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Vindicating the Vaccine: Injecting Strength into Mandatory School Vaccination Requirements to Safeguard the Public Health

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VINDICATING THE VACCINE: INJECTING STRENGTH INTO MANDATORY SCHOOL VACCINATION REQUIREMENTS TO SAFEGUARD THE PUBLIC HEALTH

Abstract: An outbreak of measles in California in early 2015 triggered a nationwide discussion about childhood vaccination requirements and the growing “anti-vaccination” movement that has gained traction in certain parts of the country. Proponents of vaccination point to the real danger vaccine-preventable diseases pose and the need to bolster “herd immunity” through aggressive vaccination practices. Meanwhile, opponents decry vaccination predominantly for purported medical reasons, or otherwise object on religious or philosophical grounds. Courts in the United States, including the Supreme Court, have consistently upheld states’ rights to compel mandatory vaccination for schoolchildren to ensure the public health and prevent diseases like measles from plaguing the population. Although all states have mandatory vaccination requirements, most states provide for religious and some, philosophical, exemptions that allow parents to send their children to school vaccine-free. This Note argues that states should strengthen their vaccination requirements by limiting religious exemptions to only “genuine and sincere” religious beliefs that oppose vaccination, and do away with philosophical exemptions entirely. State legislatures can do this by either independently redrafting their vaccination statutes using New York’s statute as a model, or, alternatively, adopting a proposed uniform vaccination law, which would also use the New York framework.

INTRODUCTION

Sometime between December 17 and 20, 2014, a patient zero entered Disneyland Park in Anaheim, California and brought with her an unlikely guest: measles.¹ By early 2015, this extremely contagious and vaccine-preventable disease (“VPD”) had spread to a reported 100 confirmed cases across California and into Colorado, Utah, Oregon, Washington, Nebraska, and

¹ See Rong-Gong Lin II, *Measles Outbreak Spreading Beyond Disneyland Visitors*, L.A. TIMES (Jan. 17, 2015), <http://www.latimes.com/local/orangecounty/la-me-0118-measles-outbreak-20150118-story.html#page=1> [<http://perma.cc/F52E-5PG5>]. The identity of patient zero is yet unknown, but the first patient to be referred to the California Department of Public Health was an 11-year-old unvaccinated child who had visited one of the Disney theme parks during the exposure period. See Jennifer Zipprich et al., *Measles Outbreak—California, December 2014–February 2015*, CTRS FOR DISEASE CONTROL & PREVENTION MORBIDITY AND MORTALITY WKLY. R. (Feb. 20, 2015), http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6406a5.htm?s_cid=mm6406a5_w [<http://perma.cc/86FM-6NDR>].

Arizona.² In response, health officials in Orange County, California—a region with high rates of parents who opt out of vaccinating their children—ordered about two dozen high school students without proof of immunization to stay home after learning that an infected student had come to school following the school’s winter break.³

Vigorous vaccination practices largely eradicated measles in the western hemisphere in the 1990s, but many of those infected via this Disneyland outbreak were unvaccinated.⁴ A study by researchers at MIT, Boston Children’s Hospital, and Harvard Medical School indicated that substandard vaccination rates likely caused the rapid spread of the outbreak.⁵

It is not surprising that the disease found a foothold in the parts of California where vaccination levels for schoolchildren are markedly low, a reflection of an “anti-vaccination” movement that has developed in isolated but notable pockets across the nation.⁶ The “anti-vaccinationists” object to childhood inoculation on various grounds, but most commonly for religious or philosophical reasons, or because of beliefs that vaccines are unsafe.⁷ But as the movement gains traction and more and more parents refuse to vaccinate their children, the risks of a public health crisis, as evidenced by the Disneyland measles outbreak, grow increasingly real.⁸

² See Rong-Gong Lin II et al., *As Disneyland Measles Outbreak Spreads, O.C. Bars Students Lacking Proof of Shots*, L.A. TIMES (Jan. 20, 2015), <http://www.latimes.com/local/orange-county/la-me-measles-huntington-beach-20150121-story.html#page=1> [<http://perma.cc/CJ8R-3C6W>]; see also *Measles Cases and Outbreaks*, CTRS. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/measles/cases-outbreaks.html> [<http://perma.cc/YQ5F-HLLU>] (showing a map of the states and the number of people affected by the Disneyland outbreak).

