

VACCINES IN THE TIME OF COVID-19: HOW GOVERNMENT AND BUSINESSES CAN HELP US REACH HERD IMMUNITY

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INTRODUCTION

The COVID-19 pandemic continues to wreak havoc on American society. Public health experts agree that the best way to end it is with the development and implementation of a safe and effective vaccine program, and government, private industry and not for profit organizations have already committed billions of dollars towards this end. Operation Warp Speed, a public-private partnership was specifically created early in the pandemic to fast-

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track vaccine development, manufacturing, and distribution.² However, a COVID-19 vaccine will only be effective if the number of Americans willing to be inoculated is sufficient to reach herd immunity, which occurs when a large enough number of people have immunity that community disease spread becomes unlikely. Experts predict that at least seventy percent of Americans would need to get vaccinated against the SARS-CoV-2 coronavirus for herd immunity to be reached.³

This is unlikely to happen since a number of recent polls have indicated that less than half of Americans plan to get vaccinated against the SARS-CoV-2 coronavirus.⁴ Recent polls also indicate that the percentage of Americans indicating a willingness to be vaccinated has decreased over the past months, as has the

2. Topher Spiro & Zeke Emanuel, *A Comprehensive COVID-19 Vaccine Plan*, *CTR. FOR AM. PROGRESS* 5 (July 28, 2020, 4:30 AM), <https://www.americanprogress.org/issues/healthcare/reports/2020/07/28/488196/comprehensive-covid-19-vaccine-plan/>.

3. *Id.* at 1.

4. A USA Today/Suffolk Poll found 67% of Americans would either not get the vaccine when it first became available (44%) or never get it (23%). See Sarah Elbeshbishi & Ledyard King, *Exclusive: Two-Thirds of Americans Say They Won't Get COVID-19 Vaccine When It's First Available, USA Today/Suffolk Poll Shows*, *USA TODAY* (Sept. 7, 2020, 12:57 PM), <https://www.usatoday.com/story/news/politics/2020/09/04/covid-19-two-thirds-us-wont-take-vaccine-right-away-poll-shows/5696982002/>. According to a poll from the Kaiser Family Foundation (KFF) 54% of Americans said they would not get a free COVID-19 vaccine if it were approved before Election Day. See *Poll: Most Americans Worry Political Pressure Will Lead to Premature Approval of a COVID-19 Vaccine; Half Say They Would Not Get a Free Vaccine Approved Before Election Day*, *KAISER FAM. FOUND.* (Sept. 10, 2020), <https://www.kff.org/coronavirus-covid-19/press-release/poll-most-americans-worry-political-pressure-will-lead-to-premature-approval-of-a-covid-19-vaccine-half-say-they-would-not-get-a-free-vaccine-approved-before-election-day/>.

percentage of Americans indicating they would *definitely* get vaccinated.⁵ While prior to the pandemic vaccine hesitancy was already a growing problem in the United States, there are now an increasing numbers of Americans, who are not usually vaccine resistant, but who are specifically concerned with the safety of a COVID-19 vaccine, fearing it will be fast tracked for political reasons.⁶ Assuming that a safe and effective vaccine is approved,⁷ and a sufficient number of doses have been manufactured, the question then becomes how to best ensure enough Americans get vaccinated against the SARS-CoV-2 coronavirus.⁸

This Essay will examine three possible approaches that government and businesses can take to increase the likelihood that enough Americans are immunized against the SARS-CoV-2

5. Alec Tyson, Courtney Johnson, & Cary Funk, *U.S. Public Now Divided Over Whether To Get COVID-19 Vaccine*, PEW RSCH. CTR. (Sept. 17, 2020), <https://www.pewresearch.org/science/2020/09/17/u-s-public-now-divided-over-whether-to-get-covid-19-vaccine/>. According to this poll, in September 21% of Americans said they would definitely get the vaccine and 30% said they would probably get it. In May, 42% of Americans had said they would definitely get a COVID-19 vaccine and 30% said they would probably get it.

6. *See infra* Part III.

7. This is clearly a contentious issue and Governor Andrew Cuomo has announced that New York will do its own review of any COVID-19 vaccine that the federal government approves. See Michael Gold & Jesse McKinley, *New York Will Review Virus Vaccines, Citing Politicization of Process*, N.Y. TIMES (Sept. 24, 2020), <https://www.nytimes.com/2020/09/24/nyregion/new-york-coronavirus-vaccine.html>. Vaccine distrust will not simply disappear after Election Day, regardless of the election results.

8. For a discussion of how vaccine distribution should be prioritized when the vaccine is first produced and supplies are limited see Spiro & Emanuel, *supra* note 2, at 17–18.

coronavirus to achieve herd immunity. Part I examines the broad power that state governments have to pass mandatory vaccination laws and how this would apply to a vaccine against the SARS-CoV-2 coronavirus. Part II focuses on how private businesses could mandate vaccination for both employees and customers. Part III briefly discusses how lessons learned from behavioral economics can be used by both government and employers to nudge people to be vaccinated. The Essay concludes by opining that the best approach to reach herd immunity is some combination of mandates and nudging.

I. GOVERNMENT MANDATES

There are two general approaches that state governments could take to ensure that a sufficient number of Americans are vaccinated against the SARS-CoV-2 coronavirus.⁹ The first, and most intrusive, would involve states mandating vaccination for all people living or working in a given geographical location within the state. The second would be a more targeted approach, which limits access to certain government benefits to individuals who have been

9. For a discussion of liability for vaccine injury see generally Efthimios Parasidis, *Recalibrating Vaccination Laws*, 97 B.U. L. REV. 2153 (2017) (discussing the Vaccine Act and how it can be reformed to further the public health goals of immunizations).

vaccinated. A common example of this second approach involves conditioning school entry on vaccination. This Part will discuss both of these approaches.¹⁰

A. Broad Mandatory Vaccination Policies

States have the legal authority to enact broad mandatory vaccination policies that cover all individuals in a given area. In the 1905 landmark case *Jacobson v. Massachusetts*,¹¹ the United States Supreme Court upheld the constitutionality of a state criminal law that required all adult inhabitants of Cambridge, Massachusetts get a smallpox vaccine or be fined \$5.¹² While Mr. Jacobson had argued

10. The author does not believe that forced vaccination against the SARS-CoV-2 coronavirus is either appropriate or effective and it will not be discussed as an option in this Essay. Other scholars have discussed the coercive nature of forced vaccination. See, e.g., Dorit Rubinstein Reiss & Lois A. Weithorn, *Responding to the Childhood Vaccination Crisis: Legal Frameworks and Tools in the Context of Parental Vaccine Refusal*, 63 BUFF. L. REV. 881, 961 (2015) (“The use of force to vaccinate a child is arguably the most coercive form of intervention in that it bypasses the exercise of free choice by a parent fully [The] choice is not just burdened, it is eliminated.”). Forced vaccination raises serious constitutional concerns and the Supreme Court has stated that forced injection “represents a substantial interference” with liberty. See *Cruzan v. Dir., Mo. Dep’t of Health*, 497 U.S. 261, 278, 284 (1990) (recognizing that states could require “clear and convincing evidence” that a patient wanted to be removed from life support). Dr. Anthony Fauci, Director of the National Institute of Allergy and Infectious Diseases has stated that “If someone refuses the vaccine in the general public you cannot force someone to take it.” See Aayushi Pratap, *Fauci: Covid-19 Vaccines Unlikely to be Mandatory*, FORBES (Aug. 18, 2020, 5:15 PM), <https://www.forbes.com/sites/aayushipratap/2020/08/18/fauci-covid-19-vaccines-unlikely-to-be-mandatory/#9d6e7695a017>.

