

University of Tennessee Law

Legal Scholarship Repository: A Service of the Joel A. Katz Library

UTK Law Faculty Publications

2017

**Employer-Mandated Vaccination Policies: Different Employers,
New Vaccines, and Hidden Risks**

Teri Baxter

Follow this and additional works at: https://ir.law.utk.edu/utklaw_facpubs



Part of the [Law Commons](#)



University of Tennessee College of Law

From the Selected Works of Teri Baxter

2017

Employer-Mandated Vaccination Policies: Different Employers, New Vaccines, and Hidden Risks

Teri D. Baxter, *University of Tennessee College of Law*



Available at: <https://works.bepress.com/teri-baxter/6/>

11-2017

Employer-Mandated Vaccination Policies: Different Employers, New Vaccines, and Hidden Risks

Teri Dobbins Baxter
University of Tennessee College of Law

Follow this and additional works at: <https://dc.law.utah.edu/ulr>

 Part of the [Health Law and Policy Commons](#)

Recommended Citation

Baxter, Teri Dobbins (2017) "Employer-Mandated Vaccination Policies: Different Employers, New Vaccines, and Hidden Risks," *Utah Law Review*: Vol. 2017 : No. 5 , Article 2.
Available at: <https://dc.law.utah.edu/ulr/vol2017/iss5/2>

This Article is brought to you for free and open access by Utah Law Digital Commons. It has been accepted for inclusion in Utah Law Review by an authorized editor of Utah Law Digital Commons. For more information, please contact valeri.craigle@law.utah.edu.

EMPLOYER-MANDATED VACCINATION POLICIES: DIFFERENT EMPLOYERS, NEW VACCINES, AND HIDDEN RISKS

Teri Dobbins Baxter*

Abstract

Although debates about access to healthcare and healthcare financing have been in the headlines for years, attention has only sporadically focused on new and resurgent health challenges in the form of outbreaks of contagious diseases. One obvious weapon in the fight against outbreaks is vaccination. Many vaccines have been proven safe and highly effective, but vaccine opponents have been vocal and influential; even some who work in healthcare facilities distrust vaccines. The tension between employees who distrust vaccines and employers who want to encourage or require vaccination has led many healthcare policy and legal scholars to explore the legal and ethical implications of compulsory vaccine policies. Most of the legal scholarship has focused on mandatory influenza (“flu”) vaccinations for healthcare workers, and healthcare employers’ potential liability if they impose vaccine mandates. However, influenza is not the only disease that threatens communities. Moreover, healthcare facilities are not the only employers affected by outbreaks. This Article considers the legal issues healthcare and nonhealthcare employers should consider when deciding whether to require employees to be vaccinated against the flu and other diseases such as measles and pertussis—for which safe and effective vaccines already exist, and the Ebola and Zika viruses—for which vaccines are currently being developed.

Most arguments in support of or in opposition to flu vaccination policies do not address whether healthcare or other employers may face liability if they do not require employees to be vaccinated. The question is critically important because many lawyers and government agencies advise employers to encourage but not mandate employee vaccination, and the only risk identified is the risk of being sued for imposing a mandate in violation of antidiscrimination statutes. The unstated premise is that there is no liability if the employer chooses not to require vaccination. This Article considers the legal issues healthcare and nonhealthcare employers

* © 2017 Teri Dobbins Baxter. Associate Dean for Faculty Development and Professor of Law, University of Tennessee College of Law. The author thanks Associate Dean and Professor Alex Long for his helpful comments, Christopher John and Alex Thomason for their valuable research assistance, and the University of Tennessee College of Law for its generous research support.

should consider when deciding whether to require employees to be vaccinated against the flu and other diseases such as measles and pertussis—for which safe and effective vaccines already exist—and the Ebola and Zika viruses—for which vaccines are currently being developed.

I. INTRODUCTION

The future of healthcare in America is uncertain. Many questions about who will have access to healthcare and how it will be paid for are likely to remain unsettled for months or years to come. But it is clear that Americans are facing new and resurgent health challenges in the form of outbreaks of vaccine-preventable illnesses. In addition to determining who will pay to treat infected patients, various segments of society—including employers whose business interests may be adversely affected by disease outbreaks—must consider how to prevent and control the spread of these diseases.

One obvious weapon in the fight against outbreaks is vaccination. Despite the increased scrutiny and distrust of vaccines over the past two decades, the overwhelming weight of authority confirms that vaccines save lives, and most are safe for the vast majority of the population.¹ The strength of the medical evidence helps explain why certain vaccines are mandatory for schoolchildren in every state.² It also supports efforts by states and employers to mandate influenza (“flu”) vaccinations for healthcare personnel. But vaccine opponents have been vocal and influential, and even some who work in healthcare facilities oppose vaccine mandates. The tension between employees who distrust vaccines and employers who want to encourage or require vaccination has led many healthcare policy and legal scholars to explore the legal and ethical implications of compulsory vaccine policies.³

While many scholars have made important contributions to this discussion, most of the legal scholarship focuses solely on the flu vaccine for a limited class of employees: healthcare workers. It is certainly understandable that scholars would

¹ Ctrs. for Disease Control & Prevention, *Vaccines and Immunizations: Six Things YOU Need to Know about Vaccines*, <http://www.cdc.gov/vaccines/vac-gen/vaxwithme.html> [<https://perma.cc/V5FR-J7AS>] (last updated Aug. 31, 2016) (explaining the measures taken to ensure the safety of approved vaccines and noting the rarity of severe side effects).

² While every state requires vaccinations for children attending school, states are not uniform with respect to which exemptions, if any, are available or the consequences of failure to comply with the vaccination requirements. *See* discussion *infra* Part III.A.

³ *See, e.g.,* Rene F. Najera & Dorit R. Reiss, *First Do No Harm: Protecting Patients Through Immunizing Health Care Workers*, 26 HEALTH MATRIX 363, 368 (2016) (exploring “the legal issues surrounding the influenza vaccine requirement for health care workers”); Alexandra M. Stewart et al., *Mandatory Vaccination of Health-Care Personnel: Good Policy, Law, and Outcomes*, 53 JURIMETRICS J. 341, 341 (2013) (“In this article, we argue that mandatory vaccination in the health-care context is supported by ethics, science, and law.”).

focus on the flu vaccine and healthcare personnel to analyze legal issues raised by mandatory vaccination policies. Influenza is a serious, highly contagious disease that affects thousands of people each year and exacts a heavy price in terms of economic losses for employers, strain on the healthcare system, and thousands of deaths. Moreover, because the risks and benefits have been closely studied over a long period of time, it is relatively easy for scholars—and courts—to perform a risk-benefit analysis and apply the results to constitutional, antidiscrimination, and disability law arguments.

Yet, the conclusions reached for compulsory flu vaccine policies for healthcare workers cannot be applied to questions about other employers or other vaccines without critical thought. New diseases threaten our communities constantly, and as new vaccines are developed—such as the Zika and Ebola vaccines currently being developed and tested—employers must reconsider whether to implement mandatory vaccination policies. This Article considers factors those employers should consider when making their decisions.

This Article also explores uncharted territory by considering whether some employers might face liability for *failing* to require their employees to be vaccinated. This question is critically important because employers are often advised by their lawyers and government agencies to encourage—but not mandate—employee vaccination, even though policies that rely on voluntary compliance are often ineffective. Moreover, the only risk identified is the risk of being sued for imposing a mandate in violation of antidiscrimination statutes. The unstated premise is that there is no liability if the employer chooses not to require vaccination. This Article considers the accuracy of that premise and concludes that employers whose employees are likely to transmit diseases to other employees, vulnerable clients, or patients may face liability if they fail to require their employees to be vaccinated. For example, while liability is not likely, it is possible that an employee could successfully argue that an employer's failure to mandate vaccination was negligent or violated a statutory duty, such as the general duty clause of the Occupational Safety and Health Act ("OSHA").

Part II of this Article briefly outlines the laws that an employer must consider before adopting a mandatory vaccination policy. Part III addresses current state laws mandating or encouraging vaccination and describes the categories of people, places, and vaccines covered—and not covered—by those laws. Part IV discusses the history of vaccine mandates in healthcare settings, some of the legal challenges to such mandates, and the reasons why relatively few healthcare facilities have adopted mandates. Part V identifies other employment settings that may benefit from mandatory vaccine policies and analyzes the risks and benefits of such policies. Part VI identifies vaccine-preventable diseases other than influenza that could threaten an employer's staff and business, and questions whether healthcare or other employers might benefit if they require employees to get vaccinated against those diseases. Finally, the wisdom and legality of such mandates is considered from the perspective of the employer in light of larger public policy concerns.

Ultimately, this Article concludes in Part VII that while society might reap some benefit from employer-mandated vaccination policies, and while a mandate

might be justified in rare circumstances—such as an outbreak that will have a significant impact on the employer’s business or the well-being of employees or customers—the risk of liability and the economic and noneconomic costs to the employer often outweigh the benefits.

II. LAWS RELEVANT TO EMPLOYER-MANDATED VACCINATION POLICIES

The laws that apply to vaccine mandates vary depending upon whether the employer is a private entity or a branch or agency of the government. The United States Constitution, and some federal and state laws, restrict government action in ways that do not apply to private employers. However, several federal and state laws may impact whether and how a private employer may impose a vaccination requirement. This section identifies relevant laws and how they apply to public and private employers.

A. Fourteenth Amendment Liberty Interests

The Fourteenth Amendment has been interpreted to protect against state deprivation of certain liberty interests.⁴ Because only state action is restricted, the Fourteenth Amendment does not affect private employers who choose to require employees to get vaccinated.⁵ However, it is relevant to states and municipalities that impose vaccine mandates on entire populations or a subset thereof.⁶

State police powers undoubtedly include the right to pass laws to protect the health and safety of state inhabitants.⁷ The seminal case upholding state mandatory vaccination laws is *Jacobson v. Massachusetts*,⁸ which the Supreme Court decided in 1905.⁹ The case was brought by a resident of Cambridge, Massachusetts who was prosecuted and found guilty of violating a regulation that required all inhabitants of the city to be vaccinated against smallpox.¹⁰ Mr. Jacobson argued that the vaccine

⁴ *Bass v. Parkwood Hosp.*, 180 F.3d 234, 241 (5th Cir. 1999) (“[T]he Fourteenth Amendment protects liberty and property interests only against invasion by the state . . .”).

⁵ *See id.*

⁶ *Id.*

⁷ *Jacobson v. Massachusetts*, 197 U.S. 11, 25 (1905) (“According to settled principles, the police power of a state must be held to embrace, at least, such reasonable regulations established directly by legislative enactment as will protect the public health and the public safety.”).

⁸ 197 U.S. 11 (1905).

⁹ *Id.* at 12. More recently, the United States Court of Appeals for the Second Circuit and the Supreme Court of Appeals of West Virginia have decided cases challenging the mandatory vaccination laws in New York and West Virginia. *Phillips v. City of New York*, 775 F.3d 538, 540 (2d Cir. 2015); *D.J. v. Mercer Cty. Bd. of Educ.*, No. 13-0237, 2013 WL 6152363, at *1 (W. Va. Nov. 22, 2013).

¹⁰ *Jacobson*, 197 U.S. at 12–13. The regulation was passed by the board of health, pursuant to a state law giving it authority to require vaccinations if, in the opinion of the board, it was necessary for the public health or safety. *Id.*

mandate violated his liberty interests under the Fourteenth Amendment to the United States Constitution.¹¹ He claimed that “a compulsory vaccination law is unreasonable, arbitrary, and oppressive, and, therefore, hostile to the inherent right of every freeman to care for his own body and health in such way as to him seems best; and . . . is nothing short of an assault upon his person.”¹²

The Supreme Court disagreed and held that the regulation did not violate the Constitution.¹³ In so holding, the court noted that the liberty interests protected by the Fourteenth Amendment are not absolute.¹⁴

There is, of course, a sphere within which the individual may assert the supremacy of his own will, and rightfully dispute the authority of any human government,—especially of any free government existing under a written constitution, to interfere with the exercise of that will. But it is equally true that in every well-ordered society charged with the duty of conserving the safety of its members the rights of the individual in respect of his liberty may at times, under the pressure of great dangers, be subjected to such restraint, to be enforced by reasonable regulations, as the safety of the general public may demand.¹⁵

Thus, the mere fact that a state law infringes on an individual’s liberty in some manner does not lead to the inevitable conclusion that the law is unconstitutional.

In addressing the smallpox regulation, the Court noted that the state legislature only mandated vaccination when it was necessary for public health or safety.¹⁶ It was neither arbitrary nor unreasonable for the legislature to entrust that authority to the board of health, which it presumed was composed of members of the community qualified to make that determination.¹⁷ Moreover, the regulation was implemented at a time when it was undisputed that smallpox “was prevalent to some extent in the

¹¹ *Id.* at 13. Specifically, he argued that the regulation:

. . . was in derogation of the rights secured to the defendant by the 14th Amendment of the Constitution of the United States, and especially of the clauses of that amendment providing that no state shall make or enforce any law abridging the privileges or immunities of citizens of the United States, nor deprive any person of life, liberty, or property without due process of law, nor deny to any person within its jurisdiction the equal protection of the laws[.]

Id.

¹² *Id.* at 26.

¹³ *Id.* at 38–39.

¹⁴ *Id.* at 26.

¹⁵ *Id.* at 29.

¹⁶ *Id.* at 25–28.

¹⁷ *Id.*

city of Cambridge, and the disease was increasing.”¹⁸ Under those circumstances, the Court was unwilling to find that the regulation was arbitrary.¹⁹ Nevertheless, the Court cautioned that compulsory vaccination laws could be unconstitutional if they were not justified by the “necessities of the case.”²⁰ If the acknowledged authority of a state or municipality to pass laws to protect health and safety was exercised in “an arbitrary, unreasonable manner” or went “so far beyond what was reasonably required for the safety of the public” the courts would be obligated to declare them in violation of the Constitution.²¹

Finally, the Court addressed Mr. Jacobson’s attacks on the efficacy and safety of vaccines.²² While acknowledging the existence of laymen and medical professionals who did not believe that vaccines prevented disease and that they could cause disease, the court took judicial notice of contrary views held by “high medical authority.”²³ The Court held that the legislature was free to choose between the competing views and was not required to submit its decision to review by a judge or jury.²⁴

If there is any such power in the judiciary to review legislative action in respect of a matter affecting the general welfare, it can only be when that which the legislature has done comes within the rule that, if a statute purporting to have been enacted to protect the public health, the public morals, or the public safety, has no real or substantial relation to those objects, or is, beyond all question, a plain, palpable invasion of rights secured by the fundamental law, it is the duty of the courts to so adjudge, and thereby give effect to the Constitution.²⁵

Not only did the Court refuse to usurp the legislature’s role in deciding disputed issues related to public health and safety, it also refused to recognize an individual right to refuse vaccination based on his own belief that the smallpox vaccination would not be beneficial to him and might cause him serious injury or death.²⁶

¹⁸ *Id.* at 27.

¹⁹ *Id.*

²⁰ *Id.* at 28.

²¹ *Id.* (discussing *Hannibal & St. J.R. Co. v. Husen*, in which the Court struck down a Missouri law prohibiting certain cattle from coming into the state. The Court held that the law was not a valid exercise of the state’s police power since it did not protect against disease and invaded Congress’ exclusive authority to regulate interstate commerce. 95 U.S. 465, 473–74 (1877)).

²² *Jacobson*, 197 U.S. at 30.

²³ *Id.*

²⁴ *Id.*

²⁵ *Id.* at 31.

²⁶ *Id.* at 36–39 (refusing to allow individuals “residing or remaining in any city or town where smallpox is prevalent, and enjoying the general protection afforded by an organized local government, may thus defy the will of its constituted authorities, acting in good faith for all, under the legislative sanction of the state”).

While courts have relied upon *Jacobson* for more than one hundred years to uphold compulsory vaccination laws, one portion of the opinion suggests a limit to the state's authority. The Massachusetts law sanctioning compulsory vaccination exempted children who were deemed "unfit subjects for vaccination"²⁷ by a physician, but no such exemption was provided for adults.²⁸ The court stressed that it was "not to be understood as holding" that the statute was intended to apply to an adult who could establish with reasonable certainty that he or she is not a fit subject for vaccination, or that vaccination would cause serious injury or "probably cause his death."²⁹ The Court implied that under such circumstances, application of the statute might be so arbitrary or oppressive "as to justify the interference of the courts to prevent wrong and oppression."³⁰

B. The Free Exercise Clause of the First Amendment to the United States Constitution

By its terms, the Free Exercise Clause of the First Amendment prohibits federal laws "respecting an establishment of religion, or prohibiting the free exercise thereof."³¹ The Supreme Court has recognized that the Fourteenth Amendment incorporates First Amendment rights and protects against state action that burdens the free exercise of religion.³² Many assume that the Free Exercise Clause poses a serious roadblock to vaccine mandates if an employee objects on religious grounds. However, for most employers, the Free Exercise Clause poses a modest obstacle or none at all.

First, the First Amendment only restricts government action.³³ Thus, it does not restrict the rights of private employers at all.³⁴ Moreover, the scope of the clause is narrower than one might expect in that it protects against government regulation of religious *beliefs*,³⁵ but it does not place all religious *acts* beyond the reach of

It is worth noting that *Jacobson*'s concerns about the smallpox vaccine were not unfounded. There were serious side effects and dangers associated with smallpox vaccination. See discussion *infra* Part VI.A.3.

²⁷ *Jacobson*, 197 U.S. at 30.

²⁸ *Id.*

²⁹ *Id.* at 37–39.

³⁰ *Id.* at 38.

³¹ U.S. CONST. amend. I.

³² *Cantwell v. Connecticut*, 310 U.S. 296, 303 (1940) ("The fundamental concept of liberty embodied in that Amendment embraces the liberties guaranteed by the First Amendment.").

³³ *Hudgens v. NLRB*, 424 U.S. 507, 513 (1976) ("[T]he constitutional guarantee of free speech is a guarantee only against abridgment by government, federal or state. Thus, while statutory or common law may provide redress against a private corporation or person who seeks to abridge the free expression of others, no such protection or redress is provided by the Constitution itself.") (internal citation omitted).

³⁴ *Id.*

³⁵ *Emp. Div., Dep't of Human Resources v. Smith*, 494 U.S. 872, 877 (1990).

otherwise valid laws.³⁶ In *Employment Division, Department of Human Resources of Oregon v. Smith*,³⁷ the Supreme Court held that “the right of free exercise does not relieve an individual of the obligation to comply with a ‘valid and neutral law of general applicability on the ground that the law proscribes (or prescribes) conduct that his religion prescribes (or proscribes).’”³⁸

Therefore, so long as a vaccine mandate is a neutral law that applies equally to all employees and does not target anyone because of their religious beliefs, the policy will not violate the Free Exercise Clause.³⁹ In other words, even if an employee opposes vaccination because of a sincerely held religious belief, the Free Exercise Clause does not require a government employer to exempt that employee from a vaccine mandate that applies to all similarly-situated employees, regardless of their religious beliefs.