³ See Lin et al., *supra* note 2.

⁴ See Lin, *supra* note 1; Zipprich et al., *supra* note 1 (providing statistics on vaccination rates of patients involved in the Disneyland outbreak). Measles presents as a rash but can spread surreptitiously for up to four days before any symptoms appear. See Bill Briggs, *Measles Outbreak Spreads in California, Other States*, NBC NEWS (Jan. 19, 2015), <http://www.nbcnews.com/health/health-news/measles-outbreak-spreads-california-other-states-n289091> [<http://perma.cc/3T8U-KLTM>].

⁵ See Maimuna Majumder et al., Research Letter, *Substandard Vaccination Compliance and the 2015 Measles Outbreak*, 169 J. AM. MED. ASS’N PEDIATRICS 494, 494 (2015) (showing that immunization rates that fell far below the required threshold contributed to the outbreak’s spread).

⁶ See Lin, *supra* note 1; see also Press Release, Kaiser Permanente, Study Identifies Geographic Clusters of Underimmunization in Northern California (Jan. 18, 2015), <http://share.kaiserpermanente.org/article/study-identifies-geographic-clusters-of-underimmunization-in-northern-california/> [<http://perma.cc/7WA8-RJML>] (using electronic medical records and spatial analysis software to document hot spots of underimmunization and vaccine refusal among the company’s members).

⁷ See Steve P. Calandrillo, *Vanishing Vaccinations: Why Are So Many Americans Opting Out of Vaccinating Their Children?*, 37 U. MICH. J.L. REFORM 353, 388 (2004) (documenting the common religious and philosophical objections to vaccinations and highlighting the common misconceptions regarding vaccine safety).

⁸ See Editorial, *Blame Disneyland Measles Outbreak on Anti-Science Stubbornness*, L.A. TIMES (Jan. 18, 2015), <http://www.latimes.com/opinion/editorials/la-ed-measles-disneyland-20150116-story.html> [<http://perma.cc/E83K-BRMP>] (cautioning against the anti-vaccination movement’s “ignorant and self-absorbed rejection of science” and discussing the threat of a new measles epidemic).

Currently, all states have mandatory vaccination laws that require children to document proof of inoculation upon entering school.⁹ Most states, however, also provide for religious and in some cases philosophical exemptions to these compulsory vaccination requirements.¹⁰ In recent years, parents have increasingly taken advantage of these exemptions.¹¹ This has led to a growing number of schoolchildren who go unvaccinated, putting themselves and other children at risk of illness.¹²

In light of the danger posed by the resurgence of VPDs, this Note argues that lawmakers have a responsibility to either strengthen or refashion the mandatory vaccination laws in this country to ensure public health and quell the threat of these serious but preventable diseases.¹³ Part I of this Note gives a brief history of mandatory vaccination law in the United States and outlines the typical arguments for and against the practice of vaccination.¹⁴ Part II discusses the relevant judicial decisions and constitutional issues that have shaped modern mandatory vaccination requirements and the medical, religious, and philosophical exemptions thereto.¹⁵ Finally, Part III argues that there is a legislative duty to strengthen mandatory vaccination requirements and apply greater scrutiny in order to limit exemptions to inoculation.¹⁶ This Note proposes three methods by which legislatures can achieve this outcome: eliminate philosophical exemptions, tighten existing religious exemptions by revising them to more closely reflect model state statutes, or alternatively, assign an independent or

⁹ See James G. Hodge, Jr. & Lawrence O. Gostin, *School Vaccination Requirements: Historical, Social and Legal Perspectives*, 90 KY. L.J. 831, 833 (2002) (providing background on school vaccination requirements and the penalties for non-compliance).