11. 197 U.S. 11 (1905). For a discussion of *Jacobson*, see Reiss & Weithorn, *supra* note 10, at 894–901; Erwin Chemerinsky & Michele Goodwin, *Compulsory Vaccination Laws Are Constitutional*, 110 NW. UNIV. L. REV. 589, 604–05 (2016); Hillel Y. Levin, *Why Some Religious Accommodations for Mandatory Vaccinations Violate the Establishment Clause*, 68 HASTINGS L.J. 1193, 1202–03 (2017); Marie Killmond, *Why Is Vaccination Different? A Comparative Analysis of Religious Exemptions*, 117 COLUM. L. REV. 913, 925–30 (2017).

12. *Jacobson*, 197 U.S. at 12.

that the mandatory vaccination policy violated his liberty interest under the Fourteenth Amendment to the United States Constitution, the Supreme Court disagreed, holding that state police powers include the right to pass legislation necessary to protect health and safety.¹³ The Court explained that an individual's liberty rights under the United States Constitution are not absolute, and the mandatory vaccination law was necessary to promote public health and safety in the midst of a smallpox outbreak.¹⁴ Justice Harlan's majority opinion did recognize, however, that courts could intervene if a state used its police powers to pass legislation in a manner that was "so arbitrary and oppressive . . . as to justify the interference of the courts to prevent wrong and oppression."¹⁵

While *Jacobson v. Massachusetts* is over one hundred years old, it continues to be cited by both the Supreme Court¹⁶ and federal appellate courts.¹⁷ Similarly, most legal commentators agree that

13. *Id.* at 25–27.

14. *Id.* For a more recent libertarian debate on the ethics of mandatory vaccination see Matt Welch, Ronald Bailey, Jeffrey A. Singer, & Sandy Reider, *Should Vaccines Be Mandatory?*, REASON (Apr. 2014), <https://reason.com/2014/03/25/should-vaccines-be-mandatory/>.

15. *Jacobson*, 197 U.S. at 38.

16. *See, e.g., S. Bay United Pentecostal Church v. Newsom*, 590 U.S. ___, 1–2 (2020) (Roberts, C.J., concurring) (denying an emergency request to enjoin California's order limiting the size of in-person religious services).

17. *See, e.g., Phillips v. City of New York*, 775 F.3d 538, 542 (2d Cir. 2015) (upholding New York's compulsory vaccination law by relying on *Jacobson*'s finding that states have the police power to mandate vaccination); *Workman v. Mingo Cnty. Bd. of*

under *Jacobson* mandatory vaccination policies are constitutional.¹⁸ Additionally, some states have passed statutes that specifically provide for mandatory vaccination during public health emergencies.¹⁹

Perhaps the most recent example of a broad mandatory vaccination policy occurred in April 2019, in the midst of a measles outbreak, when the New York City Health Commissioner issued an emergency order that anyone over the age of six months who lived, went to school or worked in one of four specific zip codes within the city “shall be vaccinated against measles.”²⁰ Violation of the order was a misdemeanor subject to a \$1,000 fine.²¹ Parents of children attending school in the area unsuccessfully challenged the order, claiming it was unconstitutional and targeted the Orthodox

Educ., 419 F. App’x 348, 353–54 (4th Cir. 2011) (relying on *Jacobson* in upholding a state mandatory vaccination law).

18. See Chemerinsky & Goodwin, *supra* note 11; Levin, *supra* note 11; Killmond, *supra* note 11. See also Wendy E. Parmet, *Rediscovering Jacobson in the Era of COVID-19*, 100 B.U. L. REV. ONLINE 117, 129–33 (2020) (discussing the proliferation of citations to *Jacobson* in COVID-19 related cases).

19. See, e.g., ARIZ. REV. STAT. ANN. § 36-787(C) (2020) (permitting the Governor during a state of emergency involving a highly contagious and highly fatal disease to issue mandatory vaccination orders); FLA STAT. ANN. § 381.00315 (West 2018) (permitting state health officials, upon declaration of a public health emergency, to order an individual to be vaccinated for “communicable diseases that have significant morbidity or mortality and present a severe danger to public health.”).

20. N.Y. CITY DEP’T OF HEALTH & MENTAL HYGIENE, ORDER OF THE COMMISSIONER (Apr. 9, 2019), <https://www1.nyc.gov/assets/doh/downloads/pdf/press/2019/emergency-orders-measles>.

21. Julie D. Cantor, *Mandatory Measles Vaccination in New York City — Reflections on a Bold Experiment*, 381 NEW ENG. J. MED. 101, 101 (2019).

Jewish community.²² Perhaps what was most striking about this order was that it arguably could have left open the possibility of forced vaccination. The Commissioner initially suggested forced vaccination could be considered on a “case by case basis” before eventually settling on instituting a \$1,000 fine.²³ Public reaction to the order was mixed, with some finding it coercive²⁴ and others concerned that wealthy individuals could simply buy their way out of vaccination. Only twenty-nine fines were ultimately issued and by September 2019 the outbreak was contained, and the emergency order was lifted.²⁵

Similarly, a mandatory vaccine for COVID-19 could be justified by a state’s need to promote public health and safety. The COVID-19 pandemic is the worst public health crisis in the United States in the last century and has led to a significant economic downturn and the closing of schools and universities. For these

22. *C.F. v. N.Y. City Dep’t of Health & Mental Hygiene*, No. 508356/19, slip op. 31047(U) (N.Y. Sup. Ct. Apr. 18, 2019).

23. Cantor, *supra* note 21, at 101–102.

24. Laura Nahmias, Dan Goldberg, & Amanda Eisenberg, *Measles Outbreak Tests Limits of Religious Freedom in New York City*, POLITICO (Apr. 15, 2019, 5:52 PM), <https://www.politico.com/story/2019/04/15/measles-new-york-1276927>.