C. Religious Freedom Restoration Acts

Although government employers who impose vaccine mandates may not have to worry about violating employees’ constitutional rights, federal and some state laws provide relief for those whose objections are based on their religious beliefs. Before the issue was settled by the Court’s holding in *Smith*, lower courts interpreted an earlier Supreme Court case to require strict scrutiny in cases implicating the Free Exercise Clause.⁴⁰ Many on both ends of the political spectrum were unhappy with the Court’s holding in *Smith* that strict scrutiny did not apply and, in response, Congress enacted the Religious Freedom Restoration Act (“RFRA”) which revived the strict scrutiny standard, at least as applied to legislation and policies enacted and enforced by the federal government.⁴¹

Similar state statutes also require strict scrutiny of state regulations that affect a person’s free exercise of religion.⁴² Under a strict scrutiny standard, if a

³⁶ *Id.* at 878–79.

³⁷ 494 U.S. 872 (1990).

³⁸ *Id.* at 879. In addition, the Court held that such laws are not subject to strict scrutiny and will be upheld if they are otherwise valid and within the state’s regulatory authority. *Id.* at 888–90.

³⁹ *Id.* at 879.

⁴⁰ See *Sherbert v. Verner*, 374 U.S. 398, 406–07 (1963) (applying strict scrutiny and holding that no “compelling state interest” justified “the substantial infringement of appellant’s First Amendment right”).

⁴¹ 42 U.S.C. § 2000bb-1 (1993) (“Government shall not substantially burden a person’s exercise of religion even if the burden results from a rule of general applicability”); *Holt v. Hobbs*, 135 S. Ct. 853, 859–60 (2015) (“Following our decision in *Smith*, Congress enacted RFRA in order to provide greater protection for religious exercise than is available under the First Amendment.”). *But see City of Boerne v. Flores*, 521 U.S. 507, 536 (1997) (striking down RFRA to the extent that it applied to state and local governments because “RFRA contradicts vital principles necessary to maintain separation of powers and the federal balance”).

⁴² See CONN. GEN. STAT. § 52-571b (2012); IDAHO CODE § 73-402 (2000); N.M. STAT. ANN. § 28-22-3 (2000); S.C. CODE ANN. § 1-32-40 (1999); TEX. CIV. PRAC. & REM. CODE

government employer in a state with a RFRA or similar law imposes a vaccine mandate with no exemption for employees whose religious beliefs oppose vaccination, the employer will have to prove that a compelling government interest justifies the mandate and that the mandate is the least restrictive means of furthering that interest.⁴³

Government-run healthcare facilities may be able to meet this burden if they can prove that vaccination is necessary to protect vulnerable patients, but they will likely have to exempt employees with religious objections if those employees do not have patient contact or if the employer can accommodate their religious beliefs in other ways. For nonhealthcare employers, it may be very difficult—or impossible—to identify a compelling interest that can only be furthered by mandatory vaccination. However, this does not mean that all vaccine mandates are unlawful; instead, it merely requires government employers to consider exemptions or other accommodations for employees with religious objections. These laws do not apply to and, therefore, do not affect private employers.⁴⁴

D. Title VII of the Civil Rights Act

While private employers are not bound by the federal RFRA or state statutes patterned after the federal RFRA, Title VII of the Civil Rights Act of 1964 (“Title VII”) does apply to private employers⁴⁵ and prohibits religious discrimination. Under Title VII it is unlawful for an employer “to fail or refuse to hire or to discharge any individual, or otherwise to discriminate against any individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual’s . . . religion.”⁴⁶ To prevail on a Title VII religious discrimination claim, the employee must first show that “a bona fide religious practice conflicts with an

ANN. § 110.003 (1999); FLA. STAT. § 761.03 (1998); 775 ILL. COMP. STAT. ANN. 35/15 (1998); R.I. GEN. LAWS § 42-80.1-3 (1993). Some state constitutions provide similar protection. *See* ALA. CONST. art. I, § 3.01 (“The purpose of the Alabama Religious Freedom Amendment is to guarantee that the freedom of religion is not burdened by state and local law; and to provide a claim or defense to persons whose religious freedom is burdened by government.”).

⁴³ *See, e.g.*, CONN. GEN. STAT. § 52-571b (2012):

The state or any political subdivision of the state may burden a person’s exercise of religion only if it demonstrates that application of the burden to the person (1) is in furtherance of a compelling governmental interest, and (2) is the least restrictive means of furthering that compelling governmental interest.

⁴⁴ *See, e.g., id.* (restricting actions by the state and political subdivisions, not private entities).

⁴⁵ 42 U.S.C. § 2000e(b) (2012). (“The term ‘employer’ means a person engaged in an industry affecting commerce who has fifteen or more employees for each working day in each of twenty or more calendar weeks in the current or preceding calendar year, and any agent of such a person . . .”).

⁴⁶ 42 U.S.C. § 2000e-2(a)(1) (2012).

employment requirement and was the reason for [an] adverse employment action.”⁴⁷ If the employee makes this *prima facie* case, then the burden shifts to the employer to show that: (1) it reasonably accommodated the employee, or (2) that offering a reasonable accommodation would cause it to suffer an undue hardship.⁴⁸ An accommodation constitutes an “undue hardship” if it imposes more than a *de minimis* cost on the employer.⁴⁹ Accordingly, an employer must consider whether to exempt employees with religious objections from a mandatory vaccination policy, or whether an accommodation—such as an exemption—will impose a significant cost.⁵⁰ If the cost is more than *de minimis*, then the employer can enforce the mandate even against employees with religious objections without violating Title VII.

E. The Americans with Disabilities Act

The Americans with Disabilities Act (“ADA”) makes it unlawful for a covered employer to “discriminate against a qualified individual on the basis of disability in regard to job application procedures, the hiring, advancement, or discharge of employees, employee compensation, job training, and other terms, conditions, and privileges of employment.”⁵¹ 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.”⁵²

⁴⁷ See, e.g., *Cloutier v. Costco Wholesale Corp.*, 390 F.3d 126, 133 (1st Cir. 2004) (setting out the two-part test applied by the First Circuit Court of Appeals to Title VII religious discrimination claims).

⁴⁸ *Id.*

⁴⁹ *Id.* at 134.

⁵⁰ *Id.*; see also *Robinson v. Children’s Hosp. Boston*, No. 14-10263-DJC, 2016 WL 1337255, at *9 (D. Mass. Apr. 5, 2016); Rachel K. Baden, *Can Health Care Facilities Require Their Employees to Receive the Influenza Vaccine?*, 40 OHIO N.U. L. REV. 277, 288 (2013).

⁵¹ 42 U.S.C. § 12112(a) (2012). The ADA applies to private employers with “15 or more employees for each working day in each of 20 or more calendar weeks in the current or preceding calendar year.” 42 U.S.C. § 12111(5)(A) (2012).

⁵² 42 U.S.C. § 12102 (2012).

Discrimination is not limited to termination or refusal to hire; an employer also violates the ADA by “not making reasonable accommodations to the known physical or mental limitations of an otherwise qualified individual with a disability who is an applicant or employee”⁵³ unless “the accommodation would impose an undue hardship”⁵⁴ on the employer.⁵⁵ “Undue hardship means, with respect to the provision of an accommodation, significant difficulty or expense incurred by a covered entity”⁵⁶ Thus, undue hardship is a higher standard under the ADA than under Title VII.

If an employee has a physical or mental limitation due to a disability, the ADA may require accommodation in the form of an exemption from a vaccine mandate unless the exemption will cause an undue hardship.⁵⁷ Healthcare employers may choose not to provide medical exemptions for employees who interact with vulnerable patient populations if no reasonable accommodation will adequately

⁵³ 42 U.S.C. § 12112(b)(5)(A) (2012).

⁵⁴ *Id.*

⁵⁵ *Id.*; *Duty v. Norton-Alcoa Proppants*, 293 F.3d 481, 490 (8th Cir. 2002) (“An ADA claimant must make a *prima facie* showing that he (1) has a disability within the meaning of the ADA, (2) is able to perform the essential functions of the job, with or without reasonable accommodation, and (3) suffered an adverse employment action as a result of the disability.”).

⁵⁶ 29 C.F.R. § 1630.2(p) (2012). The regulations set out the factors that courts should consider when assessing whether an undue hardship exists:

- (i) The nature and net cost of the accommodation needed under this part, taking into consideration the availability of tax credits and deductions, and/or outside funding;
- (ii) The overall financial resources of the facility or facilities involved in the provision of the reasonable accommodation, the number of persons employed at such facility, and the effect on expenses and resources;
- (iii) The overall financial resources of the covered entity, the overall size of the business of the covered entity with respect to the number of its employees, and the number, type and location of its facilities;
- (iv) The type of operation or operations of the covered entity, including the composition, structure and functions of the workforce of such entity, and the geographic separateness and administrative or fiscal relationship of the facility or facilities in question to the covered entity; and
- (v) The impact of the accommodation upon the operation of the facility, including the impact on the ability of other employees to perform their duties and the impact on the facility’s ability to conduct business.

Id.

⁵⁷ See U.S. Equal Emp. Opportunity Comm’n, *Pandemic Preparedness in the Workplace and the Americans with Disabilities Act*, https://www.eeoc.gov/facts/pandemic_flu.html#36 [<https://perma.cc/8K62-8BLC>] (last modified Oct. 9, 2009) (“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. This would be a reasonable accommodation barring undue hardship (significant difficulty or expense).”).

protect patients.⁵⁸ But such exemptions will rarely be necessary because the employee must first establish a disability under the ADA and then establish that the disability requires an accommodation with respect to vaccination.⁵⁹ In other words, an allergy to the vaccine by itself may not qualify the employee as disabled under the ADA, in which case no accommodation is required. Moreover, even a disabled employee must prove that the disability necessitates the exemption; if the disability is unaffected by vaccination, then exemption is not an accommodation of the physical or mental limitations of the disability.⁶⁰

It is possible that some courts will find that an employer is barred by the ADA from even inquiring about whether an employee is vaccinated.⁶¹ The ADA states that “[a] covered entity shall not require a medical examination and shall not make inquiries of an employee as to whether such employee is an individual with a disability . . . unless such examination or inquiry is shown to be job-related and consistent with business necessity.”⁶² The purpose of this prohibition is to prevent employers from asking questions that are “likely to elicit information about a disability.”⁶³

In *Conroy v. New York State Department of Correctional Services*,⁶⁴ the Second Circuit Court of Appeals held that an employer’s policy requiring employees to submit a “general diagnoses as part of a medical certification procedure following certain absences”⁶⁵ from work constituted a disability-related inquiry.⁶⁶ Other

⁵⁸ See discussion *infra* Part II.D.

⁵⁹ 42 U.S.C. § 12112 (2012) (Employers are required to make “reasonable accommodations to the known physical or mental limitations of an otherwise qualified individual with a disability”) (emphasis added).

⁶⁰ See *Taylor v. Principal Fin. Grp., Inc.*, 93 F.3d 155, 164 (5th Cir. 1996) (“[I]t is important to distinguish between an employer’s knowledge of an employee’s disability versus an employer’s knowledge of any limitations experienced by the employee as a result of that disability. This distinction is important because the ADA requires employers to reasonably accommodate limitations, not disabilities.”).

⁶¹ Some have posited that merely asking whether an employee has been vaccinated might run afoul of the ADA. See John Tozzi, *Can Your Boss Make You Get Vaccinated?*, BLOOMBERG (Jan. 22, 2015), <https://www.bloomberg.com/news/articles/2015-01-22/can-employers-mandate-vaccinations-for-employees-> [<https://perma.cc/PZ7G-ET9H>] (“Even asking about workers’ vaccination status can be thorny. Employers are barred from discriminating on the basis of medical status (under the Americans with Disabilities Act) or religion (under the Civil Rights Act), and questions about immunizations could reveal both.”).

⁶² 42 U.S.C. § 12112(d)(4)(A) (2012).

⁶³ U.S. Equal Employment Opportunity Comm’n, *Enforcement Guidance: Disability-Related Inquiries and Medical Examinations of Employees Under the Americans with Disabilities Act*, (July 27, 2000), https://www.eeoc.gov/policy/docs/guidance-inquiries.html#N_39_ [<https://perma.cc/KM27-DFBT>].

⁶⁴ 333 F.3d 88 (2d Cir. 2003).

⁶⁵ *Id.* at 92.

⁶⁶ *Id.*

circuits have construed the ADA more narrowly.⁶⁷ In a case with facts similar to those in *Conroy*—an employer whose policy required employees to submit a physician’s note indicating “the nature of”⁶⁸ the employee’s illness upon returning to work—the Sixth Circuit held that it was not a disability-related inquiry.⁶⁹ The court noted that no other court had followed *Conroy* and it declined to do so, stating that “the *Conroy* court . . . unnecessarily swept within the statute’s prohibition numerous legitimate and innocuous inquiries that are not aimed at identifying a disability.”⁷⁰ If the court believes that asking about vaccination status is likely to elicit information about a disability, then the employer would have to prove that the inquiry is job-related and consistent with business necessity.

F. Occupational Safety and Health Administration

The Occupational Safety and Health Administration (“OSHA”) imposes an obligation on employers to ensure that the workplace is “free from recognized hazards that are causing or are likely to cause death or serious physical harm to [their] employees.”⁷¹ This provision is known as the “general duty clause” and in some situations it may impose a duty on employers to take steps—including encouraging or mandating vaccination—to prevent employees from contracting or spreading serious diseases in the workplace.⁷²

As illustrated in *Safeway, Inc. v. Occupational Safety & Health Review Commission*,⁷³ even if the employer has complied with applicable safety standards, it can be liable for violating the general duty clause if the employer knows of an obvious hazard.⁷⁴ The employer in *Safeway* was cited when employees were injured trying to use a forty-pound propane tank with a grill designed for use with twenty-

⁶⁷ See, e.g., *Lee v. City of Columbus*, 636 F.3d 245, 254 (6th Cir. 2011) (declining to follow *Conroy*).

⁶⁸ *Id.* at 248.

⁶⁹ *Id.* at 254 (“[W]e do not find the requirement that an employee provide a general diagnosis . . . to be tantamount to an inquiry ‘as to whether such employee is an individual with a disability or as to the nature or severity of a disability’ under § 12112(d)(4)(A).”) (citation omitted).

⁷⁰ *Id.*

⁷¹ 29 U.S.C. § 654(a)(1) (1970).

⁷² See, e.g., U.S. Dep’t of Labor, Occupational Safety & Health Admin., *Employer Guidance: Reducing Health Care Workers’ Exposures to Seasonal Flu Virus*, <https://www.osha.gov/dts/guidance/flu/healthcare.html> [<https://perma.cc/2AZG-8AJC>] (last visited July 24, 2017) (advising healthcare employers to promote, administer, and make the flu vaccine readily available); see also U.S. Dep’t of Labor, Occupational Safety & Health Admin., *Interim Guidance for Protecting Workers from Occupational Exposure to Zika Virus*, <https://www.osha.gov/zika/index.html> [<https://perma.cc/3XCM-WH2U>] (last updated May 30, 2017).

⁷³ 382 F.3d 1189 (10th Cir. 2004).

⁷⁴ *Id.* at 1194.

pound tanks.⁷⁵ The employees were burned when “a ball of fire”⁷⁶ erupted from the tank as they tried to adjust it.⁷⁷ The employer objected to the citation, in part because it had complied with relevant regulations.⁷⁸

However, the Tenth Circuit noted that such compliance will not automatically relieve the employer of liability.

Where the employer has knowledge of an obvious hazardous condition . . . compliance with specific standards failing to address the hazard does not relieve the employer of the responsibility under the general duty clause to provide its employees with a place of employment which is free from recognized hazards.⁷⁹

The Tenth Circuit found that “there was substantial evidence to support the [Administrative Law Judge’s] finding that the use of the forty-pound tank was a recognized hazard and that Safeway was aware of the hazard.”⁸⁰ Specifically, the forty-pound tank had a warning against use with grills designed for smaller tanks; supervisors knew that the forty-pound tank did not fit properly under the grill, which the grill instructions noted was necessary for safe use; and the supervisors knew that the employees were unable to use the tank until they attached an adapter.⁸¹ In addition, the judge found that the hazard could have been eliminated simply by using a twenty-pound tank.⁸²

In *Duriron Co., Inc. v. Secretary of Labor: U.S. Occupational Safety & Health Review Commission*,⁸³ a steel and iron castings manufacturer was cited for violation of the general duty clause because it recognized that heat stress was a hazard likely to cause serious injury or death to workers in its workplace but failed to protect its employees from the hazard.⁸⁴ During a heatwave, an employee “began blacking out, became dizzy, light-headed and was unable to see the digital readout on the transfer ladle of the machine. Fearing that he might pass out and fall into the molten metal, [the employee] asked his foreman for reassignment.”⁸⁵ Not only was the heat hazard recognized in the industry, Duriron had taken preliminary steps to mitigate the hazard.⁸⁶ The Sixth Circuit upheld the OSHA Review Commission’s finding of a violation even though no employee actually suffered serious injury or death.⁸⁷

⁷⁵ *Id.* at 1192.

⁷⁶ *Id.*

⁷⁷ *Id.*

⁷⁸ *Id.* at 1194.

⁷⁹ *Id.*

⁸⁰ *Id.* at 1195.

⁸¹ *Id.*

⁸² *Id.*

⁸³ 750 F.2d 28 (6th Cir. 1984).

⁸⁴ *Id.* at 30.

⁸⁵ *Id.* at 29.

⁸⁶ *Id.* at 30.

⁸⁷ *Id.* Although the employee collapsed while on the job one day and passed out the

At least with respect to some illnesses, it would be fairly easy for OSHA to find that an employer knew that the risk of illness is a known hazard. For example, OSHA's published guidance informs employers that "[w]orkers who perform certain types of healthcare tasks for patients who may have the flu are at a higher risk of exposure to the seasonal flu virus and need additional precautions to protect them from workplace infection."⁸⁸ The first recommendation is that employers promote vaccination and make vaccines readily accessible to employees.⁸⁹ "Vaccination is the most important way to prevent the spread of the flu. Healthcare and emergency medical services personnel are a priority group for receiving the flu vaccine."⁹⁰ This advice strongly implies that an employer that fails to at least encourage and enable at-risk employees to be vaccinated may violate OSHA's general duty clause. However, no court has held that OSHA obligates an employer to *require* employees to get vaccinated.