¹⁰ See *id.* (noting that state school vaccination laws are subject to medical, religious, and philosophical exemptions); see, e.g., ME. REV. STAT. ANN. tit. 20-A, § 6359(3)(B) (2015) (permitting exemption if “[t]he student or the parent, if the student is a minor, states in writing a sincere religious belief, which is contrary to the immunization requirement of this subchapter or an opposition to the immunization for philosophical reasons”); MASS. GEN. LAWS ch. 76, § 15 (2014) (“[N]o child whose parent or guardian states in writing that vaccination or immunization conflicts with his sincere religious beliefs shall be required to present said physician’s certificate in order to be admitted to school.”); N.Y. PUB. HEALTH LAW § 2164(9) (McKinney 2015) (“[The vaccination requirement] shall not apply to children whose parent, parents, or guardian hold genuine and sincere religious beliefs which are contrary to the practices herein required, and no certificate shall be required as a prerequisite to such children being admitted or received into school or attending school.”).

¹¹ See Calandrillo, *supra* note 7, at 388; see also Zipprich et al., *supra* note 1 (reporting that 67% of the unvaccinated patients infected with measles as a result of the Disneyland outbreak were intentionally unvaccinated because of personal beliefs).

¹² See Calandrillo, *supra* note 7, at 389; Janell Ross, *Declining Vaccine Rates: Mostly a White Problem*, WASH. POST (July 3, 2015), <https://www.washingtonpost.com/news/the-fix/wp/2015/07/03/declining-vaccine-rates-mostly-a-white-problem/> [http://perma.cc/E649-5SCB] (reporting that vaccine rates in certain parts of the United States are comparable to those of developing countries).

¹³ See *infra* notes 174–232 and accompanying text.

¹⁴ See *infra* notes 18–92 and accompanying text.

¹⁵ See *infra* notes 93–173 and accompanying text.

¹⁶ See *infra* notes 174–232 and accompanying text.

ganization or agency to draft a uniform vaccination mandate for adoption by the states.¹⁷

I. A HISTORY OF MANDATORY VACCINATION LAW AND POLICY IN THE UNITED STATES

This Part provides background on policy surrounding vaccination laws in this country.¹⁸ Section A discusses the first attempts at legislative regulation of vaccinations.¹⁹ Section B examines the U.S. Supreme Court's landmark decision on vaccinations in *Jacobson v. Massachusetts*.²⁰ Section C considers contemporary arguments in favor of and against mandatory vaccination requirements.²¹

A. Shot Law: Early Legislative Control Over the Implementation of Vaccine Requirements and Initial Backlash

Local, and then state, authorities were the first to take charge of vaccination practice in the United States.²² The smallpox pandemic fueled the vaccination movement, and historians trace the first stabs at inoculation in America to as early as 1721.²³ With this deadly disease raging through the infant nation, vaccinators fought back, while local municipalities directed the initial vaccine mandates through the vessel of newly drafted compulsory school attendance laws.²⁴ In 1827, Boston became the first city to require schoolchildren to give

¹⁷ See *infra* notes 174–232 and accompanying text.

¹⁸ See *infra* notes 18–92 and accompanying text.

¹⁹ See *infra* notes 22–32 and accompanying text.

²⁰ See *infra* notes 33–56 and accompanying text.

²¹ See *infra* notes 57–92 and accompanying text.

²² See Hodge & Gostin, *supra* note 9, at 851.