25. Katie Honan, *New York City Declare Measles Outbreak Over*, WALL ST. J. (Sept. 3, 2019, 5:49 PM), <https://www.wsj.com/articles/new-york-city-ends-emergency-order-on-measles-outbreak-11567532417>.

reasons the New York State Bar Association's Health Law Section has recommended mandatory vaccination for all Americans.²⁶

However, the danger with broad-based immunization policies – such as the one in *Jacobson* that applied to *all* adult inhabitants of Cambridge, Massachusetts, or New York's Emergency Order, that applied to all individuals over the age of six months who lived, worked or attended school in certain zip codes – is that they are very heavy handed, and controversial. In the United States today, where even mask mandates are divisive, it is unlikely that many states will enact a compulsory vaccination policy for everyone, even if doing so were constitutionally permissible.

Additionally, this type of heavy-handed public health tactic can backfire, escalate tensions, and increase mistrust of government. Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases has explicitly stated that he does not foresee mandating a vaccine for the general public.²⁷ Americans who are opposed to vaccination, do not only oppose the vaccines, but are also opposed to the compulsory nature of mandatory policies which they

26. N.Y. STATE BAR ASS'N HEALTH L. SECTION, COVID-19 REPORT 64–65 (Sept. 20, 2020), <https://nysba.org/healthlawsectioncovid19/>.

27. Pratap, *supra* note 10.

view as government intrusion on personal liberty.²⁸ Broad mandatory policies could therefore have the unintended consequence of increasing public resistance to vaccination.

B. Targeted Mandatory Vaccination Policies

A less intrusive approach would be for state governments to enact targeted mandatory vaccination policies that essentially condition receipt of a benefit, such as attending school, to individuals who are vaccinated. This approach would fit into the vaccination framework that currently exists in the United States. All fifty states currently require some compulsory vaccination for children attending daycare facilities and K-12 schools.²⁹ Based on Supreme Court precedent,³⁰ it is clear states have the power to enact these laws.³¹ These laws allow for medical exemptions when vaccination is contraindicated, which is not controversial since the

28. Katie Berry, *Pumping the Brakes on Measles Outbreaks*, 52 TEX. TECH L. REV. 505, 508 (2020).

29. See *School Vaccination Requirements and Exemptions*, CTR. FOR DISEASE CONTROL & PREVENTION (Oct. 12, 2017), <https://www.cdc.gov/vaccines/imz-managers/coverage/schoolvaxview/requirements/index.html>.

30. See *Zucht v. King*, 260 U.S. 174, 176–77 (1922) (extending *Jacobson* by holding a city can require compulsory vaccination for schoolchildren even if there is no epidemic); *Prince v. Massachusetts*, 321 U.S. 158, 166 (1944) (upholding the right of the state as “*parens patriae*,” to prohibit child labor, despite parental objections, since doing so involved public health).

31. See, e.g., *Phillips v. City of New York*, 542 (2d Cir. 2015) (relying on *Jacobson* and *Zucht* in rejecting constitutional challenges to New York City’s mandatory vaccination provision for schoolchildren).

very purpose of vaccines is to protect health.³² Many states also have mandatory vaccination laws covering college students³³ as well as employees in nursing homes and healthcare facilities.³⁴

Targeted mandatory vaccination policies have been quite effective in limiting the spread of various vaccine preventable diseases.³⁵ For example, compulsory vaccination laws for school aged children led to a drastic reduction in measles.³⁶ Similarly, mandatory influenza immunization policies for health care personnel have increased vaccination rates and decreased rates of influenza.³⁷

32. See Levin, *supra* note 11, at 1201. In *Jacobson v. Massachusetts*, Justice Harlan imagined cases where vaccination of particular individuals could lead to significant medical problems and in those cases, courts should have the power “to interfere and protect the health and life of the individual concerned.” *Jacobson v. Massachusetts*, 197 U.S. 11, 38–39 (1905). However, a procedural tightening of medical exemptions is an effective means of ensuring only those who have a true medical need are exempted. See Reiss & Weithorn, *supra* note 10, at 964.

33. See *State Information: MenACWY Vaccine Mandates for Colleges and Universities*, IMMUNIZATION ACTION COAL., <https://www.immunize.org/laws/menin.asp> (last visited Sept. 9, 2020).

34. Brian Dean Abramson, *Vaccine Law in the Healthcare Workplace*, 12 J. HEALTH & LIFE SCI. L. 22, 26–27, 36 (2019).

35. See generally Robert A. Bednarczyk, Adrian R. King, Ariana Lahijani, & Saad B. Omer, *Current Landscape of Nonmedical Vaccination Exemptions in the United States: Impact of Policy Changes*, 18 EXPERT REV. VACCINES 175 (2019) (discussing how vaccination mandates for school entry have been successful in achieving a high level of coverage); Chemerinsky & Goodwin, *supra* note 11, at 599 (discussing why compulsory vaccination laws are essential); Levin, *supra* note 11, at 1200 (discussing how vaccine mandates have been successful and warning of the risks associated with laws that permit too many exemptions).

36. See Chemerinsky & Goodwin, *supra* note 11, at 597.

37. Comm. on Infectious Diseases, *Influenza Immunization for All Health Care Personnel: Keep it Mandatory*, 136 PEDIATRICS 809, 809 (2015) (policy statement reaffirming the American Academy of Pediatrics’ support for mandatory influenza vaccination for health care personnel).

One of the most controversial issues surrounding compulsory vaccination laws are religious or philosophical exemptions. Currently forty-five states have at least one of these two types of exemptions from mandatory school vaccinations.³⁸ In the aftermath of recent measles outbreaks, both New York³⁹ and California⁴⁰ eliminated these exemptions. While the majority of parents support routine childhood immunization, vocal groups of parents have strongly opposed attempts to eliminate religious and philosophical exemptions.⁴¹ Yet eliminating religious exemptions can be effective, and doing so in California led to increased vaccination rates, particularly in those counties that previously had the lowest vaccination rates.⁴² While the elimination of nonmedical exemptions in California did lead to an increase in medical

38. *States with Religious and Philosophical Exemptions From School Immunization Requirements*, NAT'L CONF. OF STATE LEGISLATORS (June 26, 2020), <https://www.ncsl.org/research/health/school-immunization-exemption-state-laws.aspx>.

The only states that do not have these exemptions are West Virginia, Mississippi, Maine, New York and California.

39. S.B. 2994, 2019–20 Leg., Reg. Sess. (N.Y. 2019) (approved by Governor Andrew Cuomo on June 13, 2019).

40. S.B. 277, 2015–16 Leg., Reg. Sess. (Cal. 2015) (approved by Governor Jerry Brown on June 30, 2015).

41. Roni Caryn Rabin, *Eager to Limit Exemptions to Vaccination, States Face Staunch Resistance*, N.Y. TIMES (June 14, 2019, 2:40 PM), <https://www.nytimes.com/2019/06/14/health/vaccine-exemption-health.html>.