G. Other State Laws

In addition to states that have antidiscrimination laws which may require an employer to accommodate employees with religious objections to vaccination,⁹¹ worker's compensation laws may require the employer to pay for vaccine-related injuries if the employee is vaccinated at the employer's request.⁹² Finally, state tort law may provide the basis for liability if an employer's *failure* to encourage or require its employees to be vaccinated against particular diseases violates a duty of care owed to employees, vendors, or clients. The most likely basis for tort liability would be a negligence claim. "The essential elements of a cause of action based on common law negligence may be stated briefly as follows: the existence of a duty owed by the defendant to the plaintiff, a breach of that duty, and an injury proximately caused by that breach."⁹³ The greatest challenge for plaintiffs would be

next day, he was not killed and was not alleged to have suffered serious injury. *Id.* at 29.

⁸⁸ See *Employer Guidance*, *supra* note 72.

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ The Iowa Civil Rights Act of 1965 and the Nebraska Fair Employment Practice Act (NFEPA) prohibit private employers from discriminating on the basis of religion. See IOWA CODE §§ 216.1 to 216.21 (2017); NEB. REV. STAT. §§ 48-1101 to 48-1126 (2017). See also ARIZ. REV. STAT. ANN. § 41-1493.01 (2017) ("[G]overnment shall not substantially burden a person's exercise of religion even if the burden results from a rule of general applicability."); FLA. STAT. § 761.03 (1998) ("The government shall not substantially burden a person's exercise of religion, even if the burden results from a rule of general applicability. . .").

⁹² Edward P. Richards, Katherine C. Rathbun, & Jay Gold, *The Smallpox Vaccination Campaign of 2003: Why Did It Fail and What Are the Lessons for Bioterrorism Preparedness?*, 64 LA. L. REV. 851, 870 (2004) ("Worker's compensation claims could be significant if a person with contraindications to vaccination is inadvertently immunized.").

⁹³ *Ward v. K Mart Corp.*, 554 N.E.2d 223, 226 (Ill. 1990); see also, e.g., *Domagala v. Rolland*, 805 N.W.2d 14, 22 (Minn. 2011) ("To recover for a claim of negligence, a plaintiff must prove (1) the existence of a duty of care, (2) a breach of that duty, (3) an injury, and (4)

to establish a duty in this context. Since courts have never recognized a duty of employers to mandate vaccination, and many legal experts advise against such mandates,⁹⁴ plaintiffs may have an uphill battle.

Just as was true with federal and state religious protection statutes and other federal laws, while employers must be aware of these laws and may need to accommodate or exempt some employees from mandatory vaccination policies, it is important to acknowledge that none of these laws serves as a blanket prohibition on such policies.

III. STATE-MANDATED VACCINATIONS

Given the proven safety and effectiveness of many vaccines, states could choose to impose vaccine mandates, thus relieving employers of the difficult task of weighing the costs and benefits of vaccination mandates. In fact, all states require some vaccinations for at least a portion of their populations. This section examines the enforceability, scope, and limitations of those state laws.

A. Current State Vaccination Statutes

All states have statutes requiring vaccination in specific settings.⁹⁵ The most common compulsory vaccination statutes apply to children who attend public and private schools and day cares, and people who work in nursing homes and healthcare facilities.⁹⁶ Most states allow exemptions from the vaccine requirements for those with religious or medical objections and some allow exemptions based on “personal beliefs.”⁹⁷ Many of the vaccination statutes have been challenged in the courts, but no statute has been struck down.⁹⁸

1. Mandatory Vaccinations for Schoolchildren and Day Care Attendees

School vaccination statutes vary by state, with the most important variation being the types of exemptions available. Most states allow an exemption when vaccination violates the family’s religious beliefs, and many allow an exemption

that the breach of the duty of care was a proximate cause of the injury.”).

⁹⁴ See discussion *infra* Part V.

⁹⁵ Ctrs. for Disease Control & Prevention, *Vaccination Laws*, <http://www.cdc.gov/phlp/publications/topic/vaccinationlaws.html> [<https://perma.cc/E72J-UBZW>] (last updated July 20, 2017) (including links to documents and charts cataloging and describing state healthcare worker and patient vaccination laws, and state school and childcare vaccination laws). “All states require children to be vaccinated against certain communicable diseases as a condition for school attendance.” *Id.* In addition, many states require or encourage health care workers to be vaccinated against influenza, varicella (chicken pox), pneumococcal disease (pneumonia), and/or pertussis. *Id.*

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ Najera & Reiss, *supra* note 3, at 377–78.

based on “personal beliefs,”⁹⁹ which essentially allows parents to refuse to vaccinate their children for any reason at all. Considering recent outbreaks of diseases that had been mostly or completely eradicated (such as measles and mumps), states are reconsidering their exemptions and, in some cases, getting rid of personal belief and religious exemptions altogether.

California is one such state. Senate Bill 277, which eliminated personal belief and religious exemptions to the vaccination requirements, was signed into law by the governor on June 30, 2015.¹⁰⁰ The law faced strong opposition but its passage was likely due in part to the measles outbreak from December 2014 through February 2015. That outbreak was traced back to Disneyland in California. Numerous Disneyland visitors were exposed to the virus and spread it across the nation when they returned to their homes.¹⁰¹

Other states have faced legal challenges when they excluded unvaccinated children from school and the courts have consistently upheld the compulsory vaccination laws, even without religious or personal belief exemptions.¹⁰² In New York, vaccination is mandatory for public school attendance, but the state provides medical and religious exemptions. However, even students that are granted exemptions on those grounds may be excluded from school during an outbreak of a vaccine-preventable disease.

⁹⁹ CTRS. FOR DISEASE CONTROL & PREVENTION, PUBLIC HEALTH LAW: STATE SCHOOL IMMUNIZATION REQUIREMENTS AND VACCINE EXEMPTION LAWS (2015), <https://www.cdc.gov/phlp/docs/school-vaccinations.pdf> [<https://perma.cc/3XZV-496V>].

¹⁰⁰ S.B. 277, 2015 Leg., (Cal. 2015). The amended statute provides:

Except as provided in this subdivision, on and after July 1, 2016, the governing authority shall not unconditionally admit to any of those institutions specified in this subdivision for the first time, or admit or advance any pupil to 7th grade level, unless the pupil has been immunized for his or her age as required by this section.

CAL. HEALTH & SAFETY CODE § 120335(g)(3) (2017).

¹⁰¹ Ctrs. for Disease Control & Prevention, *Measles Cases and Outbreaks*, <http://www.cdc.gov/measles/cases-outbreaks.html> [<https://perma.cc/PR7J-V2A2>] (last updated July 25, 2017) (“The United States experienced a large, multi-state measles outbreak linked to an amusement park in California. The outbreak likely started from a traveler who became infected overseas with measles, then visited the amusement park while infectious; however, no source was identified.”).

¹⁰² See, e.g., *Phillips v. City of New York*, 775 F.3d 538, 543 (2d Cir. 2015) (“[W]e agree with the Fourth Circuit, following the reasoning of *Jacobson* and *Prince*, that mandatory vaccination as a condition for admission to school does not violate the Free Exercise Clause.”); Martha McCarthy, *Student Vaccination Requirements: Can Nonmedical Exemptions Be Justified?*, 320 ED. L. REP. 591, 600 (2015) (“Courts in the initial challenges uniformly upheld state and municipal vaccination requirements and endorsed the conviction of parents for violating compulsory attendance laws because their unvaccinated children were not allowed to enroll in school.”).

In one case, parents filed suit when their children were excluded from attending school during a chicken pox outbreak because they had not been vaccinated.¹⁰³ Some of the plaintiffs had been granted a religious exemption while another sought but was denied the religious exemption.¹⁰⁴ The court quickly dismissed the plaintiffs' substantive due process argument, citing *Jacobson v. Commonwealth of Massachusetts* and reaffirming that questions regarding the safety and efficacy of vaccines must be decided by the legislature, not the courts or individual citizens.¹⁰⁵ "Plaintiffs' substantive due process challenge to the mandatory vaccination regime is therefore no more compelling than Jacobson's was more than a century ago."¹⁰⁶

The plaintiffs further argued that their exclusion from school during the chicken pox outbreak violated their rights under the Free Exercise Clause of the First Amendment.¹⁰⁷ At the time *Jacobson* was decided, the First Amendment had not yet been held to apply to the states. Consequently, the Supreme Court did not address the issue in that case. But the Second Circuit noted that the Court has addressed the issue in other cases.

The Supreme Court has stated in persuasive dictum . . . that a parent "cannot claim freedom from compulsory vaccination for the child more than for himself on religious grounds. The right to practice religion freely does not include liberty to expose the community or the child to communicable disease or the latter to ill health or death."¹⁰⁸

The Second Circuit also relied on a more recent Supreme Court case in which the Court held that "a law that is neutral and of general applicability need not be justified by a compelling governmental interest even if the law has the incidental effect of burdening a particular religious practice."¹⁰⁹ Accordingly, the Second Circuit agreed with a previous Fourth Circuit decision that mandatory vaccination requirements for school attendance do not violate the Free Exercise Clause.¹¹⁰

The court further noted that it would not violate the Constitution if New York chose to prohibit the children from attending school for failure to meet the mandatory vaccination requirements, without providing any exemptions.¹¹¹ Instead,

¹⁰³ *Phillips*, 775 F.3d at 540–42.

¹⁰⁴ *Id.*

¹⁰⁵ *Id.* at 542–43.

¹⁰⁶ *Id.* at 542.

¹⁰⁷ *Id.* at 543.

¹⁰⁸ *Id.* (quoting *Prince v. Massachusetts*, 321 U.S. 158, 166–67 (1944)).

¹⁰⁹ *Id.* (quoting *Church of the Lukumi Babalu Aye, Inc. v. City of Hialeah*, 508 U.S. 520, 531 (1993)).

¹¹⁰ *Id.*

¹¹¹ *Id.* Mississippi's compulsory vaccination previously included an exemption based on religious beliefs. However, in *Brown v. Stone*, 378 So.2d 218 (Miss. 1979) the Mississippi Supreme Court struck down the exemption.

the state provided an exemption for students based on religious beliefs and only excluded them during an outbreak of a vaccine-preventable disease.¹¹² The court concluded that the more limited exclusion was certainly constitutional.¹¹³ In light of recent outbreaks, several states are now considering eliminating personal belief and religious exemptions for children attending school as a means of providing greater protection to children.¹¹⁴ The *Phillips* opinion provides support for those changes.

2. State-Mandated Vaccination in Healthcare Settings

While laws mandating vaccines for schoolchildren are intended to protect the children themselves, laws mandating vaccination of healthcare workers are typically intended to protect patients who may be uniquely vulnerable to vaccine-preventable diseases.¹¹⁵ The advantage of state law mandates is that employers do not have to worry about Title VII or ADA liability. So long as the state laws hold up against any legal challenges, the employer cannot be liable for complying with the law, and while various regulations have faced legal challenges, no statute has ever been struck down.¹¹⁶

The exception, which would provide for the exemption of children of parents whose religious beliefs conflict with the immunization requirements, would discriminate against the great majority of children whose parents have no such religious convictions. To give it effect would result in a violation of the Fourteenth Amendment to the United States Constitution which provides that no state shall make any law denying to any person within its jurisdiction the equal protection of the laws, in that it would require the great body of school children to be vaccinated and at the same time expose them to the hazard of associating in school with children exempted under the religious exemption who had not been immunized as required by the statute.

Id. at 223. The current statute contains no religious or personal belief exemptions, although it does allow an exemption based on medical reasons. MISS. CODE. ANN. § 41-23-37 (2017).

¹¹² *Phillips*, 775 F.3d at 543.

¹¹³ *Id.*

¹¹⁴ J. D. Heyes, *10 U.S. States Now Considering Mandatory Vaccination*, NAT. NEWS (Apr. 21, 2015), http://www.naturalnews.com/049427_vaccinations_big_pharma_measles_outbreak.html [<https://perma.cc/3C5W-39S5>] (citing Reuters report that several states were considering eliminating religious and personal belief exemptions to vaccine requirements).

¹¹⁵ Michele L. Pearson, Carolyn B. Bridges & Scott A. Harper, Ctrs. for Disease Control & Prevention, *Influenza Vaccination of Health-Care Personnel* (Feb. 24, 2006), <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5502a1.htm> [<https://perma.cc/58Q6-LTA7>] (“Because HCP [healthcare personnel] provide care to patients at high risk for complications of influenza, HCP should be considered a high priority for expanding influenza vaccine use.”).

¹¹⁶ See Najera & Reiss, *supra* note 3, at 377–78 (citing Alexandra M. Stewart & Sara Rosenbaum, *Vaccinating the Health-Care Workforce: State Law vs. Institutional Requirements*, 125 PUB. HEALTH REP. 615, 616–17 (2010); Wendy J. Parmet, *Pandemic Vaccines—The Legal Landscape*, 362 NEW ENG. J. MED. 1949, 1951 (2010)).

However, the laws are far from uniform and states vary with respect to which vaccines are required, which healthcare personnel must be vaccinated, and what exemptions, if any, are available.¹¹⁷ Some state laws are limited to particular categories of employees and some only require healthcare facilities to implement a vaccination policy—which may include education and opportunities for employees to receive the vaccine, but not mandate vaccination.¹¹⁸ For example, seventeen states require healthcare workers to receive influenza vaccinations, with or without exemptions.¹¹⁹ California, Maine, Oklahoma, and Rhode Island require varicella (chickenpox) vaccinations for all hospital healthcare workers;¹²⁰ only Maine grants exemptions for nonmedical reasons.¹²¹

California, Nebraska, and Rhode Island require all healthcare workers to be vaccinated against pertussis, while Louisiana requires parents of newborns in hospitals to receive the pertussis vaccination but not the healthcare workers.¹²² New York requires parents of newborns in the neonatal, nursery, and obstetrics facilities to be vaccinated.¹²³ California, Nebraska, Louisiana, and New York allow exemptions based on personal beliefs.¹²⁴ Even states with mandatory vaccination

¹¹⁷ *Vaccination Laws*, *supra* note 95 (linking to documents outlining the healthcare worker vaccination laws in every state).

¹¹⁸ Maryland’s law is fairly comprehensive for certain diseases. *See* MD. CODE REGS. 10.07.02.01, 10.07.02.21-1 (2017) (requiring comprehensive care facilities and extended care facilities to “request that the employee receive immunization for varicella”); MD. CODE REGS. 10.07.02.21-1(B)(5), 10.07.02.21-1(B)(8) (2017) (requiring facilities to “screen all new employees for immunity to common childhood infections such as mumps, rubella, measles, and chicken pox (varicella), through the use of pre-employment questionnaires and, if appropriate, serologic testing for presence of antibodies of these diseases.” Maryland law further requires these facilities to “inquire about a history of varicella for each new employee. If the employee’s history is unclear, then the facility shall request a serology for varicella.”). By comparison, Maine’s law is not especially rigorous. *See* 10-144 ME CODE R. § 264-2(C) (2010) (requiring that hospitals “adopt and implement a policy that recommends and offers annual immunization against seasonal influenza to all personnel who provide direct care to residents of the facility.”).

¹¹⁹ CTRS. FOR DISEASE CONTROL & PREVENTION, MENU OF STATE HOSPITAL INFLUENZA VACCINATION LAWS (2015), <http://www.cdc.gov/phlp/docs/menu-shfluvacclaws.pdf> [<https://perma.cc/YEJ3-DA93>]. Some states allow philosophical (California, Illinois, Maine, Maryland, Massachusetts, Nebraska, Oklahoma, Oregon, Rhode Island, and Tennessee) or religious (Illinois, Maine, Massachusetts, New Hampshire) exemptions. *Id.* Others only allow medical exemptions (Colorado). *Id.*

¹²⁰ CTRS. FOR DISEASE CONTROL & PREVENTION, MENU OF STATE HEALTHCARE FACILITY VARICELLA VACCINATION LAWS (2016), <http://www.cdc.gov/phlp/docs/menu-varicella.pdf> [<https://perma.cc/B4ZD-43FG>].

¹²¹ *Id.*

¹²² CTRS. FOR DISEASE CONTROL & PREVENTION, MENU OF STATE HEALTHCARE FACILITY PERTUSSIS VACCINATION LAWS (2016), <http://www.cdc.gov/phlp/docs/menu-pertussis.pdf> [<https://perma.cc/Y7FL-E2HL>].

¹²³ *Id.*

¹²⁴ *Id.*

laws may not have strong (or any) enforcement mechanisms.¹²⁵ Some scholars have argued that state laws are the best mechanism for ensuring high vaccination rates in healthcare facilities,¹²⁶ but if the state laws only encourage vaccination, or allow nonmedical exemptions, they may not be as effective as employer mandates.¹²⁷

B. Mandatory Vaccination for Larger Populations

Vaccination laws that apply to larger segments of the population are rare. In *Jacobson*, the compulsory smallpox vaccination law applied to all inhabitants in the city of Cambridge.¹²⁸ More recently, states have not considered such broad requirements to be necessary. This may be due in large part to high vaccination rates courtesy of childhood vaccination recommendations and requirements. Moreover, imposing such a requirement likely would be viewed as extreme and heavy-handed in the absence of a compelling need, such as an outbreak of a serious and highly contagious disease.

Legislators would need to identify a specific and severe public health threat that could be substantially reduced by immunization before it would be politically feasible, much less legally defensible. While courts have relied on *Jacobson* to uphold vaccination requirements for schools and hospitals, the Supreme Court in that case cautioned that regulations that are arbitrary, unreasonable, or “so far beyond what was reasonably required for the safety of the public”¹²⁹ could violate the Constitution.¹³⁰ Yet, in light of declining childhood vaccination rates and a rise in homeschooling—which may allow parents to avoid the obligation to immunize their children before attending school—outbreaks of vaccine-preventable diseases are more likely and are already occurring. Accordingly, in the future, states may have to seriously consider mandatory vaccination of adults during outbreaks, or threats of outbreaks, of vaccine-preventable diseases.

IV. HEALTHCARE EMPLOYER VACCINE MANDATES

Healthcare workers infected with contagious diseases present an obvious threat to the patients with whom they come in contact. At least with respect to vaccine-preventable diseases, high vaccination rates in healthcare facilities can reduce the

¹²⁵ See Najera & Reiss, *supra* note 3, at 375.

¹²⁶ See Alexandra M. Stewart & Marisa A. Cox, *State Law and Influenza Vaccination of Health Care Personnel*, 31 VACCINE 827, 830 (2013) (“State-based vaccination requirements are the more efficient method to increase vaccine uptake among all HCP when compared to employer-based requirements.”); Najera & Reiss, *supra* note 3, at 401 (“We agree with Cox and Stewart that the most cost-effective way to impose mandatory immunization policies is via state statutes.”).