²³ See *id.* at 838. Historians credit Dr. Zabdiel Boylston as the first to undertake an early form of inoculation in America, in Boston in 1721, after a ship carrying smallpox from the West Indies docked in Boston Harbor. See *id.* at 849 n.125; see also GEORGE ROSEN, A HISTORY OF PUBLIC HEALTH 186–87 (1958). Thereafter the young colonies, in the throes of a pandemic that had decimated Europe, developed and cultivated what became known as vaccinations: the practice of conferring immunity by exposure to non-infectious antigens. See Calandrillo, *supra* note 7, at 362 (“The ultimate goal is that the attenuated or killed microorganisms (or derivative antigen) in the vaccine will create immunity by artificial means—thereby protecting the individual against the underlying disease without forcing her to endure the daunting task of surviving it first.”); see also Matt Lasher, Note, *Improving Indiana’s Mandatory Immunization Programs*, 7 IND. HEALTH L.R. 118, 121 (2010). Across the Atlantic, Dr. Edward Jenner, an English physician and scientist known as the “father of vaccination,” was able to control the smallpox epidemic in the late 1700s by systematically inoculating the population using the pustules of cowpox, an analogous animal disease. See Hodge & Gostin, *supra* note 9, at 838–40. Soon after, British Parliament enacted legislation requiring and regulating vaccinations in the mid-1800s, which led to a marked decline in smallpox mortality on the continent. See *id.* at 841–42.

²⁴ See Hodge & Gostin, *supra* note 9, at 850–51.

evidence of vaccination upon enrolling at school.²⁵ Working on this model, and presumably incentivized by the success of it, the Commonwealth of Massachusetts enacted a school vaccination requirement in 1855, followed soon thereafter by other neighboring states, including New York in 1862, Connecticut in 1872, and Pennsylvania in 1895.²⁶ Today, all fifty states have mandatory vaccination statutes.²⁷

As authorities began imposing mandatory school vaccination requirements, an anti-vaccination movement developed across the country.²⁸ Those who argued against vaccination questioned the effectiveness of the vaccines and claimed they would transmit other diseases.²⁹ They also raised religious and political objections to governmental overreach.³⁰ The successful eradication of smallpox and polio, however, extinguished much of the initial anti-vaccination sentiment, for these medical achievements proved that mandatory vaccination requirements were efficient and effective means of maintaining and bolstering the public health.³¹ Nevertheless, as early as 1830, challengers

²⁵ See *id.* at 851. Dr. Benjamin Waterhouse of Harvard University took Dr. Jenner's work and promulgated it in America, initiating a vaccine movement in the fledgling country that was avidly supported by President Thomas Jefferson. See *id.* at 842–43; see also ROBERT H. HALSEY, HOW THE PRESIDENT, THOMAS JEFFERSON, AND DOCTOR BENJAMIN WATERHOUSE ESTABLISHED VACCINATION AS A PUBLIC HEALTH PROCEDURE I (1936). The early movement, still frenzied by the threat of smallpox, mandated strict, compulsory vaccination, a practice that sometimes sparked outrage from those who opposed vaccination without consent. See Hodge & Gostin, *supra* note 9, at 845. The delicate balancing of public health concerns with individual, personal liberties came to the forefront, especially when outbreaks of smallpox ripped through dense urban areas like New York City in the 1800s. See *id.*; Gretchen A. Condran, *Changing Pattern of Epidemic Disease in New York City*, in HIVES OF SICKNESS 31 (David Rosner ed., 1995) (documenting fourteen smallpox outbreaks in New York City between 1804 and 1902). In extreme cases, police held down citizens so that doctors could inject them. See Hodge & Gostin, *supra* note 9, at 845. Opposing medical views cropped up that questioned the validity of vaccinations, despite empirical evidence that showed a decline in disease-related deaths. See *id.* at 845–46; see also Lasher, *supra* note 23, at 122 (noting that millions of deaths have been prevented as a result of vaccination). In short, modern day skepticism regarding the legality and efficacy of vaccines is nothing new. See Hodge & Gostin, *supra* note 9, at 845.

²⁶ See Hodge & Gostin, *supra* note 9, at 851.

²⁷ See Calandrillo, *supra* note 7, at 381–82; see, e.g., MASS. GEN. LAWS ch. 76, § 15; N.Y. PUB. HEALTH LAW § 2164; WASH. REV. CODE § 28A.210.080 (2015).

²⁸ See Calandrillo, *supra* note 7, at 388–89 (discussing anti-vaccination sentiments that began with the first use of vaccines and have endured to the present day); Hodge & Gostin, *supra* note 9, at 844, 851; Note, *Toward a Twenty-First-Century Jacobson v. Massachusetts*, 121 HARV. L. REV. 1820, 1823 (2008) (discussing the anti-vaccine movement and formation of the Anti-Vaccination League of America).