42. Sindiso Nyathi, Hannah C. Karpel, Kristin L. Sainani, Yvonne Maldonado, Peter J. Hotez, Eran Bendavid, & Nathan C. Lo, *The 2016 California Policy to Eliminate Nonmedical Vaccine Exemptions and Changes in Vaccine Coverage: An Empirical Policy Analysis*, PUB. LIBR. SCI. MED., Dec. 23, 2019, at 1–2.

exemptions, this was more than offset by the greater reduction in nonmedical exemptions.⁴³

While eliminating religious and philosophical exemptions may be politically controversial, it is clearly legal and constitutional to do so.⁴⁴ Religious opponents of mandatory vaccination laws frequently argue that these laws interfere with their right to the free exercise of religion under the First Amendment to the United States Constitution. This is legally incorrect, since the United States Supreme Court in *Employment Division v. Smith*⁴⁵ stated that under the Free Exercise Clause of the First Amendment neutral laws of general applicability are constitutional.⁴⁶ In other words, even if a law burdens a religious practice, if the legislatures' motivation in passing the law was not religious interference and the law does not single out only religious behavior, it does not violate the Free Exercise Clause. Mandatory vaccination laws, which apply to all members of a given group, whether that be schoolchildren or

43. *Id.*

44. Chemerinsky & Goodwin, *supra* note 11, at 609. *See also Phillips v. City of New York*, 775 F.3d 538, 542 (2d Cir. 2015).

45. 494 U.S. 872 (1990).

46. *Id.* at 888 (emphasizing that individuals seeking religious exemptions to generally applicable laws should turn to the legislative process and not the courts).

healthcare workers, are certainly neutral laws of general applicability.

In response to *Smith*, Congress passed the Religious Freedom Restoration Act (RFRA) which restored the compelling interest test — the standard courts had used to interpret Free Exercise claims prior to *Smith*.⁴⁷ However, the Supreme Court soon held in *City of Boerne v. Flores*⁴⁸ that RFRA was unconstitutional as applied to state and local laws.⁴⁹ As a result, while RFRA requires federal statutes that significantly burden religion to pass strict scrutiny, it does not apply to state and local laws. In response to *City of Boerne v. Flores*, Congress then passed the Religious Land Use and Institutionalized Persons Act (RLUIPA) which requires state statutes that significantly burden religion pass strict scrutiny if these statutes involve land use or institutionalized persons.⁵⁰ RLUIPA clearly does not apply to an individual's religious challenge to a state's mandatory vaccination laws.

47. Religious Freedom Restoration Act (RFRA) of 1993, 42 U.S.C. § 2000bb (1993).

48. 521 U.S. 507 (1997).

49. *Id.* at 536 (holding that Congress exceeded its authority in applying RFRA to the states).

50. Religious Land Use and Institutionalized Persons Act (RLUIPA), 42 U.S.C. § 2000cc (2000).

Not only are religious exemptions from mandatory vaccination laws not required, some courts have held that these exemptions may be unconstitutional. The Mississippi Supreme Court found that the religious exemption in the state's compulsory vaccination law for school children violated the equal protection clause of the Fourteenth Amendment since it was only available to members of religious denominations.⁵¹ The exemption therefore discriminated against the majority of children who did not have a religious objection to vaccination and who would be exposed to those who were unvaccinated due to their religious beliefs.⁵² The Maryland Court of Appeals held that a Maryland mandatory vaccination statute violated the Establishment Clause since it only permitted a religious exemption to members of a recognized church or denomination.⁵³ It is well established that laws cannot favor some religions over others, so if a state includes a religious exemption in its mandatory vaccination statute, this exemption must be broad and inclusive to avoid violating the Establishment Clause.⁵⁴

51. *Brown v. Stone*, 378 So. 2d 218, 223 (Miss. 1979).

52. *Id.* (“[W]e hold that the provision providing an exception from the operation of the statute because of religious belief is in violation of the Fourteenth Amendment to the United States Constitution and therefore is void.”).

53. *Davis v. Maryland*, 451 A.2d 107, 113–14 (Md. 1982).

54. *See also* Levin, *supra* note 11, at 1208–09 (arguing that mandatory vaccination laws that include religious exemptions are only constitutional if they include a comparable nonreligious exemption). For a discussion of religious exemptions to

However, at least twenty-one states have enacted their own state religious freedom restoration acts, some of which require strict scrutiny in analyzing state free exercise claims.⁵⁵ Additionally there are states that have interpreted their state constitutions to provide additional protection for religious practices.⁵⁶ While in some states mandatory vaccination policies that burden religious practices would need to pass strict scrutiny, even prior to the COVID-19 pandemic, courts have held that mandatory vaccination laws passed this test.⁵⁷ It is difficult to imagine a more compelling state interest than ending the worst public health crisis in the United States in the last century, which has led to a significant economic downturn and millions of K-12 and university students unable to return to the classroom.

mandatory vaccination policies see generally Killmond, *supra* note 11 (opining that cases involving religious exemptions to mandatory vaccine laws have historically considered third party harms); Chemerinsky & Goodwin, *supra* note 11, at 607–09 (discussing cases that held religious exemption to compulsory vaccination laws were unconstitutional); Christopher Ogolla, *The Public Health Implications of Religious Exemptions: A Balance Between Public Safety and Personal Choice, or Religion Gone Too Far?*, 25 HEALTH MATRIX 257, 260 (2015) (opining that religious exemptions at times permit religious conduct that is inconsistent with public health and welfare).

55. See generally STATE RELIGIOUS FREEDOM RESTORATION ACTS: A COMPILATION OF ENACTED AND RECENTLY PROPOSED LEGISLATION (William H. Manz ed., 2016).

56. See Stephanie H. Barclay, *First Amendment “Harms,”* 95 IND. L.J. 331, 341 (2020).

57. See, e.g., *F.F. ex rel. Y.F. v. New York*, 114 N.Y.S.3d 852, 867 (N.Y. Sup. Ct. 2019) (“The courts addressing this question have uniformly concluded that compulsory vaccination laws without religious exemptions are constitutional, regardless of whether rational basis or strict scrutiny applies . . .”).

State governments should consider enacting some form of targeted vaccination against the SARS-CoV-2 coronavirus, under their general police powers with the goal of ensuring that these policies cover those most at risk, and those most likely to spread the disease. Targeted policies that condition receipt of a benefit on immunization would be less heavy-handed and controversial than the broader type of immunization policy discussed in the previous Subpart. Additionally, these policies already exist in all fifty states, so there is already a framework in place. In addition to covering schoolchildren, college students and healthcare employees, states might consider passing legislation that would require proof of vaccination as a prerequisite for using public transportation, going to large public events such as concerts and sporting events or going to a gym, restaurant, or bar. This could be justified under the states' public health police power. While this Part focuses on the states' police power, the federal government should consider mandating vaccination as a prerequisite to obtaining or renewing a passport, to decrease the risk Americans will be infected with COVID-19 abroad and continue the spread of the virus in their home communities.