¹²⁷ See Najera & Reiss, *supra* note 3, at 401 (noting that a mandate must address implementation and enforcement in order to be effective).

¹²⁸ *Jacobson v. Massachusetts*, 197 U.S. 11, 12–13 (1905).

¹²⁹ *Id.* at 28.

¹³⁰ *Id.*

threat of transmission and protect vulnerable patients. However, that has been an elusive goal for many hospitals and other healthcare facilities.

A. The Uneasy History of Mandatory Hospital Vaccination Policies

The vaccine that is required in healthcare facilities more often than any other is the flu vaccine. In some respects, it may seem surprising that medical professionals advocate so strongly in favor of the flu vaccine.¹³¹ It must be administered every year, which makes it more difficult to achieve desired levels of vaccination in the population during any particular flu season.¹³² Its effectiveness also varies from year to year because the flu virus is constantly changing and researchers must make educated guesses about which viruses to target in the vaccine before the start of each flu season.¹³³ When researchers guess incorrectly, the vaccine may not provide protection against the viruses that actually circulate that season.¹³⁴

Despite the vaccine's limitations, it is the best method available for reducing the number of flu-related illnesses and deaths each year. Although influenza is not the deadliest disease for which a vaccine is available, hundreds of thousands of Americans become ill from the flu virus each year. The Centers for Disease Control and Prevention ("CDC") estimates that over 55,000 people died from complications related to the flu and pneumonia (one of the potential complications of the flu) in 2014 alone.¹³⁵

Even healthy adults can become ill from the flu, but certain populations are at far greater risk. Specifically, very young children, especially those younger than two years of age, people over 65 years of age,¹³⁶ pregnant women, people with certain

¹³¹ The CDC's Advisory Committee on Immunization Practices ("ACIP") recommends annual flu vaccination, with either the inactivated influenza vaccine ("IIV") or recombinant influenza vaccine ("RIV"), for everyone six months old and older. Ctrs. for Disease Control & Prevention, *Vaccination: Who Should Do It, Who Should Not and Who Should Take Precautions*, <http://www.cdc.gov/flu/protect/whoshouldvax.htm> [<https://perma.cc/S5NK-XARN>] (last updated Sept. 7, 2016).

¹³² See Ctrs. for Disease Control & Prevention, *Key Facts About Seasonal Flu Vaccine*, <http://www.cdc.gov/flu/protect/keyfacts.htm> [<https://perma.cc/5ZR6-VET8>] (last updated Mar. 31, 2017).

¹³³ See Ctrs. for Disease Control & Prevention, *Selecting Viruses for the Seasonal Influenza Vaccine*, <http://www.cdc.gov/flu/about/season/vaccine-selection.htm> [<https://perma.cc/Q6U6-6ZBM>] (last updated May 4, 2016).

¹³⁴ See *id.*

¹³⁵ Ctrs. for Disease Control & Prevention, *Deaths and Mortality*, <http://www.cdc.gov/nchs/fastats/deaths.htm> [<https://perma.cc/D49R-QBXC>] (last updated Mar. 17, 2017).

¹³⁶ Ctrs. for Disease Control & Prevention, *What You Should Know and Do this Flu Season If You Are 65 Years and Older*, <http://www.cdc.gov/flu/about/disease/65over.htm> [<https://perma.cc/QZ4U-SSJ2>] (last updated Jan. 24, 2017) ("In recent years, for example, it's estimated that between 71 percent and 85 percent of seasonal flu-related deaths have occurred in people 65 years and older and between 54 percent and 70 percent of seasonal flu-related hospitalizations have occurred among people in that age group.").

medical conditions such as asthma, and people with compromised immune systems are more likely to develop flu-related complications.¹³⁷ Since many patients in healthcare and long-term care facilities will be in one or more high-risk groups, and in light of the high risk that employees will transmit the influenza virus to patients,¹³⁸ mandatory flu vaccination for healthcare employees is promoted as a reasonable and prudent means of protecting vulnerable patients.¹³⁹

Similarly, some healthcare facilities require personnel who come in contact with newborns and infants to receive the pertussis vaccine. While pertussis had been almost completely eliminated in the United States, the number of cases has increased dramatically in recent years, peaking in 2012 with 48,277 cases nationwide, including twenty deaths.¹⁴⁰ Over half of babies less than a year old who are diagnosed with pertussis need to be hospitalized and the disease may result in death.¹⁴¹ Until recently, only children received the pertussis vaccine. Currently a pertussis vaccine is available in combination with the tetanus and diphtheria booster shot that is given to adolescents (“Tdap”).¹⁴² In addition, pregnant women, healthcare workers, and adults who did not get the Tdap vaccine as adolescents are encouraged to get the booster.¹⁴³ The rise in the number of pertussis cases and the serious risk posed to infants who are too young to be fully vaccinated explain why some healthcare facilities have chosen to encourage or require healthcare employees to get the pertussis vaccine.

But even though the risks to patients are clear, healthcare facilities have had difficulty achieving high vaccination rates among their employees. In 1981, the Advisory Committee on Immunization Practices (“ACIP”) of the CDC¹⁴⁴ first

¹³⁷ Ctrs. for Disease Control & Prevention, *People at High Risk of Developing Flu-Related Complications*, http://www.cdc.gov/flu/about/disease/high_risk.htm [https://perma.cc/822B-XQNE] (last updated Aug. 25, 2016). There is also some evidence that American Indians and Alaskan Natives have a higher risk of flu complications. *Id.*

¹³⁸ *Virginia Mason Hosp. v. Washington State Nurses Ass’n*, 511 F.3d 908, 911 (9th Cir. 2007) (“Studies have shown that staff-to-patient flu transmittal is prevalent in hospitals and other health facilities because about half of those infected with influenza are asymptomatic and because as many as 70% of healthcare workers continue to go to work even when experiencing flu symptoms.”).

¹³⁹ See Am. Acad. of Family Physicians, *AAFP Supports Mandatory Flu Vaccinations for Health Care Personnel*, AAFP (June 13, 2011), <http://www.aafp.org/news/health-of-the-public/20110613mandatoryfluvacc.html> [https://perma.cc/3KSU-DSKM].

¹⁴⁰ Ctrs. for Disease Control & Prevention, *Pertussis (Whooping Cough): Pertussis Outbreak Trends*, <http://www.cdc.gov/pertussis/outbreaks/trends.html> [https://perma.cc/9YR3-ECK7] (last updated Sept. 8, 2015).

¹⁴¹ See Ctrs. for Disease Control & Prevention, *Pertussis (Whooping Cough): Fast Facts*, <http://www.cdc.gov/pertussis/fast-facts.html> [https://perma.cc/8B4T-JMWQ] (last updated Sept. 8, 2015).

¹⁴² See *id.*

¹⁴³ See *id.*

¹⁴⁴ The ACIP creates the national standard of care for immunizations. Stewart & Cox, *supra* note 126, at 827.

recommended that all healthcare personnel receive the annual influenza vaccine.¹⁴⁵ Although the goal was for 90% of healthcare personnel to have received the flu vaccine, they never achieved that goal.¹⁴⁶ More than thirty years later, the vaccination rate among healthcare personnel was only approximately 40%.¹⁴⁷ By the 2011–2012 influenza season, rates had increased to approximately 66.9%, with physicians and nurses having the highest vaccination rates (77.9%) and staff at long-term care facilities had much lower rates (52%).¹⁴⁸

While the rates have increased, they are not high enough to protect patients. Unvaccinated workers contribute to outbreaks, illness, and death in healthcare facilities.¹⁴⁹ “While research indicates that outbreaks are under-detected and under-reported, they have been documented across the United States and abroad.”¹⁵⁰ At least one outbreak in a neonatal intensive care unit was attributed to unvaccinated hospital staff.¹⁵¹ Eight of the thirty-three nurses and three patients became ill.¹⁵² Transmission from staff to patients is partially attributed to the fact that many people who are exposed to diseases and become ill continue to work.¹⁵³

Some, but not all, states have passed laws requiring healthcare workers to be vaccinated. However, the same concerns about protecting patients from contracting vaccine-preventable illnesses that motivate states to impose mandates have also motivated healthcare facilities to impose vaccine mandates even when not required to do so by law.¹⁵⁴ The first hospitals adopted mandatory policies in 2005,¹⁵⁵ and hundreds more followed in the subsequent decade.

¹⁴⁵ *Id.* Currently, many other healthcare organizations recommend vaccination for healthcare workers. A list of such organizations has been compiled by the Association of American Family Physicians (AAFP). See *AAFP Supports Mandatory Flu Vaccinations for Health Care Personnel*, *supra* note 139.

¹⁴⁶ Am. Acad. of Family Physicians, *supra* note 139.

¹⁴⁷ See Stewart & Cox, *supra* note 126, at 827.

¹⁴⁸ *Id.*

¹⁴⁹ *Id.*

¹⁵⁰ *Id.*

¹⁵¹ *Id.* at 828. Only 63% of medical staff, 50% of auxiliary staff, and a shockingly low 15% of nurses had been vaccinated. *Id.*

¹⁵² *Id.*

¹⁵³ *Id.* “Eleven to 59% of exposed workers can be affected, but continue to work, transmitting infection to 3–50% of exposed patients.” *Id.* (citations omitted).

¹⁵⁴ See Najera & Reiss, *supra* note 3, at 382–83; *Robinson v. Children’s Hosp. Boston*, No. CV 14-10263-DJC, 2016 WL 1337255, at *2 (D. Mass. Apr. 5, 2016).

¹⁵⁵ Najera & Reiss, *supra* note 3, at 372.

Johns Hopkins Medicine recently mandated flu vaccines for its employees.¹⁵⁶ On its website, it explains why it adopted the policy:

Vaccination for health care personnel has been recommended for years, yet vaccination rates remain at 45 percent nationally. At Johns Hopkins Medicine member organizations, rates increased over the years, but they did not achieve 100 percent despite significant efforts. Overall, voluntary programs have not been effective at markedly increasing vaccination rates.¹⁵⁷

While many high-profile hospitals have chosen to mandate vaccines, they represent only a fraction of American healthcare facilities.¹⁵⁸ And some of those facilities faced opposition and litigation from individual employees and unions.¹⁵⁹

In *Virginia Mason Hospital v. Washington State Nurses Association*,¹⁶⁰ the hospital initially attempted to protect patients by implementing a voluntary vaccination program through which the hospital offered employees free flu vaccines.¹⁶¹ The program began in 1998, but by 2004 the hospital had only achieved a 55% vaccination rate among the staff.¹⁶² Only after the voluntary vaccination program failed to achieve a sufficiently high vaccination rate did the hospital choose to implement a mandatory vaccination requirement.¹⁶³

The nurses' union filed a grievance against the hospital stating its opposition to the new policy.¹⁶⁴ The grievance was submitted to arbitration to determine whether the compulsory vaccination policy could be implemented by the hospital "without bargaining over it with representatives of the union."¹⁶⁵ The undisputed evidence established that "the elderly and immune-compromised patient population that Virginia Mason serves is at high risk for contracting the flu if exposed to it and for

¹⁵⁶ Johns Hopkins Med., *Mandatory Flu Vaccination Frequently Asked Questions*, http://www.hopkinsmedicine.org/mandatory_flu_vaccination/faq.html [https://perma.cc/9E LW-8FJD] (last visited July 4, 2017). The policy was implemented beginning with the 2012–2013 flu season and applies to all Johns Hopkins Medicine entities. *Id.* Employees can request accommodation for sincerely held religious beliefs and can request an exception for medical reasons. *Id.* "Those who cannot receive the flu vaccine, whether for religious or medical reasons, will be required to properly wear a protective surgical mask over their mouth and nose when within 6 feet of any patient and when entering a patient room during the influenza season." *Id.*

¹⁵⁷ *Id.*

¹⁵⁸ *See id.*

¹⁵⁹ *See id.*

¹⁶⁰ 511 F.3d 908 (9th Cir. 2007).

¹⁶¹ *Id.* at 912.

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ *Id.* Only those with religious objections or a documented vaccine allergy were exempt. *Id.*

¹⁶⁵ *Id.*

suffering severe and even fatal consequences if infected.”¹⁶⁶ Moreover, unvaccinated employees posed a direct threat to vulnerable patients.¹⁶⁷ “Studies have shown that staff-to-patient flu transmittal is prevalent in hospitals and other healthcare facilities because about half of those infected with influenza are asymptomatic and because as many as 70% of healthcare workers continue to go to work even when experiencing flu symptoms.”¹⁶⁸ Those risks have led the American Academy of Pediatrics and several other medical organizations to “strongly recommend[]”¹⁶⁹ vaccination of healthcare employees.¹⁷⁰

Notwithstanding this evidence, the arbitrator sustained the union’s grievance and ordered the hospital to rescind the policy.¹⁷¹ The hospital filed an application in federal district court to have the arbitration award vacated. The hospital argued that “the award was irrational and contrary to public policy because it prevented the hospital from protecting patient health and thus performing its core mission.”¹⁷² The district court granted summary judgment to the union, holding in relevant part that “Virginia Mason did not show any explicit, well-defined, and dominant public policy that was contravened by the arbitrator’s decision.”¹⁷³ The Ninth Circuit Court of Appeals affirmed.¹⁷⁴

While the district court and Ninth Circuit decisions can be explained by the considerable deference given to arbitrator’s conclusions with respect to the collective bargaining agreement, the conclusion that no “explicit, well-defined, and dominant public policy” was contravened by the decision is troubling from a public

¹⁶⁶ *Id.* at 911.

¹⁶⁷ *Id.*

¹⁶⁸ *Id.* Unvaccinated employees pose a risk to patients even if they do not feel ill because “[m]ost healthy adults may be able to infect others beginning 1 day **before** symptoms develop and up to 5 to 7 days **after** becoming sick. Some people, especially young children and people with weakened immune systems, might be able to infect others for an even longer time.” Ctrs. for Disease Control & Prevention, *Key Facts About Influenza (Flu)*, <http://www.cdc.gov/flu/keyfacts.htm> [<https://perma.cc/RD6Z-WJTH>] (last updated Aug. 25, 2016).

¹⁶⁹ See *Robinson v. Children’s Hosp. Boston*, No. 14-10263-DLC, 2016 WL 1337255, at *2 (D. Mass. Apr. 5, 2016).

¹⁷⁰ *Id.* (naming medical organizations favoring vaccination of healthcare personnel, including the Centers for Disease Control and Prevention, American Academy of Family Physicians, American Hospital Association, Society for Healthcare Epidemiology of America, Infectious Diseases Society of America, Pediatric Infectious Diseases Society, Association for Professionals in Infection Control and Epidemiology Inc. and American Public Health Association).

¹⁷¹ *Virginia Mason*, 511 F.3d at 911.

¹⁷² *Id.* at 913.

¹⁷³ *Id.*

¹⁷⁴ *Id.* Further litigation following *Virginia Mason* adopted a policy requiring unvaccinated employees to use facemasks. Najera & Reiss, *supra* note 3, at 382. That policy was appealed to the National Labor Relations Board. *Id.* An administrative law judge ultimately decided that the union waived its collective bargaining right in that case. *Id.*

health and public policy perspective.¹⁷⁵ In essence, the *Virginia Mason* rationale allows unions to challenge and delay measures deemed necessary by trained public health and medical professionals to protect sick and vulnerable patients. The *Virginia Mason* arbitrator and affirming courts failed to acknowledge that a future plaintiff would have abundant evidence of the well-known risks posed by unvaccinated healthcare workers and the benefits of compulsory vaccination. Moreover, merely encouraging or recommending vaccination—as advocated by the nurses’ union¹⁷⁶—results in far lower vaccination rates than a requirement.

Recently, a federal district court sided with a hospital that terminated an employee who refused to comply with the hospital’s mandatory flu vaccination policy.¹⁷⁷ In *Robinson v. Children’s Hospital Boston*,¹⁷⁸ the plaintiff was an administrator who had significant contact with patients.¹⁷⁹ In 2011 the hospital implemented a mandatory flu vaccination policy that applied to all employees and others—including contractors and volunteers—who worked or accessed patient-care areas.¹⁸⁰ The plaintiff, Leontine Robinson, refused to be vaccinated on the ground that taking the vaccine violated her religious beliefs.¹⁸¹ Although the hospital assisted her in her attempts to find another position at the hospital that would not require vaccination, she was unable to find such a position and was eventually terminated.¹⁸²

Robinson sued the hospital, claiming that her termination violated Title VII.¹⁸³ The district court analyzed the Title VII claim under the First Circuit’s two-part framework: first, the plaintiff must make a *prima facie* case that an adverse employment action was taken because an employment requirement conflicted with the employee’s bona fide religious practice,¹⁸⁴ second, if the employee establishes

¹⁷⁵ *Id.*; Stewart et al., *supra* note 3, at 358–59.

¹⁷⁶ The union stated that “although ‘receiving influenza vaccine is a good choice for most nurses, it is just that—a choice’ and that ‘receipt of any medical treatment is up to the individual.’” *Virginia Mason*, 511 F.3d at 912 (quoting the union’s grievance).

¹⁷⁷ *Robinson v. Children’s Hosp. Boston*, No. 14-10263-DJC, 2016 WL 1337255, at *9 (D. Mass. Apr. 5, 2016).

¹⁷⁸ No. 14-10263-DJC, 2016 WL 1337255 (D. Mass. Apr. 5, 2016).

¹⁷⁹ *Id.* at *2.

¹⁸⁰ *Id.*

¹⁸¹ *Id.* at *3–4. Initially, Robinson objected because the vaccine contained pork byproduct. The hospital offered to give her a pork-free vaccine but she refused, apparently because her religion prohibited taking any vaccines. *Id.* at *3.

¹⁸² *Id.* at *4. She applied and interviewed for one such position, but she was not offered the job. *Id.*

¹⁸³ *Id.* Robinson also brought a claim under a similar state civil rights statute. *Id.* The court ruled that the state statute was substantially similar to the federal claim and it failed for the same reasons. *Id.* at *10 n.7.