²⁹ See Hodge & Gostin, *supra* note 9, at 844 (citing J.N. HAYS, THE BURDEN OF DISEASE 280 (1998)).

³⁰ See Calandrillo, *supra* note 7, at 388–89; Hodge & Gostin, *supra* note 9, at 844. Individual school boards sometimes objected to the state mandates, arguing that they were overly invasive. Hodge & Gostin, *supra* note 9, at 852.

³¹ See Hodge & Gostin, *supra* note 9, at 852. Paradoxically, the general apathy created in times of low infection rates also complicated the vaccination movement and contributed to recurring epidemics of smallpox. See *id.*; see also James Colgrove, "Science in a Democracy:" *The Contested Status of Vac-*

brought judicial action against mandatory vaccination requirements, and arguments debating the merits of such requirements continue to the present day.³²

B. The Jacobson Precedent: Using State Police Power to Compel Vaccination

In 1905, in *Jacobson v. Massachusetts*, the U.S. Supreme Court upheld a state's right to compel mandatory vaccinations.³³ A flare of smallpox cases had swept the Northeast.³⁴ In response, the City of Cambridge, relying on a Massachusetts statute, ordered all adults to receive the smallpox vaccine.³⁵ The mandate prescribed a penalty of five dollars for those refusing to be vaccinated.³⁶ Jacobson, a minister, refused to receive a vaccination and then refused to pay the fine.³⁷ A Massachusetts trial court found him guilty of disobeying the vaccination law and he appealed his case up to the Supreme Judicial Court of Massachusetts, which affirmed the lower court's decision.³⁸

The U.S. Supreme Court upheld the Supreme Judicial Court's decision and rejected Jacobson's various arguments.³⁹ Jacobson voiced his concerns about the safety of the vaccine and claimed that he, his son, and others had previously "been caused great and extreme suffering" from vaccination.⁴⁰ Furthermore, he argued that a compulsory vaccination law is "unreasonable, arbitrary and oppressive" and thus interferes with an individual's right to bodily autonomy.⁴¹ In affirming the lower court's decision, the Court relied on the

cination in the Progressive Era and the 1920s, 96 *ISIS* 167, 183 (2005) (discussing the apathy created by declining smallpox infections).

³² See *Hazen v. Strong*, 2 *Vt.* 427, 433 (1830). In 1830, in *Hazen v. Strong*, the Vermont Supreme Court held that a town council could pay for vaccination of citizens exposed to smallpox despite the lack of documented cases in the community. *Id.* *Hazen* represents one of the first vaccine-related court cases and is perhaps the first judicial opinion on vaccinations that considers the need for public officials to preserve the public health and well-being. See Hodge & Gostin, *supra* note 9, at 853.

³³ See 197 U.S. 11, 38 (1905).

³⁴ See Ben Horowitz, Comment, *A Shot in the Arm: What a Modern Approach to Jacobson v. Massachusetts Means for Mandatory Vaccinations During a Public Health Emergency*, 60 *AM. U. L. REV.* 1715, 1718 (2011). In 1900, 100 cases were reported in Massachusetts alone, with Cambridge as the epicenter. See *id.*

³⁵ See *Jacobson*, 197 U.S. at 12–13.

³⁶ See *id.*

³⁷ See *id.*

³⁸ See *Commonwealth v. Pear*, 66 *N.E.* 719, 722 (1903), *aff'd sub nom. Jacobson*, 197 U.S. 11.

³⁹ See *Jacobson*, 197 U.S. at 25.

⁴⁰ See *id.* at 36; see also Horowitz, *supra* note 34, at 1719; Hope Lu, Note, *Giving Families Their Best Shot: A Law-Medicine Perspective on the Right to Religious Exemptions from Mandatory Vaccination*, 63 *CASE W. RES. L. REV.* 869, 876 n.40 (2013) (noting that Jacobson claimed he and his son suffered illness after a prior vaccine, which he argued evidenced a hereditary condition that caused his body to react negatively to vaccines).