While limiting religious exemptions is politically controversial, it is constitutional to do so and will likely increase the vaccination rate.⁵⁸

II. PRIVATE BUSINESS MANDATES

In addition to government mandates, a different and complementary approach would be for private businesses to mandate COVID-19 vaccination for either, or both, employees and customers. Private businesses have significant flexibility in adopting compulsory vaccination policies which, unlike government mandated policies, are simply not subject to constitutional restrictions. It should be noted, however, that at least one state, Oregon, has a statutory provision prohibiting employers from mandating vaccinations that are not required by the government.⁵⁹ Additionally, in a unionized workforce, the union might be able to successfully challenge unilaterally implemented mandatory vaccination policies.⁶⁰

58. It should be noted that some states have increased vaccination rates simply by requiring that parents are educated on the safety and efficacy of vaccination before their children receive a religious exemption. See Levin, *supra* note 1, at 1239–40.

59. OR. REV. STAT. ANN. § 433.416(3) (West 2020) (“A worker shall not be required as a condition of work to be immunized under this section, unless such immunization is otherwise required by federal or state law, rule or regulation.”).

60. See Terri Dobbins Baxter, *Employer-Mandated Vaccination Policies: Different Employers, New Vaccines, and Hidden Risks*, 2017 UTAH L. REV. 885, 909–14 (2017) (discussing legal issues employers should consider before mandating vaccination for their employees).

These policies should be less controversial than mandatory government vaccination laws since libertarians are opposed to *government mandates* that intrude on individual rights and this is simply not an issue in the context of a *private business* adopting a mandatory vaccination policy.⁶¹ There has also been a high level of distrust of the government when it come to the development of a vaccine against the SARS-CoV-2 coronavirus, which could translate into skepticism regarding government mandates.⁶² Employer mandates might therefore be less contentious.

However, few businesses outside of healthcare facilities and nursing homes have enacted vaccination policies, partly out of fear that employees or customers would consider these policies an unacceptable invasion of their personal lives. Additionally, worker's compensation laws may lead to employer liability for vaccine related injuries if they are mandated by the employer.⁶³ Despite this, in the midst of the

61. There will still likely be individuals opposed to vaccination who believe that neither government nor private businesses have the right to tell them to be vaccinated.

62. Marie Rosenthal & Sarah Tilyou, *Will Distrust Derail the COVID-19 Vaccination Program?*, INFECTIOUS DISEASE SPECIAL EDITION (Oct. 21, 2020), <https://www.idse.net/Covid-19/Article/10-20/Will-Distrust-Derail-the-COVID-19-Vaccination-Program-/60934>.

63. See Baxter, *supra* note 55, at 899.

COVID-19 pandemic private businesses have more of an incentive to mandate vaccination against the SARS-CoV-2 coronavirus.

If private employers mandate vaccination for their employees, they should provide exemptions for those employees who demonstrate a legitimate medical need. However, it is unclear if a medical exemption would even be required under federal law.⁶⁴ While the Americans with Disabilities Act (ADA) prohibits covered employers from discriminating against a “qualified individual on the basis of a disability,”⁶⁵ an employee is only covered by the ADA if they can first establish that they have a disability. Many of the common reasons why individuals cannot be vaccinated – such as an allergy to a vaccine – likely do not rise to the level of being a disability for purposes of the ADA.⁶⁶

Furthermore, even if an employee’s need for an exemption stems from a “disability” the ADA specifically states

64. *See generally id.* at 894–97.

65. 42 U.S.C. § 12112(a) (2009).

66. The ADA defines disability as “(A) a physical or mental impairment that substantially limits one or more major life activities of such individual; (B) a record of such an impairment; or (C) being regarded as having such an impairment” 42 U.S.C. § 12102(1) (2009).

that employees who pose “a direct threat to the health or safety of other individuals” do not meet the qualification standards of the ADA.⁶⁷ The Equal Employment Opportunity Commission (EEOC) regulations define a direct threat as “a significant risk of substantial harm to the health or safety of the individual or others that cannot be eliminated or reduced by reasonable accommodation.”⁶⁸ Under the ADA, a reasonable accommodation is one that can be done without “significant difficulty or expense.”⁶⁹ In the midst of the COVID-19 pandemic, with its severe health and economic implications, it is unlikely that medical exemptions would be required under the ADA.

However, it should be noted that the EEOC has understandably discouraged mandatory vaccination policies that do not include medical exemptions.⁷⁰ There is a general

67. 42 U.S.C. § 12113b. The EEOC has acknowledged that allowing individuals with COVID-19 in the workplace would present a “direct threat,” and that employers may therefore generally test employees for the virus. *What You Should Know About COVID-19 and the ADA, the Rehabilitation Act, and Other EEO Laws*, U.S. EQUAL EMP. OPPORTUNITY COMM’N (Sept. 8, 2020), <https://www.eeoc.gov/wysk/what-you-should-know-about-covid-19-and-ada-rehabilitation-act-and-other-eeo-laws>.

68. 29 C.F.R. § 1630.2(r) (2012).

69. 42 U.S.C. § 12111(10(A)) (2009).

70. *Pandemic Preparedness in the Workplace and the Americans with Disabilities Act*, U.S. EQUAL EMP. OPPORTUNITY COMM’N (Mar. 21, 2020), <https://www.eeoc.gov/laws/guidance/pandemic-preparedness-workplace-and-americans-disabilities-act> (“An employee may be entitled to an exemption from a mandatory vaccination requirement based on an ADA disability that prevents him from taking the influenza vaccine.”).

consensus that it is wrong to penalize those who cannot be vaccinated for medical reasons, since the very purpose of vaccines is to protect public health. Therefore, employers should provide medical exemptions for those employees who demonstrate a legitimate medical need.⁷¹

Employers may also be concerned that if policies do not include religious exemptions, they could potentially be liable for religious discrimination. However, it is highly unlikely that federal law would require employers to accommodate employees requesting a religious exemption to a COVID-19 vaccine, even if an employee can show he has a sincerely held religious belief opposing vaccination.⁷² Under § 701(j) of Title VII of the 1964 Civil Rights Act, employers must reasonably accommodate religious employees unless accommodation would cause “undue hardship” on the employers’ business.⁷³ In *Trans World Airlines, Inc. v. Hardison*,⁷⁴ the United States Supreme Court somewhat

71. As with mandatory vaccination statutes, tightening procedural requirements can effectively ensure that only those with a valid medical need are exempted. See Reiss and Weithorn, *supra* note 10, at 964.

72. See, e.g., *Fallon v. Mercy Cath. Med. Ctr. of Se. Pa.*, 877 F.3d 487, 492 (3rd Cir. 2017) (determining the employee’s objection to vaccination was a personal belief that did “not occupy a place in his life similar to that occupied by a more traditional faith.”).

