITY AND MORTALITY WEEKLY REP. 1294, 1294 (2021).

^{257.} See. COVID-19 Vaccine. WASH. STATE DEP'T e.a.. https://doh.wa.gov/emergencies/covid-19/vaccine-information (last visited May 5, 2022) ("COVID-19 vaccination is one of the most important tools to end the COVID-19 pandemic."); COVID-19 Vaccine, ILL. DEP'T OF PUB. HEALTH, https://dph.illinois.gov/covid19/vaccine.html (last visited Feb. 24, 2022) ("COVID-19 vaccinees are safe and highly effective in preventing severe illness and death."); COVID-19 Vaccine – What You Need to Know, NVCOVID FIGHTER (Dec. 20. https://www.nvcovidfighter.org/news/covid-19-vaccine-boosters-what-you-need-know ("Based on guidance from the FDA, CDC, and the Western States Scientific Safety Review Workgroup, the Nevada State Immunization Program now recommends a bivalent booster dose for everyone aged 5 and older. Data indicates that protection levels from vaccines wane over time and boosters significantly improve it, helping to protect against COVID-19 infection, severe illness, and death.").

^{258.} See, e.g., Understanding COVID-19 Vaccines, NAT'L INSTS. HEALTH, https://covid19.nih.gov/treatments-and-vaccines/covid-19-vaccines (last visited May 5, 2022).

^{259.} Bajima et al., *supra* note 256, at 1294.

^{260.} Ian D. Plumb et al., Effectiveness of COVID-19 mRNA Vaccination in Preventing COVID-19—Associated Hospitalization Among Adults with Previous SARS-CoV-2 Infection—United States Jun. 2021—Feb. 2022, 71 MORBIDITY AND MORTALITY WEEKLY REP. 549, 549 (2022).

^{261.} See Bajima et al., supra note 256.

^{262.} See, e.g., Klaassen v. Trs. of Ind. U., 7 F.4th 592 (7th Cir. 2021); see also Does v. Mills, 16 F.4th 20 (1st Cir. 2021); Kane v. De Blasio, 575 F.Supp.3d 435 (S.D.N.Y. 2021); Dahl v. Bd. of Trs. of W. Mich. U., 15 F.4th 728 (6th Cir. 2021); Troogstad v. City of Chicago, 571 F. Supp. 3d 901 (N.D. III. 2021); Kozlov v. City of Chicago, No. 21 C 6904 (N.D. III. Feb. 28, 2021).

true informed consent. True informed consent requires at least a basic understanding of accurate risks, benefits, and alternatives to a proposed intervention. Generally, informed consent to decline COVID-19 vaccination has not been possible. The plethora of misinformation on the risks, benefits, and alternatives to COVID-19 vaccination has led to misguided refusals rather than informed declinations, resulting in an inaccurate basis for decision-making. Seeking and following credible medical advice is impossible if individuals deny the existence of the illness altogether. Politically motivated views on science, the rapid spread of misinformation, and long-standing trust issues present unique challenges to balancing public health ethics against the interest of protecting the public.

Mitigating and correcting widespread misinformation will be key in the future. State medical boards may be able to debunk misinformation by reprimanding practitioners (e.g., doctors and physician assistants) who spread misinformation, ²⁶⁴ as misinformation may lead to decisions that are not based on informed consent principles, which may violate the standard of care. Beyond practitioner reprimands, health departments and medical organizations may be able to lead effective educational campaigns, like the ACEP vaccination campaign described in a previous section, to combat misinformation through schools, the press, and social media. Although the rapid nature of social media can be challenging to counter, a clear focus on debunking misinformation may enable consent that is fully and factually informed, which will maintain autonomy while improving vaccination rates.

V. CONCLUSION

Should another COVID-19 pandemic occur in the future, a balance must be struck between public health ethics and the state's interest in protecting public health. Century-old U.S. Supreme Court precedent in *Jacobson v. Massachusetts* recognizes the constitutional authority of the State to enforce laws that protect the public's health and safety.²⁶⁵ This precedent has largely been upheld against claims for violations of personal autonomy and religion.²⁶⁶ Courts have consistently applied legal standards to ensure that government actions are applied uniformly and without discrimination, but the legal system fails to take into context the ethical issues that may affect trust in public health. In the future, vaccine mandates and requirements could be more ethical by including specific benchmarks to ensure that

^{263.} Christine Nero Coughlin et al., When Doctors Become "Patients": Advocating a Patient-Centered Approach for Health Care Workers in the Context of Mandatory Influenza Vaccinations and Informed Consent, 45 Wake Forest L. Rev. 1551, 1558 (2010); Informed Consent: Opinion 2.1.1, Am. Med. Ass'n Code of Med. Ethics 2, https://www.ama-assn.org/system/files/2019-06/code-of-medical-ethics-chapter-2.pdf (obtaining informed consent includes, but is not limited to, explaining "the burdens, risks, and expected benefits of all options, including forgoing treatment").

^{264.} Spreading COVID-19 Vaccine Misinformation May Put Med License at Risk, FED'N OF STATE MED. LICENSING BDs. (July 29, 2021), https://www.fsmb.org/advocacy/news-releases/fsmb-spreading-covid-19-vaccine-misinformation-may-put-medical-license-at-risk/.

^{265.} Jacobson v. Massachusetts, 197 U.S. 11, 25 (1905).

^{266.} Emp't Div., Dep't of Hum. Res. of Or. v. Smith, 494 U.S. 872, 879 (1990), superseded in part by statute, Religious Freedom Restoration Act, 42 U.S.C. § 2000bb-1 (1993); Kane v. De Blasio, 19 F.4th 152 (2d Cir. 2021); Dahl v. Bd. of Trs. of W. Mich. Univ., 15 F.4th 728 (6th Cir. 2021).

the requirement continues to be necessary. The government should prioritize accurately informing the public over any political considerations, and there may be natural consequences, including distrust, if they fail to be transparent with the public. It is unclear whether the use of vaccine mandates and requirements will have a lasting impact on the public's vaccine confidence or hesitancy, but one thing is for certain: the political climate and rapid spread of misinformation in the COVID-19 era presented unique challenges to striking a balance between honoring autonomy and the health and safety for all.

620