⁴¹ See *Jacobson*, 197 U.S. at 26. Additionally, Jacobson's brief contained religious objections to vaccination, but the Court addressed these only fleetingly and in dicta. See Horowitz, *supra* note 34, at 1719 n.29.

police power of the state.⁴² This police power gives states authority to enact laws or impose regulations that protect public health and safety.⁴³ The Court held that the law in question was reasonable and not harsh in light of a real health hazard, especially given that an individual could pay a nominal fine as an alternative.⁴⁴ The Court gave substantial deference to the states, authorizing any laws that relate to matters completely within a state's territory and which do not by their necessary operation affect people of other states.⁴⁵

The Court did, however, impose certain limitations on the states' police power to mandate vaccinations.⁴⁶ First, mandates needed to address a public health necessity.⁴⁷ Second, the means needed to be reasonable and proportional.⁴⁸ Lastly, mandates needed to avoid harm.⁴⁹ In other words, a vaccine mandate could not be arbitrary, unreasonable, or far beyond what is reasonably required to ensure the public health and safety.⁵⁰ The Court left the manner of implementation to the discretion of the states.⁵¹

In 1922, in *Zucht v. King*, the U.S. Supreme Court applied *Jacobson* to school vaccination requirements.⁵² In *Zucht*, officials in Texas refused to allow a student to enroll in either private or public school because she lacked the required vaccination documentation and refused to vaccinate in compliance with Texas law.⁵³ The Court upheld the state requirement that predicated enrollment in school on sufficient evidence of vaccinations.⁵⁴ Numerous state supreme

⁴² See *Jacobson*, 197 U.S. at 25.

⁴³ See *id.*; Stacey D. Blayer, *But Names Will Never Hurt Me: HIV Surveillance & Mandatory Reporting*, 39 B.C. L. REV. 1175, 1190 (1998) (discussing *Jacobson* and the use of police power to protect the public against smallpox by means of vaccination); Hodge & Gostin, *supra* note 9, at 856 ("The legacy of *Jacobson* is surely its defense of social welfare philosophy and unstinting support of police power regulation.").

⁴⁴ See *Jacobson*, 197 U.S. at 13. The Court ordered *Jacobson* to pay the fine or face imprisonment. See *id.*

⁴⁵ See *id.*; see also Horowitz, *supra* note 34, at 1720 (calling the Court's continued deference to state legislatures when reviewing their public health legislation a "hallmark" of *Jacobson*).

⁴⁶ See Hodge & Gostin, *supra* note 9, at 856–57.

⁴⁷ See *Jacobson*, 197 U.S. at 28.

⁴⁸ See *id.* at 26–27; Hodge & Gostin, *supra* note 9, at 856.

⁴⁹ See *Jacobson*, 197 U.S. at 38–39; Hodge & Gostin, *supra* note 9, at 856–57. The harm avoidance factor catches the cases of individuals who have proven themselves unfit for vaccinations for medical reasons. See Hodge & Gostin, *supra* note 9, at 856–57.

⁵⁰ See *Jacobson*, 197 U.S. at 27; Horowitz, *supra* note 34, at 1720.

⁵¹ See *Jacobson*, 197 U.S. at 25.

⁵² See *Zucht v. King*, 260 U.S. 174, 177 (1922); see also Calandrillo, *supra* note 7, at 385; Lu, *supra* note 40, at 876 (discussing the application of *Jacobson* to mandatory vaccination for school attendance).

⁵³ *Zucht*, 260 U.S. at 175.