¹⁸⁴ *Id.* at *5.

the *prima facie* case, the employer then has the burden of proving that it offered a reasonable accommodation, or that a reasonable accommodation would create an undue hardship.¹⁸⁵ The hospital claimed that it reasonably accommodated Robinson; alternatively, “any accommodation would have been an undue hardship.”¹⁸⁶

The court agreed that the hospital had reasonably accommodated Robinson by: (1) granting her a temporary exemption while it reviewed her medical records to determine whether she was entitled to a permanent medical exemption;¹⁸⁷ (2) assisting her in her efforts to find a new position at the hospital; (3) allowing her to use two months of accrued earned time to find a position outside of the hospital plus another two weeks when she had not found a job at the end of the two months; and (4) treating her termination as a voluntary resignation so that she would be eligible to apply for positions at the hospital in the future.¹⁸⁸

Rejecting Robinson’s argument that the hospital should have made a greater effort to help her find a new position within the hospital, the court noted that Title VII does not obligate employers to create positions to accommodate an employee’s religious beliefs.¹⁸⁹ Moreover, employers are only required to provide a *reasonable* accommodation, not the employee’s preferred or requested accommodation.¹⁹⁰ “[O]nce the employer has reasonably accommodated the employee’s religious needs, the inquiry is over. . . . An employer ‘need not further show that each of the employee’s alternative accommodations would result in undue hardship.’”¹⁹¹

Finally, the district court held that granting Robinson’s request to allow her to keep her job and allowing her to continue to have patient access would create an undue hardship for the hospital.¹⁹² An accommodation creates an undue hardship if it results in a “more than *de minimis* cost” to the employer.¹⁹³ Costs can be economic or noneconomic, and can include increased safety risks or increased risk of legal liability.¹⁹⁴ The hospital argued that granting Robinson’s requested accommodation would have increased the risk that influenza would be transmitted to vulnerable patients.¹⁹⁵ Concluding that “accommodating Robinson’s desire to be vaccine-free

¹⁸⁵ *Id.*

¹⁸⁶ *Id.* at *6. The hospital also argued that “no reasonable jury could find that Robinson had a bona fide religious belief that precluded vaccination,” but the court declined to address that claim since it found in the hospital’s favor on the other two grounds. *Id.*

¹⁸⁷ *Id.* at *8. The hospital ultimately determined that she did not qualify for a medical exemption. *Id.* at *4.

¹⁸⁸ *Id.* at *8. Ms. Robinson had an adverse reaction to a prior vaccination and the hospital encouraged her to get medical documentation of that event to submit in support of her request for a medical exemption. *Id.* at *4.

¹⁸⁹ *Id.* at *8.

¹⁹⁰ *Id.* at *6.

¹⁹¹ *Id.* (citations omitted) (quoting *Ansonia Bd. of Educ. v. Philbrook*, 479 U.S. 60, 68 (1986)).

¹⁹² *Id.* at * 8.

¹⁹³ *Id.* (quoting *Cloutier v. Costco Wholesale Corp.*, 390 F.3d 126, 134 (1st Cir. 2004)).

¹⁹⁴ *Id.*

¹⁹⁵ *Id.* at *9. According to the hospital’s statement of undisputed facts, “[t]he Hospital’s patient population includes some of the most critically ill infants, children and adolescents

in her role would have been an undue hardship because it would have imposed more than a *de minimis* cost,” the court granted summary judgment in favor of the hospital.¹⁹⁶

B. Why Mandates Are Not Ubiquitous

It is worth considering why more hospitals have not imposed vaccine mandates. First, the *Virginia Mason* experience demonstrates that even some healthcare workers resist vaccination. If unions can successfully challenge mandatory vaccination policies, then hospitals with unionized employees may not be able to unilaterally implement the policies. Second, the risk of liability if hospitals do not mandate vaccinations currently seems very low. There are no published cases of patients successfully suing a hospital because the patient contracted influenza from an unvaccinated healthcare worker.¹⁹⁷ In fact, the absence of such cases was noted in *Virginia Mason*:

Hospitals theoretically could be liable under respondeat superior or other theories of corporate negligence for the unprofessional conduct of their nurse employees,¹⁹⁸ but neither *Virginia Mason* nor [the Washington State Health Association] has cited a single example of a hospital facing legal action because a patient contracted the flu from a health care worker.¹⁹⁹

Without proof of a legal and regulatory consensus in support of mandatory vaccinations, the court would not overturn the arbitrator’s decision on public policy grounds.²⁰⁰

In addition, a hospital will not be liable unless the patient can show that the hospital failed to exercise reasonable care.²⁰¹ Given that most hospitals do not have vaccine mandates, and the Equal Employment Opportunity Commission (“EEOC”)

in the world. Even in healthy infants and children, the influenza virus can be fatal and the risk of infection and fatality is higher within the Hospital’s patient population.” *Id.* at *2 (citations omitted).

¹⁹⁶ *Id.* at *10.

¹⁹⁷ See *Virginia Mason Hosp. v. Wash. State Nurses Ass’n*, 511 F.3d 908, 916 (9th Cir. 2007) (noting that neither the hospital seeking to enforce its mandatory vaccination policy nor an amicus that filed a brief in support of the hospital had “cited a single example of a hospital facing legal action because a patient contracted the flu from a health care worker”).

¹⁹⁸ The Washington State Health Association (“WSHA”) was an amicus in the case. *Id.* The WSHA noted that Washington’s Uniform Disciplinary Act, WASH. REV. CODE § 18.130.180(15), made it a violation of professional standards for a nurse to “[e]ngag[e] in a profession involving contact with the public while suffering from a contagious or infectious disease involving serious risk to public health.” *Id.* (quoting WASH. REV. CODE § 18.130.180(15) (2010)).

¹⁹⁹ *Id.*

²⁰⁰ *Id.* at 917.

²⁰¹ *Keller v. Koca*, 111 P.3d 445, 447 (Colo. 2005).

recommends encouraging but not requiring employee vaccination, hospitals have strong evidence that their policies are reasonable without a mandate. However, as more hospitals and states impose vaccine mandates, those that do not will find it more difficult to prove that failure to do so is reasonable. Additionally, if the judgment in *Robinson* is upheld on appeal and other courts follow and uphold mandatory vaccination policies, the risk of liability will increase. Finally, even a single case of a patient successfully suing a hospital after contracting a vaccine-preventable illness from an unvaccinated healthcare worker may be sufficient to convince more healthcare facilities to implement compulsory vaccination policies.

V. OTHER EMPLOYERS: FINDING A DUTY, WEIGHING THE RISKS

It is understandable that most vaccination statutes and policies target healthcare facilities, children in schools, and day care settings. Requiring vaccinations before children enter school or day care protects those who may be more likely to transmit and catch vaccine-preventable illnesses, and who may suffer more severe symptoms than adults will suffer. To the extent that childhood vaccinations lead to immunity that persists into adulthood, such policies also ensure high vaccination rates for the general public. Vaccinating healthcare workers also protects uniquely vulnerable patients.

Aside from these two groups, mandatory vaccination policies are discouraged because of concerns about liability for religious or disability discrimination and a general sense that employees will oppose such policies as an intrusion on their personal liberties. Moreover, a plaintiff who alleges that an employer is liable for failing to require its employees to be vaccinated faces the daunting task of identifying a duty owed by the employer to the plaintiff and a breach of that duty.

This section identifies additional categories of employers who might consider imposing a mandatory vaccination requirement. It then considers whether each of those employers might owe a duty to an individual or group that requires the employer to impose a vaccine mandate. Whether a duty exists is a question of law to be decided by the court,²⁰² which should consider “the risk involved, the foreseeability of the injury weighed against the social utility of the actor’s conduct, the magnitude of the burden of guarding against injury or harm, and the consequences of placing the burden on the actor.”²⁰³ In the context of vaccinations, this requires weighing the burden of imposing requirements on reluctant or unwilling employees against the risks and costs associated with vaccine-preventable diseases. Finally, this section discusses how employers might draft a policy to minimize the litigation risk.

²⁰² *Id.*

²⁰³ *Id.* at 448.

A. School Employees

All states require schoolchildren to be vaccinated before attending school, but no states require teachers, other school employees, or volunteers to be vaccinated.²⁰⁴ Vaccinating adults may not be necessary to protect the children if the vaccination rate of the student body is sufficient to establish herd immunity,²⁰⁵ but if student vaccination rates are lower than that threshold, unvaccinated faculty and staff could pose dangers to students as well as other faculty, staff, and parents. Unvaccinated teachers could pose a threat to children who are unable to be vaccinated due to medical conditions, religious beliefs, or children who were vaccinated but did not develop immunity to the disease. Unvaccinated adults might also transmit a vaccine-preventable disease to a child who may not get seriously ill, but might infect a family member with a compromised immune system or who is too young to be vaccinated.

Yet these risks may not justify a vaccine mandate. While unvaccinated adults may pose a risk to others in the school, it does not automatically follow that the schools owe a duty to any individual or group, or that unvaccinated adults pose a litigation risk. Assuming there is no evidence of an intent to harm students, a plaintiff who contracted a vaccine-preventable illness from a school employee would likely bring a negligence claim. The plaintiff would have to prove: (1) the school owed a duty to the plaintiff; (2) the school breached that duty; and (3) the school's breach of its duty caused the plaintiff's injury.²⁰⁶ Specifically, in order to hold the school liable on a negligent supervision theory, the plaintiff would need to prove that the school had "a duty to prevent an unreasonable risk of harm to third persons to whom the employer knows or should have known that the employee would cause harm."²⁰⁷ A plaintiff may have difficulty establishing the existence of a duty and proving that there is an unreasonable risk of harm.

²⁰⁴ See *Vaccination Laws*, *supra* note 95 (discussing and linking to state school vaccination laws and noting that all states require schoolchildren to be vaccinated; however, none of those laws require vaccination of adults working in the schools).

²⁰⁵ Herd immunity (or also known as community immunity) is defined as:

A situation in which a sufficient proportion of a population is immune to an infectious disease (through vaccination and/or prior illness) to make its spread from person to person unlikely. Even individuals not vaccinated (such as newborns and those with chronic illnesses) are offered some protection because the disease has little opportunity to spread within the community.

Ctrs. for Disease Control & Prevention, *Glossary*, <http://www.cdc.gov/vaccines/terms/glossary.html> [<https://perma.cc/JZ6Q-JE5L>] (last updated Aug. 17, 2015).

²⁰⁶ See *Keller*, 111 P.3d at 447 (stating the elements of a negligence claim: "(1) the existence of a legal duty to the plaintiff; (2) the defendant breached that duty; and (3) that the breach of the duty caused the harm resulting in damages to the plaintiff.").

²⁰⁷ *Id.* at 448.

While schools certainly have a duty to protect students from unreasonable risks of harm, if the vaccination rate in the community is high, it will be difficult to establish that the school should have known that failing to mandate vaccines for employees would result in harm. Likewise, while the social utility of vaccinating school employees may be high, if all or nearly all the children are vaccinated it is probably unforeseeable that a school or district's choice not to require vaccination of all adults would result in transmission of a vaccine-preventable illness.²⁰⁸ Even if a plaintiff can make out a *prima facie* case of negligence, public schools may have immunity to the suit that bars recovery.²⁰⁹

However, during an outbreak or in a community with lower vaccination rates, schools who do not have the shield of immunity may be at greater risk for liability. During an outbreak, the risk to students and their families is more obvious and courts may find that schools have a duty to consider and assess ways to minimize the risk of transmission in the school. That evaluation should include assessment of the risk posed by unvaccinated employees as well as unvaccinated children.

For example, in February 2017, several school districts in East Tennessee closed for up to a week because of high rates of illness and absenteeism among students, teachers, and substitute teachers.²¹⁰ At least some of the ill students and teachers were diagnosed with the flu and the CDC reported that Tennessee was one of several states experiencing a high number of influenza-like illnesses.²¹¹ If the county had low vaccination rates among teachers and staff, perhaps a mandatory vaccine policy would have resulted in lower rates of teacher infection and the schools could have remained open.

²⁰⁸ But in an elementary school, many students are likely to have younger siblings who are too young to be fully vaccinated against diseases such as pertussis or influenza. Arguably, a teacher or staff member should have known that any disease that they carry into the school could be transmitted by a student or fellow teacher or staff member to a vulnerable young child in their household.

²⁰⁹ *Compare* Crisp Cty. Sch. Sys. v. Brown, 487 S.E.2d 512, 514 (Ga. App. 1997) (holding that the county school system was a political subdivision of the state and, as such, was vested with sovereign immunity except where expressly authorized by state law) *with* Dermott Special Sch. Dist. v. Johnson, 32 S.W.3d 477, 481 (Ark. 2000) (holding that “school districts, as political subdivisions, are not entitled to the State’s constitutional sovereign-immunity protection” but are entitled statutory immunity which limits liability to the extent of liability insurance).

²¹⁰ Megan Boehnke & Kristi L. Nelson, *Knox Schools Joins Long List of East Tennessee Districts Closed for Illness*, KNOXVILLE NEWS-SENTINEL (Feb. 6, 2017), <http://www.knoxnews.com/story/news/education/2017/02/06/knox-county-schools-joins-long-list-east-tennessee-school-districts-closed-illness/97559328/> [<https://perma.cc/U9UU-CWBE>].

²¹¹ *Id.* (“School officials have seen confirmed cases of influenza, a non-flu respiratory illness and an intestinal bug, said Melissa Massie, executive director of student support services.”).

Some school districts have required unvaccinated children to remain home during an outbreak;²¹² prudence might warrant requiring unvaccinated teachers and other employees to be absent as well. Similarly, if vaccination rates in the community or the school fall below the level necessary for herd immunity, a court could find that unvaccinated employees in close contact with students pose an unreasonable risk of harm. Courts are most likely to find a duty with respect to diseases that are highly contagious, and for which there exists a vaccine that is effective with a low likelihood of serious side effects.

One example is the measles virus. A person with measles will generally first develop a fever, runny nose, cough, red eyes, and sore throat—all symptoms that can easily be mistaken for a common cold.²¹³ Two or three days after symptoms begin, a rash develops.²¹⁴ The measles virus is very contagious and can spread through coughing and sneezing.²¹⁵

[The] measles virus can live for up to two hours in an airspace where the infected person coughed or sneezed. If other people breathe the contaminated air or touch the infected surface, then touch their eyes, noses, or mouths, they can become infected. Measles is so contagious that if one person has it, 90% of the people close to that person who are not immune will also become infected.²¹⁶

A person infected with the measles virus is contagious for up to four days before the telltale rash appears.²¹⁷

Given the ease of transmission, the virus can spread quickly through a school with low vaccination rates. But vaccinating every adult can help. One dose of MMR vaccine is about 93% effective at preventing measles if exposed to the virus, and two doses are about 97% effective.²¹⁸ Even if an unvaccinated person has already been exposed to the virus, the measles vaccine can provide some protection from the

²¹² *Phillips v. City of New York*, 775 F.3d 538, 540–45 (2d Cir. 2015) (holding that school’s decision to exclude children who were exempt from vaccination requirements due to religious objections during a chicken pox outbreak did not violate the student’s rights under the Due Process Clause of the Fourteenth Amendment or the Free Exercise Clause of the First Amendment).

²¹³ Ctrs. for Disease Control & Prevention, *Measles (Rubeola): Signs and Symptoms*, <http://www.cdc.gov/measles/about/signs-symptoms.html> [https://perma.cc/JD5T-M5N4] (last updated Feb. 17, 2015).

²¹⁴ *Id.*

²¹⁵ Ctrs. for Disease Control & Prevention, *Measles Vaccination*, <http://www.cdc.gov/measles/vaccination.html> [https://perma.cc/6B6X-EB4N] (last updated Nov. 22, 2016).

²¹⁶ Ctrs. for Disease Control & Prevention, *Transmission of Measles*, <http://www.cdc.gov/measles/about/transmission.html> [https://perma.cc/8EJB-TYG7] (last updated Mar. 3, 2017).

²¹⁷ *Id.*

²¹⁸ *Measles Vaccination*, *supra* note 215.

disease if received within seventy-two hours of initial exposure.²¹⁹ In addition to being highly effective, the MMR vaccine has a low risk of *any* side effects and an extremely low risk of *serious* side effects.²²⁰

Requiring all teachers and school employees to be vaccinated will not prevent transmission if many students remain unvaccinated. Consequently, a plaintiff who alleges that failure to vaccinate employees created an unreasonable risk of harm may have difficulty proving causation. However, if vaccinating school personnel would have been sufficient to create herd immunity, or if the plaintiff can prove that the school knew that unvaccinated personnel created a risk for identifiable students,²²¹ then the school might have a duty to ensure that teachers and other adults who are in contact with those students do not increase the risk of transmission.

Schools may need to exempt or accommodate employees who have religious or medical objections, particularly if vaccination rates are sufficiently high with those exemptions nullifying any potential claim of undue burden. Since school attendance is mandatory and many parents do not have the option of homeschooling or sending their children to private schools, public school districts could be found to have a heightened duty to ensure that teachers and other school employees do not present an unnecessary health risk.²²² For private schools, parents have the option of sending their children to a different school, so the defense that parents have knowingly assumed the risk of sending their children to a school with low vaccination rates and lenient policies might apply and preclude liability.²²³

B. Private Non-Healthcare Employers

Private employers may consider mandating employee vaccination for the benefit of the business, other employees, or customers. But even if they can do so, there may be compelling arguments against a mandate. The extent to which the

²¹⁹ Ctrs. for Disease Control & Prevention, *Measles (Rubeola): For Healthcare Professionals*, <http://www.cdc.gov/measles/hcp/index.html#immunity> [<https://perma.cc/32PR-RRY7>] (last updated Mar. 3, 2017). “MMR vaccine, if administered within 72 hours of initial measles exposure, or immunoglobulin (IG), if administered within six days of exposure, may provide some protection or modify the clinical course of disease.” *Id.*

²²⁰ According to the CDC, there is a small risk of “febrile seizures (seizures or jerking caused by fever)” with no long-term effects. In addition, “[s]ome people may experience swelling in the cheeks or neck. MMR vaccine rarely causes a temporary low platelet count, which can cause a bleeding disorder that usually goes away without treatment and is not life threatening. Extremely rarely, a person may have a serious allergic reaction to MMR vaccine.” Ctrs. for Disease Control & Prevention, *Measles, Mumps, and Rubella (MMR) Vaccine Safety*, <https://www.cdc.gov/vaccinesafety/vaccines/mmr-vaccine.html> [<https://perma.cc/ZC65-6PEF>] (last updated May 4, 2017).

²²¹ For example, an immunocompromised student who is at greater risk of catching the virus or a student who is unable to receive the measles vaccine for medical or religious reasons and has been exempted from the vaccination mandate applicable to students.

²²² Of course, the public schools may have immunity to suit.

²²³ But if the public schools have similarly low vaccination rates, the defense may not apply.

employer may have a *duty* to require vaccinations depends upon a multitude of factors, including the workplace environment, the degree and context in which employees interact with one another or with customers, and any unusual vulnerability of employees, customers, or others with whom they come in contact.