73. 42 U.S.C. § 2000e(j) (1991).

74. 432 U.S. 63 (1977).

inexplicably defined undue hardship as any cost greater than “de minimis.”⁷⁵

Yet despite the Supreme Court’s holding in *Trans World Airlines, Inc. v. Hardison*, in recent years, the EEOC has opposed vaccination policies by private employers that do not include significant religious exemptions.⁷⁶ While the EEOC has been unsuccessful in winning these cases, it has in some instances successfully pushed employers into settlement agreements.⁷⁷ These cases all occurred prior to the COVID-19 pandemic, and the EEOC would hopefully rethink its position on employers’ mandatory vaccination policies in the midst of the worst pandemic in a century.

Additionally, there are some states that require a higher level of accommodation, typically defining undue hardship under their state religious accommodation statutes as “significant difficulty or expense.”⁷⁸ This is the same

75. *Id.* at 84. See also *Horvath v. City of Leander*, 946 F.3d 787, 789 (5th Cir. 2020) (finding employer was justified in firing a firefighter who both objected to vaccination for TDAP and would not accept a reasonable accommodations); *Robinson v. Children’s Hosp. Bos.*, No. 14-10263-DJC, 2016 WL 1337255, at *10 (D. Mass. Apr. 5, 2016) (finding hospital reasonably accommodated employee with religious objection to flu vaccine and that exempting her from vaccination requirement would have been an “undue hardship”).

76. See generally Douglas J. Opel, James A. Sonne, & Michelle M. Mello, *Vaccination without Litigation – Addressing Religious Objections to Hospital Influenza-Vaccination Mandates*, 378 NEW ENG. J. MED. 785 (2018).

77. *Id.* at 786.

78. See, e.g., N.Y. EXEC. LAW § 296(2)(d)(iii) (McKinney 2020) (“undue hardship” shall mean an accommodation requiring significant expense or difficulty); CAL.

accommodation standard as that used under the ADA. Yet regardless of whether the standard is “de minimis” or “significant difficulty and expense” certainly in the midst of the worst public health crisis in the last century, mandatory vaccination policies should usually meet this burden.

In addition to mandating vaccination for employees, businesses should also consider mandating vaccination for customers and clients. This is the approach that some large national chains, such as Target, Walgreens and CVS, have taken regarding customer mask mandates.⁷⁹ Of course, vaccination is more intrusive than wearing a mask, and it will be more time intensive to ensure customers are vaccinated.

The issue of medical exemptions is somewhat different with customers, since businesses tend to have a more fleeting interaction with customers than they have with employees. For example, a customer going into a retail store has limited contact with the business. In many cases it is more realistic

GOV'T CODE § 12926(u) (West 2020) (defining undue hardship as “an action requiring significant difficulty *or expense*, . . .”).

79. Kelly Tyko, *Target, CVS, Walgreens to Also Require Masks at Stores Nationwide as COVID-19 Cases Rise*, USA TODAY (July 16, 2020, 3:59 PM), <https://www.usatoday.com/story/money/2020/07/16/target-face-coverings-requirement-free-masks-provided-coronavirus/5450555002/>.

for businesses to determine whether an employee demonstrates a legitimate need for a medical exemption than whether a customer demonstrates such a need. As with employees, it is unlikely that the ADA would require businesses to accommodate customers who refused to get a vaccine against the SARS-CoV-2 coronavirus.⁸⁰ Yet, businesses might still choose to provide medical exemptions to a mandatory customer vaccination policy, even if not mandated by the ADA.⁸¹

Businesses may also be concerned that they will be liable for religious discrimination if they have mandatory vaccination policies for customers that do not include religious exemptions. However, Title II of the 1964 Civil Rights Act, the federal law prohibiting religious discrimination in public accommodations⁸² differs from Title VII of the Act in that it does

80. See *supra* notes 58–63 and accompanying text.

81. Airlines are not covered by the ADA, but nonetheless provide an interesting analogy in their approaches to granting customers medical exemptions to mask policies. Southwest and JetBlue offer no medical exemptions and those who cannot wear a mask simply cannot fly. Other airlines, such as Delta, require passengers claiming a need for a medical exemption to go through a medical consultation arranged by Delta. Hugo Martin, *Strict Mask Rules? Empty Middle Seats? We Compare Airlines' COVID-19 Policies*, L.A. TIMES (Aug. 8, 2020, 5 AM), <https://www.latimes.com/business/story/2020-08-08/airline-mask-rules-compare-policies-empty-seats>.

82. Title II prohibits discrimination based on “race, color, religion, or national origin.” 42 U.S.C. §2000a(a) (2018).

not include a religious accommodation requirement.⁸³ Businesses therefore would not need to provide customers with a religious exemption to a mandatory vaccination policy. There are, however, some states that require public accommodations to provide customers with religious exemptions.⁸⁴ Yet, in the midst of one of the worst public health and financial crisis in the last century, it is unlikely that religious accommodation would be required for customers in public accommodations under state laws.⁸⁵

Private businesses, particularly those with employees or customers at high risk for either spreading COVID-19 or becoming ill with the virus should consider adopting mandatory vaccination policies. Businesses should specifically explain that they are doing so to protect the health of customers and employees as well as the livelihood of employees by ensuring the business does not need to shut down. Adopting mandatory vaccination policies could potentially fill in gaps left by

83. See Eugene Volokh, *Must Health Club Give Religious Member an Exemption From the Club's Clothing Rules?*, WASH. POST (May 25, 2017, 11:37 AM), URL.

84. See e.g., *Yeager v. Ohio Civ. Rts. Comm'n*, 773 N.E.2d 1097, 1101 (Ohio Ct. App. 2002) (holding that a place of public accommodation must provide reasonable religious accommodation to customers when doing so is possible without the business incurring more than a de minimis cost).

85. This is similar to why accommodation would not be required under statutes mandating religious accommodation of employees. See *supra* notes 66–67 and accompanying text.

government mandates. For example, COVID-19 is most likely to spread in crowded indoor venues where people tend to remain for longer periods of time such as bars, gyms, restaurants,⁸⁶ meat packing plants,⁸⁷ and schools. Employees, patients, and visitors at healthcare facilities and nursing homes⁸⁸ are also at higher risk for illness and disease transmission. On the other hand, if employees are working remotely, it would be more difficult for employers to justify a mandatory vaccination policy. This is by no means an exclusive list of the types of businesses that should consider mandating COVID-19 vaccination. Rather, businesses should be guided by the likelihood that their employees and customers will either become ill or spread the virus to others and fill in gaps left by state vaccination policies.

III. NUDGING

86. See Brendan Cole, *COVID-19 Spiked Where Restaurants, Bars and Gyms Reopened Earliest: Study*, NEWSWEEK (July 22, 2020, 7:01 AM), <https://www.newsweek.com/yelp-survey-consumer-interest-coronavirus-infections-1519582>.