⁵⁴ See *id.*; see also Hodge & Gostin, *supra* note 9, at 857–58.

courts have upheld similar laws on similar grounds.⁵⁵ Today, all states in the nation require vaccination as a prerequisite for school enrollment.⁵⁶

C. The Value in the Vaccine: Why Legislators Impose Mandatory Vaccination Policies

Many experts rank vaccines among the greatest public health achievements that science has ever produced.⁵⁷ Subsection 1 of this section describes the many compelling medical reasons for maintaining and strengthening compulsory vaccination policies in schools.⁵⁸ Subsection 2 highlights economic benefits to such vaccination policies.⁵⁹ Conversely, subsection 3 examines the medical, religious, and philosophical arguments against mandatory vaccination policies.⁶⁰

1. Medical Benefits of Vaccinations

Today, vaccines protect against more than twenty deadly diseases.⁶¹ These vaccines have dramatically reduced the morbidity and mortality rates of some

⁵⁵ See Alicia Novak, Comment, *The Religious and Philosophical Exemptions to State-Compelled Vaccination: Constitutional and Other Challenges*, 7 U. PA. J. CONST. L. 1101, 1105 n.23 (2005) (citing *People ex rel. Hill v. Bd. of Educ. of City of Lansing*, 195 N.W. 95, 99 (Mich. 1923) (providing examples of state courts in North Carolina, New York, Georgia, Connecticut, Ohio, Massachusetts, California, Utah, Minnesota, Indiana, Missouri, and Arkansas that upheld state-mandated school vaccination requirements)).

⁵⁶ See Calandrillo, *supra* note 7, at 381–82; see also Alan R. Hinman et al., *Childhood Immunization: Laws That Work*, 30 J.L. MED. & ETHICS 122, 124 (2002) (describing how schools find it less burdensome and more effective to have a “No Shots, No School” rule for incoming students, rather than allowing students to enter school unvaccinated and then trying to follow up and monitor them).

⁵⁷ See Hodge & Gostin, *supra* note 9, at 878. The Centers for Disease Control and Prevention (“CDC”) includes vaccination among the top ten public health achievements of the twentieth century. Ctrs. for Disease Control & Prevention, *Impact of Vaccines Universally Recommended for Children—United States, 1900-1998*, 281 J. AM. MED. ASS’N 1482, 1482–83 (1999); see also Hinman et al., *supra* note 56, at 122 (calling vaccines “among the 20th century’s most successful and cost effective public health tools” and crediting them with the worldwide eradication of smallpox and the elimination of polio in the western hemisphere). The efficacy of vaccinations has ironically contributed to the need to remind people of why they are so important: the success of inoculation at eliminating diseases that at one time in history ravaged cities has produced a relatively healthy country that has forgotten the horrors of vaccine-preventable diseases. See Calandrillo, *supra* note 7, at 362 (highlighting the irony that the success of vaccines has reduced public attention toward them and that many modern Americans have not witnessed “the ravages of the diseases that took their ancestors’ lives”). In short, vaccines have become a “victim of their own success.” See *id.*

⁵⁸ See *infra* notes 61–73 and accompanying text.

⁵⁹ See *infra* notes 74–78 and accompanying text.

⁶⁰ See *infra* notes 79–92 and accompanying text.

⁶¹ See *List of Vaccine-Preventable Diseases*, CTRS. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/vaccines/vpd-vac/vpd-list.htm> [<http://perma.cc/XNQ9-C7YH>] (listing twenty-five vaccine-preventable diseases, or VPDs); see also Calandrillo, *supra* note 7, at 369. The smallpox vaccine in 1798 was the catalyst for the vaccine movement, as since then vaccines have been developed to prevent many common diseases such as measles, tetanus, whooping cough, polio, hepatitis A and B, and chicken pox. See Calandrillo, *supra* note 7, at 369 & n.85. New vaccines—such as highly

of the most threatening diseases in history, saving millions of lives and increasing life expectancy.⁶² By extension, compulsory vaccination policies ensure the comprehensive administration of these life-saving vaccines that have reduced and in some cases completely eradicated a host of childhood diseases.⁶³

Widespread vaccination maintains the public health by ensuring the preservation of “herd immunity.”⁶⁴ Herd immunity occurs when a significant percentage of the community is vaccinated from a disease, creating a buffer that prevents infections from gaining traction.⁶⁵ This buffer also protects those individuals among the population who cannot be vaccinated for medical rea-

anticipated HIV, malaria, and tuberculosis vaccines—are currently in development. *See Vaccines and Diseases*, WORLD HEALTH ORG., <http://www.who.int/immunization/diseases/en/> [<http://perma.cc/7FJK-FQ4B>] (providing information on the research and development of various “pipeline vaccines”).