1. Employers' Ability to Mandate Vaccination for the Benefit of the Employer and Other Employees

Studies have concluded that employers lose an estimated 7–10 billion dollars annually in productivity due to the flu.²²⁴ During the 2010–2011 flu season, the flu was blamed for 100 million lost workdays, and two-thirds of the missed days were employer-paid sick time.²²⁵ Given the tremendous economic cost to employers, mandating vaccination against the flu seems like a prudent and obvious solution.

Private employers do not face the same constitutional concerns as government employers²²⁶ and the vast majority of states have a presumption of at-will employment.²²⁷ Consequently, there are few legal barriers to vaccine mandates by private employers.²²⁸ Yet few employers outside of the healthcare industry have imposed such mandates. In fact, many law firms have published newsletters or blog posts discouraging their clients from implementing mandatory vaccination policies and instead suggest that employers educate their employees and encourage vaccination.²²⁹

²²⁴ Patricia Curran, *The Economic Effect of Influenza on Businesses*, SOC'Y FOR HUMAN RES. MGMT. (Dec. 13, 2012), <https://www.shrm.org/ResourcesAndTools/hr-topics/risk-management/Pages/Economic-Effect-Influenza-Businesses.aspx> [https://perma.cc/AN7H-2BCZ] (citing a 2011 Walgreens study from September 2011). In a 2007 study, the CDC calculated approximately \$7 billion annual cost in sick days and lost productivity; the total economic burden of annual influenza epidemics exceeded \$87 billion. N.A. Molinari et al., *The Annual Impact of Seasonal Influenza in the US: Measuring Disease Burden and Costs*, VACCINE (June 28, 2007), <http://www.ncbi.nlm.nih.gov/pubmed/17544181> [https://perma.cc/SJ77-DB67].

²²⁵ *Id.*

²²⁶ The constitution generally only regulates government action, not action by private parties. However, Title VII and the Americans with Disabilities Act apply to many private employers. See discussion *infra* Part II.D.

²²⁷ Najera & Reiss, *supra* note 3, at 380.

²²⁸ See *id.*

²²⁹ See, e.g., Jeanine Conley, *Mandatory Flu Vaccination Policies: Tips for the Upcoming Flu Season*, BAKER HOSTETLER (Sept. 5, 2013), <http://www.employmentlawspotlight.com/2013/09/mandatory-flu-vaccination-policies-tips-for-the-upcoming-flu-season/> [https://perma.cc/LXP8-DBGK] (cautioning employers about potential discrimination or civil rights violation claims arising from mandatory vaccination policies); Leech Tishman, *Employers: Be Wary of Vaccine Mandates* (Nov. 7, 2011), <http://leechtishman.com/publications/employer-be-wary-of-vaccine-mandates/> [https://perma.cc/P9Y5-3W2V] (warning clients that “while the prospect of costs savings may be attractive, employers should be wary when considering whether to require employees to be vaccinated. The potential legal ramifications and costs could be colossal.”).

Concerns about union opposition and potential liability under Title VII and the ADA may explain why mandates are so rare. Under Title VII, an employer must accommodate an employee's religious objections unless accommodation will impose an undue hardship.²³⁰ An accommodation imposes an undue hardship if it will result in "more than a *de minimis* cost" to the employer.²³¹ The ADA defines undue hardship differently and sets a higher standard for employers.²³² "Undue hardship means, with respect to the provision of an accommodation, *significant* difficulty or expense incurred by a covered entity."²³³

The EEOC has also issued guidance to employers in the context of pandemic²³⁴ influenza and noted that the reasonable accommodation requirements under Title VII and the ADA might necessitate exemptions for employees if the employer imposes an influenza vaccine requirement. The EEOC concluded that even during a pandemic, "[g]enerally, ADA-covered employers should consider simply encouraging employees to get the influenza vaccine rather than requiring them to take it."²³⁵ Notwithstanding the EEOC's advice, it may be worthwhile for some employers to require at least some vaccinations, even if they allow exemptions for employees with religious objections or medical disabilities.

Consider companies with many employees whose business demands peak during flu season.²³⁶ The company can suffer significant losses in productivity, profits, and experience increased healthcare costs if many key employees are out with the flu at any given time. Making flu shots available may be sufficient to get a substantial number of employees to get vaccinated voluntarily, but if vaccine fears drive down vaccination rates, the employer may consider imposing a mandate. If the jobs are in high demand and there is a large pool of willing applicants, the mandate is likely to be successful. In a tight job market, or if opposed by the relevant unions, the mandate may not be feasible even if it is legal.²³⁷

Compulsory vaccination policies may also be prudent during an outbreak. In the event of an outbreak of a vaccine-preventable disease such as measles, an employer may have an incentive to ensure that their workforce is not vulnerable. If the employer can demonstrate that its workforce is susceptible to an outbreak, that

²³⁰ Cloutier v. Costco Wholesale Corp., 390 F.3d 126, 133 (1st Cir. 2004).

²³¹ Trans World Airlines, Inc. v. Hardison, 432 U.S. 63, 65 (1977).

²³² See discussion *supra* Part II.E.

²³³ 29 C.F.R. § 1630.2(p)(1) (2012) (emphasis added); see discussion *supra* Part II.E.

²³⁴ See Ctrs. for Disease Control & Prevention, *Pandemic Basics*, <https://www.cdc.gov/flu/pandemic-resources/basics/index.html> [<https://perma.cc/X8XQ-F5TW>] (last updated Nov. 3, 2016).

²³⁵ U.S. Equal Emp. Opportunity Comm'n, *Pandemic Preparedness in the Workplace and the Americans with Disabilities Act*, https://www.eeoc.gov/facts/pandemic_flu.html [<https://perma.cc/8K62-8BLC>] (last updated Oct. 9, 2009).

²³⁶ Examples might include UPS or Amazon during the Christmas holiday season.

²³⁷ See *Virginia Mason Hosp. v. Washington State Nurses Ass'n*, 511 F.3d 908, 912, 917 (9th Cir. 2007) (holding that the hospital could not unilaterally impose a vaccine mandate without bargaining with the nurses' union as required by the parties' collective bargaining agreement).

an outbreak among its employees would create a serious economic hardship, and that the required vaccine is safe,²³⁸ the employer will have a strong case for requiring employees to be vaccinated. Depending upon the factors outlined by the EEOC,²³⁹ the employer may need to accommodate religious or disability-based exemption requests, and if the employees belong to a union, there may be collective bargaining requirements.²⁴⁰ However, if the employer makes the decision carefully and thoughtfully, the risk that an employee will successfully sue the employer should be low.²⁴¹

2. *Do Employers Have a Duty to Mandate Vaccination for the Protection of Employees, Customers, or Vendors?*

Neither the EEOC nor many of the employment law letters, law firm blogs, or newsletters discuss potential liability for *failing* to mandate vaccination. The fact that there have not been any high-profile lawsuits alleging negligence by employers—much less a finding of liability—likely reinforces the notion that the risks associated with a mandate are higher than the risk of not imposing a mandate. In fact, an employee trying to establish liability faces several obstacles to proving that the employer’s lack of a vaccine mandate resulted in a compensable loss to the employee. The first and biggest challenge for the employee is establishing that the employer owed a duty to the employee to prevent transmission of vaccine-preventable diseases.²⁴²

²³⁸ The medical and scientific communities should assess vaccine safety, not the employee or the employer.

²³⁹ *Pandemic Preparedness*, *supra* note 235 (“An accommodation poses an ‘**undue hardship**’ if it results in significant difficulty or expense for the employer, taking into account the nature and cost of the accommodation, the resources available to the employer, and the operation of the employer’s business.”).

²⁴⁰ *See Virginia Mason*, 511 F.3d at 912, 917 (holding that hospital must comply with collective bargaining agreement before imposing vaccine mandate).

²⁴¹ *See* discussion of other vaccines *infra* Part VI.

²⁴² *Keller v. Koca*, 111 P.3d 445, 448 (Colo. 2005) (“To establish liability [for negligence], the plaintiff must prove that the employer has a duty to prevent an unreasonable risk of harm to third persons to whom the employer knows or should have known that the employee would cause harm.”).

OSHA may establish such a duty if the employee can prove that a low vaccination rate in the workplace created an unsafe or unhealthy environment.²⁴³ During a pandemic or even a local outbreak, the employee may be able to meet this burden if the conditions at the workplace make transmission between employees—or between customers and employees—likely.²⁴⁴ If the risk of contracting a contagious disease is a hazard under OSHA, the employer has an obligation to eliminate the hazard.²⁴⁵ Requiring employees to be vaccinated is one way to fulfill that obligation.

However, if the employee brings a common law negligence claim, the employee might have their recovery limited or barred under the doctrine of avoidable consequences or comparative fault.²⁴⁶ The most obvious argument would be that the employee could have protected herself by getting vaccinated. Unless the employee has a medical condition that makes vaccination unadvisable, it will be difficult to prove that the employer's decision not to mandate vaccination for all employees was the proximate cause of the employee's illness. Even an employee who has a compromised immune system or who is unable to be vaccinated for medical or religious reasons can seek an accommodation from the employer—such as being allowed to work from home or take paid sick leave during the outbreak.

3. *For the Benefit of Customers or Vendors*

Businesses that cater to or have high numbers of customers who are pregnant, parents or caregivers, or children (e.g., Motherhood Maternity, Disneyland, Babies 'R Us, or a medical supply store) may consider mandatory vaccination of employees for the benefit of their customers. Not all unvaccinated employees pose a risk to customers and therefore not all employees need to be vaccinated against all diseases. However, those who are in sufficiently close contact where a serious, vaccine-preventable disease can be transmitted, may pose a risk to customers. This in turn may pose a business or litigation risk to their employers.

The risk of legal liability is probably small for most businesses. While a business has a duty to its customers, in most cases courts are unlikely to hold that the duty encompasses protecting customers from vaccine-preventable diseases.

²⁴³ See, e.g., *Employer Guidance*, *supra* note 72.

²⁴⁴ See *id.*

²⁴⁵ 29 U.S.C. § 654 (2011).

²⁴⁶

Contributory fault shall not bar recovery in an action by a claimant to recover damages for fault resulting in death or in injury to person or property unless the claimant bears a greater percentage of fault than the combined percentage of faulty attributed to the defendants, third-party defendants and persons who have been released, but any damages allowed shall be diminished in proportion to the amount of fault attributable to the claimant.

IOWA CODE § 668.3 (2011).

Unless the employees pose a greater risk than the public, there is no reason to believe that a business must protect its customers from risks that the customer is likely to encounter anywhere else. Courts would also need to consider the extent to which customers are responsible for protecting themselves by getting vaccinated. Finally, proving that the customer contracted a vaccine-preventable disease from the employee of a particular business may be difficult.

However, the threat of liability may be greater for businesses that target customers who are unlikely or unable to be vaccinated. For example, a store that specializes in clothes and furnishings for infants can expect customers to bring their infants into the store with them, and those infants may be too young to be vaccinated against many diseases. A judge or jury could find that it is foreseeable that unvaccinated and vulnerable infants would encounter employees of the store and that the business's duty of reasonable care includes an obligation to ensure that the employees do not pose an unreasonable risk of harm to customers or their infants. Other factors that may affect liability include whether an employer allowed or encouraged employees to stay at work when they are sick,²⁴⁷ whether the employer encouraged vaccination and how successful any voluntary program has been, and whether the workplace is cleaned and disinfected adequately and frequently.

Even if a customer cannot successfully sue a business, a business may suffer economic losses if customers even suspect that an employee transmitted a serious illness to a customer. The infant clothing store may lose customers if it becomes known—or believed—that another customer's infant contracted the flu or pertussis from an employee of the store. Conversely, customers may be more likely to patronize a business that publicizes its efforts to protect vulnerable customers against vaccine-preventable diseases or during an outbreak. A store that targets parents of young babies may benefit from assuring customers that all its employees have been vaccinated.

Yet even recent high profile outbreaks do not appear to have motivated employers to consider mandatory vaccinations. When a measles outbreak in California was linked to the Disneyland Park and Resort, the Los Angeles Times reported that five Disney Resort employees had been diagnosed with measles.²⁴⁸

²⁴⁷ Studies have shown that most American workers go to work even when they are sick. See *Fourth Annual Staples Survey Shows Alarming Increase in Sick People Coming to Work Contagious, Despite Knowing How to Try to Prevent the Flu*, STAPLES (Oct. 21, 2013), <http://staples.newshq.businesswire.com/press-release/products-services/fourth-annual-staples-survey-shows-alarming-increase-sick-people-com#axzz2iZ3JPWcY> [<https://perma.cc/KJ8Y-D96W>] (discussing annual survey conducted by office supply company Staples). Workers refuse to stay home for many reasons, including fear of losing their jobs, the need for a paycheck and no paid sick leave, fear of getting behind on their work, and employer insistence. See Eliza Barclay, *Many Food Workers Keep Working While Sick, Survey Finds*, NPR (June 6, 2012), <http://www.npr.org/sections/thesalt/2012/06/06/154442191/many-food-workers-keep-working-while-sick-survey-finds> [<https://perma.cc/QH39-Z9AM>] (discussing food borne illnesses transmitted by people who pick, process, prepare, and sell food).

²⁴⁸ Rosanna Xia et al., *Disney measles outbreak: Resort asks staff for proof they're*

Disney reportedly placed those employees and all other employees who had contact with those employees on paid leave and asked them to stay home until they could confirm that they were vaccinated or had developed an immunity to the disease.²⁴⁹ Disney also offered vaccinations to employees.²⁵⁰ Despite the outbreak and resulting public relations challenges, there is no indication that Disney considered requiring all employees to be vaccinated.²⁵¹ Perhaps this is because other unvaccinated children are a significant risk factor and the park is unlikely to require all guests to be vaccinated. The same is probably true for most businesses that cater to children or families with young children. For example, a parent shopping in Babies ‘R Us is likely to encounter at least as many children as employees. An employer is unlikely to be found negligent for failing to reduce the risk to a plaintiff if a significant risk still exists due to other customers because the plaintiff would be unable to prove that the failure to mandate vaccination of employees—as opposed to contact with other customers—caused the harm.²⁵²

VI. OTHER VACCINATIONS

Influenza and pertussis vaccines have been available and studied for many years.²⁵³ The risk of serious complications from either vaccine is far lower than the risk of serious illness or death from the diseases.²⁵⁴ Mandating these vaccines for healthcare workers or those who encounter people who are especially vulnerable to contracting the diseases and developing serious or life-threatening complications is not especially controversial. But the experience with these vaccines does not provide much guidance for states or employers when faced with an outbreak of a disease for which there is a new vaccine or a vaccine with higher incidences of more serious complications.

protected, L.A. TIMES (Jan. 21, 2015), <http://www.latimes.com/local/lanow/la-me-ln-disneyland-measles-outbreak-20150121-story.html> [<https://perma.cc/8JNP-4YVR>]. Two of the employees had been vaccinated; the vaccination status of the other three was unknown. *Id.*

²⁴⁹ Employees could provide medical records to prove they had been vaccinated. Immunity could be established by a blood test. *Id.*

²⁵⁰ *Id.*

²⁵¹ *See id.* (reporting that Disney employees “who had not been vaccinated or could not confirm their immunity status were asked to go on paid leave until their status could be confirmed” but not indicating that Disney required employees to be vaccinated).

²⁵² *See Keller v. Koca*, 111 P.3d 445, 447 (Colo. 2005) (noting that a successful negligence claim requires proof that the breach of the duty caused the plaintiff’s harm).

²⁵³ Ctrs. for Disease Control & Prevention, *Influenza (Flu) Vaccine Safety*, <https://www.cdc.gov/flu/protect/vaccine/vaccinesafety.htm> [<https://perma.cc/XLB9-XM6S>] (last updated Oct. 16, 2015) (noting that “[f]or more than 50 years, hundreds of millions of Americans have safely received seasonal flu vaccines” and linking to flu vaccine safety information).

²⁵⁴ *Key Facts About Seasonal Flu Vaccine*, *supra* note 132.

A. New Vaccines

Scientists are constantly working to develop new vaccines. If there is an outbreak of a serious disease for which a new vaccine has been developed, states and employers—healthcare employers in particular—will need to have a framework for determining: who should receive the vaccine, whether those persons should be encouraged or required to receive the vaccine, and what exemptions, if any, should be allowed. Public policy officials and private employers will have to balance the risk to the employees from the vaccine against the risk that the disease poses to employees, patients or customers, and the economic health of the business.

Government employers face the same constitutional concerns that apply to current state influenza mandates and the smallpox vaccine policy approved by the Court in *Jacobson*. Specifically, mandates will likely be upheld so long as the new vaccine requirements are not arbitrary, unreasonable, or oppressive.²⁵⁵ While that bar is fairly low for vaccines that have been tested and proven safe and effective over time, it is a higher hurdle when the safety and efficacy of the vaccine is not clearly established or when the disease at issue is less catastrophic than smallpox or less contagious than influenza. While private employers retain the relative freedom to impose vaccination requirements on their employees—subject to Title VII, the ADA, and union collective bargaining requirements—there are still pragmatic economic concerns to be considered. The employer’s conclusions about whether to impose a mandate will depend on the seriousness and contagiousness of the disease for which the vaccine was developed, and on the data available regarding the vaccine’s safety.

Zika and Ebola are two examples of highly contagious diseases which can have debilitating or deadly complications.²⁵⁶ Governments and private companies in many countries are developing and testing vaccines for both viruses.²⁵⁷ Employers’ responses to these vaccines will likely differ based not only on the perceived safety of the vaccine, but also the risk to employees, patients, or customers if employees are not vaccinated.

²⁵⁵ *Jacobson v. Massachusetts*, 197 U.S. 11, 29–28 (1905).

²⁵⁶ See discussion *infra* Part VI.A.1–2.

²⁵⁷ On March 31, 2017, the National Institute of Health (“NIH”) announced that “[v]accinations have begun in a multi-site Phase 2/2b clinical trial testing an experimental DNA vaccine designed to protect against disease caused by Zika infection.” Nat’l Inst. of Health, *Phase 2 Zika Vaccine Trial Begins in U.S., Central and South America* (Mar. 31, 2017), <https://www.nih.gov/news-events/news-releases/phase-2-zika-vaccine-trial-begins-us-central-south-america> [<https://perma.cc/AQ3C-JUT2>]; see also Ctrs. for Disease Control & Prevention, *Sierra Leone Trial to Introduce a Vaccine Against Ebola (STRIVE) Q&A*, <https://www.cdc.gov/vhf/ebola/strive/qa.html> [<https://perma.cc/K6SP-GBRW>] (last updated Apr. 20, 2016) (discussing Ebola vaccine clinical trial co-sponsored by The College of Medicine and Allied Health Sciences (“COMAHS”), University of Sierra Leone, the Sierra Leone Ministry of Health and Sanitation (“MoHS”), and the U.S. Centers for Disease Control and Prevention (“CDC”)).