87. See Amelia Lucas, *CDC Says 9% of Meatpacking Plant Workers Have Been Diagnosed with Covid-19*, CONSUMER NEWS & BUS. CHANNEL (July 7, 2020, 7:07 PM), <https://www.cnbc.com/2020/07/07/cdc-says-9percent-of-meatpacking-plant-workers-have-been-diagnosed-with-covid-19.html>.

88. See Jemima McEvoy, *Nursing Homes Account for Over 40% of U.S. Coronavirus Deaths*, FORBES (June 16, 2020, 11:49 AM), <https://www.forbes.com/sites/jemimamcevoy/2020/06/16/nursing-homes-account-for-over-40-of-us-coronavirus-deaths/#1de5ccce300b>.

In addition to the vaccination mandates discussed in the previous two Parts, both government and private businesses should develop policies encouraging individuals to get vaccinated against the SARS-CoV-2 coronavirus. This is the least controversial approach towards vaccination, since it does not involve any mandates. Theories of behavioral economics explain that when individuals need to make risk judgements and are either faced with an overload of complex data or insufficient knowledge about a topic they revert to heuristics or mental shortcuts.⁸⁹ Since these mental shortcuts occur when people decide whether to be vaccinated, lessons learned from behavioral economics are instructive in determining how to best encourage individuals to get vaccinated against the SARS-CoV-2 coronavirus.⁹⁰ While a full examination of behavioral economics and vaccination rates is beyond the scope of this Essay, this section will highlight some approaches government and

89. See generally Christine Jolls, Cass R. Sunstein, & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471 (1998) (advancing an approach to the economic analysis of law that more accurately reflects human behavior); RICHARD H. THALER & CASS R. SUNSTEIN, *NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS* (2009) (developing what they refer to as the libertarian paternalistic approach).

90. For example, people have an “omission bias” and are consistently more concerned with the risks associated with doing something than the risks associated with doing nothing. People are therefore more concerned with potential adverse reactions from a vaccination than with becoming ill as a result of being unvaccinated. See Ilana Ritov & Jonathan Baron, *Reluctance to Vaccinate: Omission Bias and Ambiguity*, 3 J. BEHAV. DECISION MAKING 263, 263 (1990).

employers can take.⁹¹

Before, discussing any particular policies, it is crucial to emphasize that public health agencies in the United States must maintain their scientific independence and credibility. Otherwise Americans simply will not believe these agencies when they approve a vaccine and announce it is safe and effective. This is particularly true with the politization of the pandemic. While science is continually developing, particularly with new and emerging diseases, there has nonetheless been a disturbing trend of federal health officials' recommendations being influenced by politics. While prior to the pandemic, vaccine hesitancy had already been a problem,⁹² now a growing number of Americans are specifically concerned with the safety of a COVID-19 vaccine, fearing the Trump Administration will fast track it for political reasons.⁹³

91. See generally Marysia Laskowski, *Nudging Towards Vaccination: A Behavioral Law and Economics Approach to Childhood Immunization Policy*, 94 TEX. L. REV. 601 (2016) (using behavioral law insights to respond to the anti-vaccination movement); Ljiljana Stanic, *Private Irrationality and Public Health: Failure to Vaccinate and What We Can Do About It*, 22 HEALTH L. REV. 49, 55–56 (2014) (proposing policy solutions to vaccination refusal from a behavioral-economics perspective); Alexander Cappelen, Ottar Maestad, & Bertil Tungodden, *Demand for Childhood Vaccination — Insights from Behavioral Economics*, 37 F. DEV. STUD. 349 (2010) (examining how behavioral economics can be used to understand when caregivers choose to vaccinate children).

92. The World Health Organization (WHO) declared vaccine hesitancy a top ten global health threat in 2019. See *Ten Threats to Global Health in 2019*, WORLD HEALTH ORG., <https://www.who.int/news-room/spotlight/ten-threats-to-global-health-in-2019> (last visited Sept. 9, 2020).

93. See Jared S. Hopkins, *A Covid-19 Vaccine Problem: People Who Are Afraid to Get One*, WALL ST. J. (Aug. 28, 2020, 5:30 AM), [https://www.wsj.com/articles/covid-](https://www.wsj.com/articles/covid-19-vaccine-problem-people-who-are-afraid-to-get-one)

Over the last few months, the Food and Drug Administration (FDA) has engaged in actions that have fueled these fears. After the FDA approved the emergency use of convalescent plasma to treat COVID-19, White House Chief of Staff Mark Meadows explicitly stated that President Trump had encouraged the FDA to “see the light” and do so.⁹⁴ The FDA commissioner was then forced to admit that he had overstated the benefit of the treatment.⁹⁵ Similarly, the FDA had earlier approved the emergency use of hydroxychloroquine, after being pressured to do so by the White House, and was then ultimately forced to revoke this approval due to cardiac risk associated with the drug.⁹⁶ Similarly, the Center for Disease Control (CDC) lost credibility when it bowed to political pressure in writing its COVID-19 guidance.⁹⁷ If public health

19-vaccine-hesitancy-is-a-growing-concern-for-researchers-health-officials-11598607002.

94. Jeremy Samuel Faust, *The FDA Should Not Have Caved to Trump’s Latest Covid-19 Demand*, WASH. POST (Aug. 24, 2020, TIME), URL.

95. Katie Thomas & Sherri Fink, *F.D.A. ‘Grossly Misrepresented’ Blood Plasma Data, Scientists Say*, N.Y. TIMES (Aug. 24, 2020, 1:22 PM), <https://www.nytimes.com/2020/08/24/health/fda-blood-plasma.html>.

96. Steve Usdin, *FDA Credibility on the Line with White House Pressure on Hydroxychloroquine*, BIOCENTURY (July 7, 2020, 5:31 PM), <https://www.biocentury.com/article/305642/fda-credibility-on-the-line-with-white-house-pressure-on-hydroxychloroquine>.

97. Catherine Lynn Troisi, *I’m a Public Health Researcher, and I’m Dismayed that the CDC’s Missteps are Causing People to Lose Trust in a Great Institution*, THE CONVERSATION (Aug. 31, 2010, 8:38 AM), <https://theconversation.com/im-a-public-health-researcher-and-im-dismayed-that-the-cdcs-missteps-are-causing-people-to-lose-trust-in-a-great-institution-145236>.

agencies do not maintain credibility, Americans will dismiss what they say about vaccines.