1. *The Zika Virus*

The Zika virus is spread primarily through mosquito bites, but authorities have confirmed that it can be transmitted by a mother to her child during birth, sexual contact between a man and his partner, and blood transfusions.²⁵⁸ In addition, there has been one confirmed case of transmission through sexual contact from a woman to a man,²⁵⁹ and at least one case in which officials cannot determine the method of transmission.²⁶⁰ Most people infected with the Zika virus suffer only mild symptoms with no long-term complications.²⁶¹ However, Zika infection during pregnancy can cause birth defects, including hearing loss, eye defects, impaired growth, severe brain defects, and microcephaly.²⁶² With so many known methods of transmission, the possibility of unknown methods of transmission, and severe possible consequences for pregnant women and their babies, Zika presents a potential public

²⁵⁸ Ctrs. for Disease Control & Prevention, *Zika Virus: Transmission & Risks*, <http://www.cdc.gov/zika/transmission/index.html> [<https://perma.cc/GTY6-F6N3>] (last updated Apr. 28, 2017).

²⁵⁹ Ctrs. for Disease Control & Prevention, *Suspected Female-to-Male Sexual Transmission of Zika Virus—New York City, 2016*, http://www.cdc.gov/mmwr/volumes/65/wr/mm6528e2.htm?s_cid=mm6528e2_ [<https://perma.cc/A8CZ-M6XP>] (last updated July 22, 2016).

²⁶⁰ Clyde Hughes, *Zika Utah Mystery: Sex-Less, Mosquito-Less Transmission*, NEWSMAX (July 19, 2016), <http://www.newsmax.com/TheWire/zika-utah-mystery/2016/07/19/Id/739321/> [<https://perma.cc/96RM-YQJU>]. County health officials were investigating the case of a Utah man who was the caregiver for a man with Zika who died. The caregiver was later diagnosed with Zika, but he had not had sexual contact with anyone who had Zika, had not traveled to a Zika-infected area, and there were no known Zika-carrying mosquitos in Utah. *Id.*

²⁶¹ Ctrs. for Disease Control & Prevention, *Zika Virus: Symptoms, Testing, & Treatment*, <http://www.cdc.gov/zika/symptoms/index.html> [<https://perma.cc/H3XG-9H2V>] (last updated June 21, 2016).

²⁶² Ctrs. for Disease Control & Prevention, *Zika Virus: Addressing the Growing Public Health Threat* (Feb. 24, 2016), <http://www.hhs.gov/asl/testify/2016/02/t20160224c.html> [<https://perma.cc/ARK7-J5N8>] [hereinafter *Zika Virus: Addressing the Threat*]; Ctrs. for Disease Control & Prevention, *Zika Virus: Health Effects and Risks*, <http://www.cdc.gov/zika/pregnancy/question-answers.html> [<https://perma.cc/45KJ-VQEY>] (last updated Aug. 9, 2016).

health disaster.²⁶³ The potential consequences of an uncontrolled outbreak have spurred research and testing of Zika vaccines,²⁶⁴ but it will likely be several years before a vaccine is widely available.²⁶⁵

If a Zika vaccine is finally approved for use and is proven safe and effective, then compulsory vaccination of all U.S. residents and visitors would undoubtedly be an effective means of reducing or eliminating the risk to pregnant women and their babies. However, it is highly unlikely that any state or the federal government would take such an aggressive—and unprecedented—approach. While the states might have authority to implement such a policy, it is not a certainty.²⁶⁶ States have rarely imposed such widespread mandates and would be justifiably reluctant to impose the mandate for a Zika vaccine because the state would need to prove that the mandate was reasonable and not arbitrary or oppressive.²⁶⁷

Unlike influenza or pertussis—which can be transmitted through casual contact—the only known methods for human-to-human transmission of Zika require intimate contact.²⁶⁸ While there is one case of Zika transmission without any intimate contact,²⁶⁹ that is probably not sufficient to justify mandatory vaccination of every resident who might come in casual contact with someone infected with the Zika virus. If public health authorities confirm that Zika can be transmitted through casual contact, a stronger case could be made for state mandated vaccination.²⁷⁰

²⁶³ *Zika Virus: Addressing the Threat*, *supra* note 262. The governor of Florida signed an executive order declaring a public health emergency in counties where Zika had been diagnosed. *Gov. Rick Scott Directs Public Health Emergency in Four Counties for Zika Virus*, RICK SCOTT: 45TH GOVERNOR OF FLORIDA (Feb. 3, 2016), <http://www.flgov.com/2016/02/03/gov-rick-scott-directs-public-health-emergency-in-four-counties-for-zika-virus/> [<https://perma.cc/8ZKZ-7JFB>].

²⁶⁴ Nat'l Inst. of Health, *Zika Virus Vaccines* (Apr. 25, 2017), <https://www.niaid.nih.gov/diseases-conditions/zika-vaccines> [<https://perma.cc/67Y9-36EL>] (listing and describing potential vaccines in various stages of testing).

²⁶⁵ *Id.* The National Institute of Allergy and Infectious Diseases (“NIAID”), part of the National Institutes of Health (“NIH”), has begun

a multi-site Phase 2/2b clinical trial testing an experimental DNA vaccine. . . . The two-part trial, called VRC 705, further evaluates the vaccine’s safety and ability to stimulate an immune response in participants, and assesses the optimal dose for administration. It also will attempt to determine if the vaccine can effectively prevent disease caused by Zika infection.

Phase 2 Zika Vaccine, *supra* note 257. The study is not expected to be completed until 2019. *Id.*

²⁶⁶ See *Jacobson v. Massachusetts*, 197 U.S. 11, 23–25 (1905) (recognizing the state’s authority under its police powers to enact a compulsory smallpox vaccination law).

²⁶⁷ *Id.* at 28–29.

²⁶⁸ *Zika Virus: Transmission & Risks*, *supra* note 258.

²⁶⁹ Hughes, *supra* note 260.

²⁷⁰ The federal government could rely on its authority under the Commerce Clause if the spread of Zika has a substantial effect on interstate commerce, but it is not clear that

Otherwise, requiring every inhabitant of the state to be vaccinated against a disease that produces only mild, temporary symptoms in the vast majority of the population could easily be labeled unreasonable or oppressive. The more likely response is that states or municipalities with diagnosed cases of Zika will strongly encourage pregnant women, women who may become pregnant, and their partners to be vaccinated. States may also require healthcare workers to be vaccinated, but only if they can prove that the targeted employees pose an identifiable risk to patients (which is unlikely based on the current evidence regarding transmission).

The issue is further complicated by the realization that far fewer cases of microcephaly than expected were diagnosed among babies born after a Zika outbreak in Brazil.²⁷¹ After a 2015 outbreak of Zika in Brazil, thousands of babies were born with microcephaly.²⁷² After the 2016 outbreak, fewer than one hundred cases of microcephaly were identified.²⁷³ While the reason for the decrease is unknown, some speculate that researchers overestimated the number of Zika cases.²⁷⁴ Another possibility is that Zika alone is not responsible for the birth defects; instead they may result when another infection makes the Zika infection worse or increases the risk of microcephaly.²⁷⁵ Until that mystery is solved, vaccination opponents could argue that vaccines may not be necessary to prevent birth defects and, consequently, mandatory vaccination is unreasonable or arbitrary.

In the absence of a state-imposed requirement, healthcare facilities and other employers will have to decide whether to impose a vaccine mandate on all or some employees. In an at-will employment context, an employer can require vaccination as a condition of continued employment.²⁷⁶ However, employees with religious or medical objections have a strong case for an exemption.²⁷⁷ As noted above, the Zika virus is not known to be transmitted through casual contact.²⁷⁸ Since the risk of the employee either contracting the virus from or transmitting the virus to another employee is small, there is little risk that the employer will suffer an economic loss

sufficient evidence exists to support that claim. U.S. CONST. art. I, § 8.

²⁷¹ *Fewer Zika-Linked Birth Defects Than Expected*, NPR (Mar. 30, 2017), <http://www.npr.org/2017/03/30/522015647/fewer-zika-linked-birth-defects-than-expected> [<https://perma.cc/6SLJ-L5CH>].

²⁷² *Id.*

²⁷³ *Id.*

²⁷⁴ *Id.*

²⁷⁵ *Id.*

²⁷⁶ *See, e.g.*, 18 NO. 9 N.D. EMP. L. LETTER 3 (2013) (“As a general rule, most North Dakota employers may institute a mandatory vaccine policy and fire workers for not complying with the policy. That’s because in North Dakota, most employment is ‘at will’ meaning most employees can be fired for any lawful reason at any time.”); 20 NO. 8 MISS. EMP. L. LETTER 3 (2013) (“All Mississippi employers can technically require at-will employees to get flu shots regardless of their industry.”).

²⁷⁷ *See* 18 NO. 9 N.D. EMP. L. LETTER 3 (2013) (explaining that antidiscrimination laws may make vaccination policies unlawful); 20 NO. 8 MISS. EMP. L. LETTER 3 (2013) (“An employee whose religious beliefs and practices prevent her from having vaccinations and not taking medications cannot be forced to get a flu shot or fired for refusing the shot.”).

²⁷⁸ *Zika Virus: Transmission & Risks*, *supra* note 258.

due to the employee's illness. Likewise, there is little chance that the employee will infect another employee, customer, or patient. Consequently, for most employers there is little risk of legal liability if employees are not vaccinated against Zika and it will be difficult for an employer to prove that religious or medical exemptions impose an undue burden (under the strict ADA standard or more lenient Title VII standard) on the employer.

The case for compulsory vaccination further weakens if the vaccine is effective for most people who receive it. In that circumstance, women who are, or who may get pregnant, can protect themselves most effectively by getting vaccinated and ensuring that their sexual partners are vaccinated. Even if most people are vaccinated, unvaccinated people will not be protected against transmission from mosquitos to humans.²⁷⁹ Thus, vaccination of individuals and eliminating the mosquito populations would be the most effective controls.²⁸⁰

While the Zika virus will not affect most employers (making mandatory vaccination unnecessary), there are some employers who may have a strong incentive to require vaccination if and when a vaccine becomes available.²⁸¹ The CDC and OSHA have issued guidance for employees who are likely to come in contact with mosquitos carrying the Zika virus, such as landscapers and others who work outdoors.²⁸² If a Zika vaccine becomes available, an employer might have an

²⁷⁹ *Id.*

²⁸⁰ The HPV vaccine presents a similar situation. HPV itself is relatively harmless, but increases the risk of some cancers, including cervical cancer. *See* Ctrs. for Disease Control & Prevention, *Human Papillomavirus (HPV)*, https://www.cdc.gov/hpv/?s_cid=PN-NCIRD-Teen-AW-HPVQuestions-HPV_Prevention-3 [<https://perma.cc/5CMN-GA4U>] (last updated Jan. 25, 2017) (describing the characteristics of the HPV vaccine). Thus, unlike other vaccine-preventable diseases, vaccination is intended to prevent secondary effects and not the disease vaccinated against. *Id.* Moreover, HPV is only effective before infection, which occurs through sexual contact. *Id.* For these reasons, vaccination is most effective before a person becomes sexually active. *Id.* Thus, the target group for vaccination is adolescents and the desired result is a longer-term reduction in cancer rates. *Id.* Mandating vaccination for adult healthcare workers, school employees, or any other employee would not serve any significant public health purpose.

²⁸¹ The CDC reports that mosquitos have begun transmitting the Zika virus in the United States. Ctrs. for Disease Control & Prevention, *Advice for People Living in or Traveling to South Florida*, <http://www.cdc.gov/zika/intheus/florida-update.html> [<https://perma.cc/E5SW-JDMG>] (last updated June 20, 2017). On August 1, 2016, the Florida Department of Health reported that mosquitos are transmitting the virus in a Miami neighborhood. *Id.* The CDC advised pregnant women not to travel to the area. *Id.* This is the first time the CDC has ever issued a travel advisory for a place within the continental United States. Sandee LaMotte, *CDC Issues Historic Travel Warning Over Miami Zika Outbreak*, CNN (Aug. 3, 2016), <http://www.cnn.com/2016/08/01/health/cdc-miami-florida-zika-travel-warning/index.html> [<https://perma.cc/32GX-E75S>].

²⁸² *Employer Guidance*, *supra* note 72 (“Workers who are exposed on the job to mosquitoes or the blood or other body fluids of infected individuals may be at risk for occupationally acquired Zika virus infection.”).

obligation to give employees access to the vaccine.²⁸³ While pregnant women are at greatest risk, an employee who may transmit the virus to a woman who is pregnant, or who may become pregnant, should also be protected.²⁸⁴ Consequently, OSHA recommends reassigning any women who are pregnant, or who may become pregnant, *and* any man who has a sexual partner who may become pregnant to indoor work assignments.²⁸⁵

Obviously, for an employer whose primary business requires employees to work outside (e.g., construction, landscaping, road maintenance, park ranger, lifeguard), that advice might require reassignment of many workers. In those circumstances, requiring employees to get the Zika vaccine may be necessary to protect employees and their sexual partners. Whether the risk rises to the level of a “recognized hazard” that is “likely to cause death or serious physical harm to . . . employees” under OSHA²⁸⁶ is less clear if it is the employee’s sexual partner and any child they conceive that is at risk of harm. The employer might offer free vaccination out of concern for employees and their families and perhaps out of concern for increased health care costs, but it is unclear if a mandate would be warranted.

2. *The Ebola Virus*

Unlike the Zika virus, the Ebola virus is deadly²⁸⁷ and can be transmitted through contact with the bodily fluids of an infected person, including sweat, blood, vomit, feces, and semen.²⁸⁸ While this does not pose a high risk to the general public

²⁸³ OSHA requires employers to provide a workplace “free from recognized hazards that are causing or are likely to cause death or serious physical harm to [their] employees.” 29 U.S.C. § 654 (2012).

²⁸⁴ *Employer Guidance*, *supra* note 72.

²⁸⁵ *Id.*

²⁸⁶ 29 U.S.C. § 654 (2012).

²⁸⁷ Ebola has a death rate of up to 90%. World Health Org., *Frequently Asked Questions on Ebola Virus Disease*, <http://www.who.int/csr/disease/ebola/faq-ebola/en/> [<https://perma.cc/95L5-5XSP>] (last updated May 2017).

²⁸⁸ Ctrs. for Disease Control & Prevention, *Why Ebola Is Not Likely to Become Airborne* (2015), <http://www.cdc.gov/vhf/ebola/pdf/mutations.pdf?pdf=image> [<https://perma.cc/TT7R-SG9X>].

Ebola virus is spread through direct contact with the blood or body fluids (including but not limited to feces, saliva, sweat, urine, vomit, and semen) of a person who is sick with or has died from Ebola. The virus in blood and body fluids can enter another person’s body through broken skin or unprotected mucous membranes in, for example, the eyes, nose, or mouth.

Id. It may be possible for the virus to be transmitted through the semen of men who have recovered from Ebola. *Id.* See also Ctrs. for Disease Control & Prevention, *About Ebola Virus Disease*, <http://www.cdc.gov/vhf/ebola/about.html> [<https://perma.cc/U2L3-Q7VP>] (last updated Feb. 18, 2016) (noting the possibility of transmission from contact with the

when there are isolated cases of Ebola, there is a serious risk in healthcare settings because healthcare workers are likely to come in contact with the infected bodily fluids of Ebola patients.²⁸⁹ When a patient with Ebola was admitted to a hospital in Dallas in the fall of 2014, two nurses who cared for him became infected.²⁹⁰ In light of that experience, it seems likely that healthcare facilities would strongly consider requiring employees to take the vaccine if it becomes available.²⁹¹

There is also a risk to family members and others who care for Ebola patients, since the symptoms are nonspecific and the patient may be initially misdiagnosed with another nonfatal illness such as pneumonia, or general gastrointestinal distress.²⁹² Those family members may then become infected and risk infecting others. This widens the circle of potential victims, but not dramatically. If there are only a few isolated cases, the disease can be contained fairly quickly without the need for large-scale vaccination programs. However, the fact that the disease is often fatal and the symptoms are perceived as gruesome may lead to higher demand for the vaccine.²⁹³

In 2014, when the Ebola outbreaks in Guinea, Sierra Leone, and Liberia were at their peak, a single medical aid worker who worked with Doctors Without Borders in Guinea developed Ebola after returning to New York.²⁹⁴ Meanwhile, two

semen of a man who has recovered from Ebola). It is not known whether the virus can be transmitted through the vaginal fluid from a woman with Ebola. Ctrs. for Disease Control & Prevention, *Ebola (Ebola Virus Disease): Transmission*, <http://www.cdc.gov/vhf/ebola/transmission/index.html> [<https://perma.cc/WBN8-SAG9>] (last updated July 22, 2015).

²⁸⁹ *Id.*

²⁹⁰ *Id.*; Manny Fernandez, *2nd Ebola Case in U.S. Stokes Fears of Health Care Workers*, N.Y. TIMES (Oct. 12, 2014), http://www.nytimes.com/2014/10/13/us/texas-health-worker-tests-positive-for-ebola.html?_r=0 [<https://perma.cc/2H2S-5A3V>].

²⁹¹ In fact, a newly developed vaccine was highly effective in clinical trials and is being used in the Democratic Republic of Congo to try to halt an outbreak. Michaelen Doucleff, *Powerful New Ebola Vaccine Heads to Congo to Help Stop Outbreak*, NPR (May 30, 2017), <http://www.npr.org/sections/goatsandsoda/2017/05/30/530742469/powerful-new-ebola-vaccine-heads-to-congo-to-help-stop-outbreak> [<https://perma.cc/8B43-AGEN>].

²⁹² *Id.*

²⁹³ See Josh Sanburn, *The Psychology Behind Our Collective Ebola Freak-Out*, TIME (Oct. 20, 2014), <http://time.com/3525666/ebola-psychology-fear-symptoms/> [<https://perma.cc/ZTT2-K3PX>] (discussing the near-panicked reaction of many Americans to the small number of Ebola cases in 2014).

Like the first cases of polio and HIV/AIDS, Ebola is something novel in the U.S. It is uncommon, unknown, its foreign origins alone often leading to fearful reactions. The fatality rate for those who do contract it is incredibly high, and the often gruesome symptoms—including bleeding from the eyes and possible bleeding from the ears, nose and rectum—provoke incredibly strong and often instinctual responses in attempts to avoid it or contain it.

Id.

²⁹⁴ Ctrs. for Disease Control & Prevention, *Cases of Ebola Diagnosed in the United States*, <http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/united-states-imported->

healthcare workers in Dallas tested positive for Ebola after treating Thomas Eric Duncan, a Liberian man who developed Ebola symptoms after arriving in Dallas.²⁹⁵ The nurses recovered, but the patient, Mr. Duncan, died eight days after the CDC confirmed his Ebola diagnosis.²⁹⁶ All of the people who came in contact with the Ebola patients were monitored for twenty-one days. The only transmission of the virus in the United States was from Mr. Duncan to the two Dallas healthcare workers. Mr. Duncan's was the only death from Ebola in the United States.²⁹⁷

Nevertheless, in response to public fears and outcry, the governors of New York, New Jersey, and Illinois instituted a twenty-one-day quarantine for all healthcare workers returning from West Africa who had contact with Ebola patients.²⁹⁸ A nurse who was placed in quarantine in New Jersey—even though she had tested negative for Ebola and did not have any symptoms—argued that the quarantine violated her rights and experts debated the legality of the quarantines.²⁹⁹ Public health officials criticized the quarantines as unnecessary in light of the strong medical consensus that people are not contagious until they develop symptoms of Ebola.³⁰⁰ As months passed without any new infections, the tidal wave of fear receded and the legal issues were left largely unresolved.³⁰¹ However, the extent of the fear and the nearly unprecedented—and medically unnecessary—quarantines imposed in response to those fears make vaccination mandates a real possibility.

The considerations for Ebola differ markedly from those raised by a Zika vaccine. While the Zika virus can only be transmitted by humans through intimate contact and only has serious consequences for a limited segment of the population, the Ebola virus has potentially fatal consequences for anyone who is infected.³⁰² Moreover, while transmission requires contact with bodily fluids, healthcare workers are at high risk for such contact and even people outside of the healthcare setting may be at risk if an outbreak occurs and infected people are not quickly diagnosed and isolated. Under these circumstances, healthcare facilities would have good reason to require vaccination for all who may encounter patients during an

case.html [https://perma.cc/DSE5-4D6E] (last updated Dec. 16, 2014).

²⁹⁵ *Id.*

²⁹⁶ *Id.*

²⁹⁷ *Id.*

²⁹⁸ Justin Worland, *Christie and Cuomo Announce Mandatory Ebola Quarantine*, TIME (Oct. 25, 2014), <http://time.com/3537755/ebola-new-york-new-jersey/> [https://perma.cc/76ZV-965N].

²⁹⁹ Jacob Gersham, *Experts Debate Legality of New Jersey's Ebola Quarantine Policy*, WALL ST. J. (Oct. 27, 2014), <http://blogs.wsj.com/law/2014/10/27/experts-debate-the-legality-of-new-jerseys-ebola-quarantine-policy/> [https://perma.cc/Y5CG-A7N2].

³⁰⁰ See *FAQs on Ebola*, *supra* note 287. People are not contagious until they develop symptoms. *Id.*

³⁰¹ Kaci Hicox, the nurse who was quarantined in New Jersey, filed suit in federal district court in New Jersey; that case is still pending although the State of New Jersey has filed a motion to dismiss. *Hicox v. Christie*, No. 2:15-cv-07647-KM-JBC, 2016 WL 211611 (D.N.J. Jan. 15, 2016).

³⁰² *FAQs on Ebola*, *supra* note 287.

outbreak. Whether states should impose a mandate for all inhabitants or even all healthcare workers in the absence of an outbreak or during an outbreak requires more careful consideration.³⁰³

States must still satisfy the courts that any mandatory vaccination policy is reasonable and not arbitrary or oppressive.³⁰⁴ In the absence of an outbreak, or more than a few isolated cases of Ebola, a mandatory vaccine policy is suspect.³⁰⁵ However, recent history has shown that the Ebola virus inspires fear and it may be easier to persuade courts that a vaccine mandate is reasonable, even if public health and policy officials deem it unnecessary.³⁰⁶

A new vaccine also raises concerns about safety and effectiveness. Without significant testing and a proven safety record, states are less likely to impose such a mandate and courts are more likely to strike them down if the state chooses to do so.³⁰⁷ If there is an outbreak, a mandate may be perceived as more reasonable and necessary to protect public health and safety.³⁰⁸ However, the state will likely have to convince opponents and the courts that any risks posed by the vaccine are justified by the greater risks of widespread Ebola outbreaks.

States may be able to meet this burden if an Ebola vaccine currently being tested continues to be as successful as it has been in early trials.³⁰⁹ In early tests the vaccine had only mild side effects (headaches and muscle pain)³¹⁰ and worked quickly (within 4–5 days).³¹¹ Approximately 4,000 individuals who had been exposed to the

³⁰³ For example, at the end of 2014 thirty-five hospitals in the United States had been designated as Ebola treatment centers. Ctrs. for Disease Control & Prevention, *35 U.S. Hospitals Designated as Ebola Treatment Centers* (Dec. 2, 2014), <https://blogs.cdc.gov/safehealthcare/35-u-s-hospitals-designated-as-ebola-treatment-centers/> [<https://perma.cc/Q2QK-2X7A>]. The administrators at those hospitals have a stronger incentive to require all employees to be vaccinated. However, in the beginning of an outbreak a person who has symptoms (and is therefore contagious) but has not been diagnosed with Ebola may go into a hospital that is not one of those designated treatment centers and expose healthcare workers. Similarly, a person may be exposed to Ebola in another country and not even suspect that they are infected with Ebola. That single case may not lead to an outbreak, but healthcare workers could still be exposed. That is precisely what happened in Dallas in 2014.

³⁰⁴ See *Jacobson v. Massachusetts*, 197 U.S. 11, 28 (1905); see also discussion *supra* Part II.A (discussing possible limits on states' right to impose vaccine mandates).

³⁰⁵ See *Jacobson*, 197 U.S. at 28.

³⁰⁶ See Sanburn, *supra* note 293 (discussing the near-panicked reaction of many Americans to the small number of Ebola cases in 2014).

³⁰⁷ See *Jacobson*, 197 U.S. at 28 (noting that courts may intervene if vaccination mandate is arbitrary or unreasonable).

³⁰⁸ See *id.*

³⁰⁹ Doucleff, *supra* note 291.

³¹⁰ *Id.*

³¹¹ Michaelen Doucleff, *First Ebola Vaccine Likely to Stop the Next Outbreak*, NPR (Dec. 22, 2016), <http://www.npr.org/sections/goatsandsoda/2016/12/22/506600875/first-ebola-vaccine-likely-to-stop-the-next-outbreak> [<https://perma.cc/X62B-HEKK>].

virus were given the vaccine; none of them developed the disease.³¹² But the vaccine has not completed the trials necessary to receive approval by the World Health Organization or the U.S. Food and Drug Administration.³¹³ Approval is expected sometime in 2018, but in the meantime it has been approved for use to fight an outbreak in the Democratic Republic of Congo.³¹⁴ However, there are still unanswered questions about the vaccine, including how long it is effective.³¹⁵ Such questions cannot be answered until the vaccine has been studied for a longer period of time, but it seems clear that short term effectiveness can be key to preventing an outbreak.³¹⁶

Considering the vaccine's effectiveness in preventing an outbreak, states—or municipalities—would have a powerful incentive to make the vaccine mandatory for at least some subset of the population. Healthcare workers are most likely to encounter bodily fluids of patients infected with the Ebola virus and become infected themselves. Considering this reality, hospitals have an obvious duty to their employees and other patients to minimize the risk that the employees will contract the virus or transmit it to others.³¹⁷ Providing protective gear and instruction on proper use of the gear is imperative,³¹⁸ but may not be sufficient. Other nurses who worked at the hospital where Mr. Duncan—the Dallas Ebola patient—was treated, told reporters that the protective gear that they were given to use when treating Ebola patients was inadequate, as was the training on how and when to use the equipment.³¹⁹ They also claimed to have encountered resistance when trying to follow isolation procedures.³²⁰ Staff allegedly did not follow protocols for processing specimens, leading to potential contamination of hospital systems.³²¹ The hospital disputed those reports³²² and it may be that the nurses who were infected

³¹² *Id.*

³¹³ *Id.*

³¹⁴ *Id.*

³¹⁵ *Id.*

³¹⁶ *Id.* “What is clear is that the vaccine offers short-term protection during outbreaks. And that’s exactly what’s needed to stop the virus from spreading and to keep small outbreaks from getting out of control.”

³¹⁷ Employers have a duty under OSHA to ensure that the workplace is safe, and OSHA has published “recommendations for protecting workers whose work activities are conducted in an environment that is known or reasonably suspected to be contaminated with Ebola virus (e.g., due to contamination with blood or other potentially infectious material).” U.S. Dep’t of Labor, *Ebola: Control and Prevention*, https://www.osha.gov/SLTC/ebola/control_prevention.html [<https://perma.cc/3FVW-FJQ5>] (last visited June 16, 2017).

³¹⁸ *Id.*

³¹⁹ *Dallas Nurses Accuse Hospital of Sloppy Ebola Protocols*, ABC NEWS (Oct. 15, 2014), <http://abcnews.go.com/Health/dallas-nurses-hospital-sloppy-ebola-protocols-union/story?id=26205956> [<https://perma.cc/XK6U-X7Y5>].

³²⁰ *Id.*

³²¹ *Id.*

³²² Geoffrey Mohan, *Dallas Hospital Shifts Blame to CDC on Ebola Protocols*, L.A. TIMES (Oct. 16, 2014), <http://www.latimes.com/nation/la-na-dallas-nurses-hospital-response-20141016-story.html> [<https://perma.cc/RBJ7-RGQC>] (reporting that the hospital

while treating Mr. Duncan failed to follow the procedures put in place by the hospital. Moreover, the CDC provided more guidance to hospitals after the Dallas cases were diagnosed,³²³ and state and federal authorities have changed their approach for treating Ebola patients.³²⁴

However, any system that requires perfect compliance 100% of the time is bound to have failures. A vaccine that is highly effective with only a few minor known side effects may be viewed as the only reasonably effective way to protect employees and patients. If so, then the state may require vaccination for those most likely to be infected.

One obvious and clear benefit to mandatory vaccination is that it protects employees who encounter infected patients before they are diagnosed with Ebola. In other words, before the employees are aware that they need to don protective gear and implement the procedures necessary to prevent transmission of the virus. While there have not been any new Ebola cases in the United States since October 2014, new cases of Ebola have been diagnosed in the Democratic Republic of Congo as late as April 2017.³²⁵ If the disease exists anywhere in the world from which people in the United States can travel, it is possible for new cases to be diagnosed here. But until that happens, healthcare workers are not likely to consider that a patient presenting with a fever, chills, and malaise may be infected with the Ebola virus.³²⁶

denied allegations inadequate training and procedures put employees or patients at risk).

³²³ *Ebola: Control and Prevention*, *supra* note 317.

³²⁴ 35 *U.S. Hospitals Designated as Ebola Treatment Centers*, *supra* note 303. The CDC describes a tiered approach, with healthcare facilities falling into one of three categories: (1) frontline healthcare facilities, (2) Ebola assessment hospitals, or (3) Ebola treatment centers. Ctrs. for Disease Control & Prevention, *Interim Guidance for U.S. Hospital Preparedness for Patients Under Investigation (PUIs) or with Confirmed Ebola Virus Disease (EVD): A Framework for a Tiered Approach*, <http://www.cdc.gov/vhf/ebola/healthcare-us/preparing/hospitals.html> [<https://perma.cc/9S35-A6VD>] (last updated Aug. 25, 2015). Most acute care facilities will be frontline healthcare facilities which should be able to identify and isolate patients who have been exposed to Ebola and have signs or symptoms of the virus, but will likely transfer the patients to Ebola assessment or treatment centers. *Id.* “Ebola assessment hospitals are facilities prepared to receive and isolate PUIs and care for the patient until a diagnosis of EVD can be confirmed or ruled out and until discharge or transfer is completed.” *Id.* “Ebola treatment centers are facilities that plan to care for and manage a patient with confirmed EVD for the duration of the patient’s illness.” *Id.* As of February 18, 2015, the CDC identified were fifty-five hospitals with Ebola treatment centers in eighteen states and the District of Columbia. *Id.*

³²⁵ Doucleff, *supra* note 291. Other West African nations have also seen outbreaks in 2015-2016. World Health Org., *End of Ebola transmission in Guinea* (June 1, 2016), <https://www.who.int/en/news/5301/end-ebola-transmission-guinea> [<https://perma.cc/XS35-M7SW>]. The World Health Organization declared that the Republic of Guinea was Ebola-free on June 1, 2016 but it had been declared Ebola-free in December 2015 only to have new cases diagnosed in March 2016. *Id.*

³²⁶ Ctrs. for Disease Control & Prevention, *Ebola Virus Disease (EVD) Information for Clinicians in U.S. Healthcare Settings*, <http://www.cdc.gov/vhf/ebola/healthcare->

An Ebola vaccine would protect against infection and prevent transmission when healthcare workers are least likely to protect themselves.

3. *Old Vaccines for New Outbreaks*

With respect to diseases for which vaccines have been available and in use for many years, there is likely to be sufficient information for employers—and courts—to determine whether the effectiveness of the vaccine and risks to patients justify mandatory vaccination over religious or medical objections. One example is the smallpox vaccine. The attacks of September 11, 2001 prompted federal officials to consider compulsory smallpox vaccination regulations for certain segments of the population, particularly those serving in the armed forces.³²⁷

As late as 2004, the smallpox vaccine was known to have potentially fatal side effects, particularly in those with compromised immune systems.³²⁸ Moreover, the vaccination process requires infecting the patient with the live virus into an open wound that takes weeks to heal.³²⁹ During that time, the vaccinated patient risks transmitting the virus to others.³³⁰ Given that the risk of an outbreak was thought to be small, it is not surprising that when offered the vaccine, most healthcare employers declined and only a small percentage of the targeted population was vaccinated.³³¹ Government officials did not attempt to persuade or pressure civilians to be vaccinated in greater numbers, but scholars have used that experience to theorize more effective ways for the government to approach large-scale vaccination

us/preparing/clinicians.html [<https://perma.cc/T8XJ-F8XP>] (last updated May 24, 2016).

Initial signs and symptoms are nonspecific and may include elevated body temperature or subjective fever, chills, myalgias, and malaise. Because of these nonspecific symptoms, particularly early in the course of the disease, EVD often can be confused with other more common infectious diseases such as malaria, typhoid fever, meningococemia, and other bacterial infections (for example, pneumonia).

Id.

³²⁷ See Edward P. Richards, Katherine C. Rathbun & Jay Gold, *The Smallpox Vaccination Campaign of 2003: Why Did It Fail and What Are the Lessons for Bioterrorism Preparedness?*, 64 LA. L. REV. 851, 894 (2004) (describing and analyzing the smallpox vaccination program instituted after the September 11, 2001 terrorist attacks).

³²⁸ *Id.* at 865–67 (discussing the contemporary smallpox vaccine and its complications).

³²⁹ *Id.*

³³⁰ *Id.*

³³¹ *Id.* at 853 (explaining that the civilian smallpox vaccination plan failed in large part because healthcare employers and institutions decided not to participate).

programs.³³² Without an identifiable and substantial risk of a smallpox outbreak, a state mandatory vaccination policy would likely be struck down as unreasonable and unconstitutional.

Private employers also need to be concerned about the potential impact of smallpox vaccination and potential liability flowing from transmission of the disease by the vaccinated employees to other employees and customers.³³³ The vaccinated employee could suffer side effects that result in an inability to work or illness requiring treatment, or both. If the vaccination poses a risk to people other than the vaccinated person, the employer may need to insist that the employee stay home or adopt procedures to reduce or eliminate the risk of transmission to others. In these cases, the employee may expect or demand compensation for lost work, medical treatment, and indemnity if the employee infects others and faces liability. In the absence of a specific, credible threat, employers have no basis to require smallpox vaccination.

A much stronger case can be made for measles vaccination (“MMR”).³³⁴ The measles virus is highly contagious and is potentially—though not typically—fatal. However, unlike the smallpox vaccine, the MMR vaccine carries a very low risk of side effects.³³⁵ Recent measles outbreaks may motivate some employers to consider requiring employees to prove that they have been vaccinated against measles or otherwise have developed immunity, at least during an outbreak.³³⁶ Any such policy would be for the benefit of the employer—to prevent having a large number of employees out sick at the same time—rather than to protect the employees, since employees can protect themselves simply by choosing to get vaccinated. While employers have not yet taken this step, even after several measles outbreaks, if the outbreaks increase in number or scope, and the risk of serious financial loss is great enough, employers may be willing to break new ground and impose a mandate.

³³² See *id.* The authors advocated preparing for the possibility that smallpox could be used as an agent of bioterrorism by immunizing specific groups of people to make them immune to smallpox. *Id.* at 904. Moreover, large quantities of the vaccine should be stockpiled securely in various locales; enough people should be trained to administer the vaccine that large numbers of people can be vaccinated quickly in the event of an outbreak. *Id.* at 901–04.

³³³ *Id.* at 866 (noting that the smallpox virus can be spread to others while the vaccination site heals).

³³⁴ Ctrs. for Disease Control & Prevention, *Complications of Measles*, <https://www.cdc.gov/measles/about/complications.html> [https://perma.cc/FM6C-TP9U] (last updated Mar. 3, 2017). Common side effects include ear infections which may lead to hearing loss. *Id.* More serious side effects include pneumonia and encephalitis. *Id.* “For every 1,000 children who get measles, one or two will die from it.” *Id.*

³³⁵ *Measles, Mumps, and Rubella (MMR) Vaccine Safety*, *supra* note 220 (noting a small risk of febrile seizures with no long-term effects and extremely rare cases of more serious allergic reactions to the MMR vaccine).

³³⁶ During the Disney measles outbreak, the Disney Corporation required employees to prove that they had been vaccinated before allowing them to return to work. See discussion *supra* Part III.A.1.

VII. CONCLUSION

Vaccines save lives. For this reason, states have ample incentive to encourage people of all ages to get vaccinated. However, states generally only require limited vaccinations for healthcare workers and schoolchildren. That leaves individual healthcare employers with the decision of whether to require other vaccinations, and nonhealthcare employers to decide whether and under what conditions to require any vaccinations for their employees. While most employers can legally require employees to get any vaccinations that the employer desires (with possible exemptions for religious and medical objections), there is rarely a compelling reason for such a mandate.

Yet, employers cannot afford to dismiss the possibility of a compulsory vaccination policy. During an outbreak of a highly contagious disease, or when their employees are likely to contract and transmit vaccine-preventable diseases to other employees, vulnerable patients, or customers, a targeted mandate may be necessary to avoid liability or serious business losses. Identifying when the employer has a duty to employees or customers and determining whether a vaccine mandate is necessary to fulfill that duty requires an understanding of the risks posed by the disease and those posed by the vaccine. Only by carefully weighing the risks can an employer decide whether a mandate makes sense legally and financially.