Alternatively, when Americans trust government, its messages matter and the government must explain the importance of vaccination against the SARS-CoV-2 coronavirus in a clear and transparent manner. The importance of government messages was evident in the controversy involving government mask mandates. In addition to mandating masks, Governor Cuomo has successfully convinced New Yorkers to wear them by emphasizing that “wearing a mask is about respect”⁹⁸ and we do so to protect others, particularly essential workers, health care providers and high-risk individuals. The majority of New Yorkers, who do not want to view themselves as disrespectful and uncaring, wear masks. On the other hand, mask wearing has been much more controversial in Florida, and Governor DeSantis has refused to declare a state-wide mask mandate claiming that to do so would interfere with personal freedom and even be unconstitutional.⁹⁹ While some local Florida counties and cities did

98. Andrew Cuomo (@NYGovCuomo), TWITTER (May 12, 2020, 1:20 PM), <https://twitter.com/NYGovCuomo/status/1260273563275231234>.

99. Christine Sexton, *Amid Record-High COVID-19 Rates, Florida Gov. Ron DeSantis Says Masks Should Be Voluntary*, ORLANDO WKLY. (June 20, 2020, 12:09 PM), <https://www.orlandoweekly.com/Blogs/archives/2020/06/20/amid-record-high-covid-19-rates-florida-gov-ron-desantis-says-masks-should-be-voluntary> (“This has to be voluntary because the Constitution is not suspended just because there is a virus.”).

ultimately mandate mask wearing,¹⁰⁰ the message Floridians received from the Governor, is that wearing masks is a matter of personal choice.

Government can similarly encourage Americans to get vaccinated through public health messaging by whoever members of a particular community respect and trust.¹⁰¹ Government should be creative in choosing spokespeople, who could include religious leaders, social media influencers, celebrities, or professional athletes. For example, during last year's measles outbreak in New York, the Orthodox Jewish Nurses Association was in the forefront of educating the Orthodox Jewish community on the safety and efficacy of vaccination.¹⁰² Similarly, in 1956, six months after Elvis Presley got a polio vaccine on the Ed Sullivan Show, the teen vaccination rate increased astronomically from 0.6 percent to over eighty percent.¹⁰³ Unfortunately, people will also be listening to celebrities without medical credentials who inaccurately claim vaccines are dangerous, and government communication needs to

100. *Id.*

101. *See generally* THALER & SUNSTEIN, *supra* note 82 (discussing how people are influenced by what others say).

102. Cantor, *supra* note 21, at 103.

103. Karen Harris, *The Day Elvis Helped Fight Polio*, HIST. DAILY (Oct. 28, 2019), <https://historydaily.org/the-day-elvis-helped-fight-polio>.

override this misinformation.¹⁰⁴ Trusted public health officials should emphasize the safety of the vaccine and widely publicize when they receive the vaccination.

Government should also make the vaccine both free and readily available, which is what the Department of Health and Human Services (HHS) is planning to do.¹⁰⁵ Historically, successful vaccination campaigns always provided vaccines for free.¹⁰⁶ Vaccines should be widely available at convenient locations that could include community vaccination clinics, pharmacies, supermarkets, schools, places of employment, senior centers and doctor's offices.¹⁰⁷ Government should be particularly sensitive to the needs of minority communities, who are less likely to get vaccinated against the SARS-CoV-2 coronavirus.¹⁰⁸ Since polls

104. For example, actress Jenny McCarthy, has inaccurately claimed that vaccines may cause autism. Her fans listen to her because she is a celebrity, not because of her scientific background. See Nicole Einbinder, *How Former 'The View' Host Jenny McCarthy Became the Face of the Anti-Vaxx Movement*, INSIDER (Apr. 29, 2019, 3:57 PM), <https://www.insider.com/jenny-mccarthy-became-the-face-of-the-anti-vaxx-movement-2019-4>.

105. Jamie Gumbrecht & Naomi Thomas, *Federal Government Details Plans to Distribute Free Covid-19 Vaccines*, CNN (Sept. 16, 2020, 7:42 PM), <https://www.cnn.com/2020/09/16/health/coronavirus-vaccine-distribution-plan/index.html>.

106. Spiro & Emanuel, *supra* note 2, at 15.

107. *Id.* at 20. See also *The Public's Role in COVID-19 Vaccination: Planning Recommendations Informed by Design Thinking and the Social, Behavioral, and Communication Science*, JOHNS HOPKINS 16–20 (July 2020), <https://www.centerforhealthsecurity.org/our-work/publications/the-publics-role-in-covid-19-vaccination>.

108. According to one poll, only twenty-five percent of African Americans and thirty-seven percent of Hispanics said they would get vaccinated, perhaps because of the

indicate that many Americans are vaccine hesitant, government's goal should be making vaccination as easy and convenient as possible.

Additionally, there are ways that private employers could effectively and cheaply nudge employees to get a COVID-19 vaccine. For example, a study at Rutgers University found that requiring faculty and staff to opt out of vaccination, as opposed to opting in, could significantly increase vaccination rates. In this study, some faculty and staff received an email scheduling them for a flu shot with the option of opting out, while others received an email providing them the opportunity to opt in and schedule their own flu shot online. There was a thirty-six percent relative increase in vaccination rates for the automatically enrolled employees in comparison to the employees who had to opt in and schedule their own vaccine.¹⁰⁹

In a different study, employees at a Midwestern utility firm were sent a mailer with information with the dates and times when the employer's free vaccination clinics would occur. One of groups

history of health discrimination in the United States, including the Tuskegee study. *See* Spiro & Emanuel, *supra* note 2, at 20.

109. Gretchen B. Chapman, Meng Li, Helen Colby, & Haewon Yoon, *Opting In vs Opting Out of Influenza Vaccination*, 304 J. AM. MED. ASS'N 43–44 (2010).

received a mailer that additionally reminded them to mark down the day and time they had chosen to be vaccinated. Simply including this reminder led to a 12% relative increase in flu vaccinations when compared to the group who received no nudge to mark down the date and time.¹¹⁰ These studies illustrate that there are inexpensive and subtle nudges employers can use to increase vaccination rates against the SARS-CoV-2 coronavirus, without resorting to mandates.

VI. CONCLUSION

A safe and effective vaccine could help end the COVID-19 pandemic if a large enough number of Americans are immunized against the SARS-CoV-2 coronavirus. As this Essay has explained, both government and employers have the legal authority to adopt mandatory vaccination policies. While broad mandatory government vaccination policies that apply to everyone in a given location are likely constitutional, they are also heavy handed and could backfire, spark distrust of government and increase public resistance to vaccination. Instead, government should adopt targeted

110. Katherine L. Milkman, John Beshears, James J. Choi, David Laibson, & Brigitte C. Madrian, *Using Implementation Intentions Prompts to Enhance Influenza Vaccination Rates*, 108 PROC. NAT'L ACAD. SCI. 10415, 10415–16 (2011).

mandatory vaccination policies aimed specifically at those individuals most likely to get ill or spread the disease. Private businesses with employees or customers at high risk for infection should also consider adopting mandatory vaccination policies. Finally, both government and private businesses should use lessons learned from behavioral economics to nudge Americans to be vaccinated against the SARS-CoV-2 coronavirus.