⁶² See Calandrillo, *supra* note 7, at 369. See generally Sandra W. Roush & Trudy V. Murphy, *Historical Comparisons of Morbidity and Mortality for Vaccine-Preventable Diseases in the United States*, 298 J. AM. MED. ASS’N 2155, 2155 (2007) (crediting vaccines for the elimination and marked decrease of vaccine-preventable diseases). Studies indicate that the average life of an American in 1900 was thirty years less than today; twenty-five of those years are attributed to vaccination and other advancements in public health. See Novak, *supra* note 55, at 1105–06. England’s Queen Victoria commissioned a report in 1857 that revealed that in the years following the adoption of vaccination practices in a number of European countries, smallpox deaths declined by over 88%. See *id.* In studies of U.S. schoolchildren, the National Immunization Program has concluded that students who bypass mandatory vaccinations are thirty-five times more likely to contract measles than vaccinated students. See Hodge & Gostin, *supra* note 9, at 883–84.

⁶³ See Hodge & Gostin, *supra* note 9, at 878; Roush & Murphy, *supra* note 62, at 2160 (“These achievements are largely due to reaching and maintaining high vaccine coverage levels from infancy throughout childhood by successful implementation of the infant and childhood immunization program.”).

⁶⁴ See Anthony Ciolli, *Religious & Philosophical Exemptions to Mandatory School Vaccinations: Who Should Bear the Costs to Society?*, 74 MO. L. REV. 287, 288 (2009) (explaining the concept of herd immunity and discussing how non-medical exemptions to vaccination threaten it); Kevin M. Malone & Alan R. Hinman, *Vaccination Mandates: The Public Health Imperative and Individual Rights*, in LAW AND PUBLIC HEALTH PRACTICE 263, 263 (Richard A. Goodman ed., 2007) (explaining how herd immunity fails when individuals choose to remain unimmunized); see also *Vaccines and Immunizations Glossary*, CTNS. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/vaccines/about/terms/glossary.htm#c> [<http://perma.cc/S24N-4Q37>]. The CDC defines herd immunity under “community immunity” 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.

See *Vaccines and Immunizations Glossary*, *supra*.

⁶⁵ See Ciolli, *supra* note 64, at 288; Malone & Hinman, *supra* note 64, at 264 (noting that the percentage of the population that requires vaccination in order for herd immunity to take effect varies based on the disease; for example, measles likely requires more than 90% vaccination for herd immunity to work properly); *Vaccine Safety and Adverse Events*, CTNS. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/vaccines/vac-gen/safety/default.htm> [<http://perma.cc/RMM6-YLSJ>] (explaining that vaccines work best when most people in a community are vaccinated).

sons, and bolsters protection for those whose immune systems are most susceptible, such as infants, the elderly, and the sick.⁶⁶

Herd immunity is one of the driving forces behind compulsory vaccination laws.⁶⁷ Many doctors assert that parents who assume that the vaccination of other children in their child's class will protect their child, or that their refusal to vaccinate their child will have no effect on other people's children, ignore the communal benefit of vaccination.⁶⁸ To these doctors, parents who avoid vaccinating their child by way of religious or philosophical exemption whittle away the invaluable herd immunity that keeps not only their child but also the most vulnerable members of the community healthy.⁶⁹

Recent outbreaks of VPDs, which tend to flare up among groups of unvaccinated individuals, underscore the necessity of vaccination.⁷⁰ Many of the over 110 Californian patients from the Disneyland measles outbreak of December 2014 were unvaccinated for the disease.⁷¹ This region is not unfamiliar with the peril that a measles outbreak presents: from 1989 to 1991, undervaccination in southern California led to thousands of children contracting the disease, at least seventy-five of whom died.⁷² It is unsurprising that areas in which

⁶⁶ See Calandrillo, *supra* note 7, at 420. Medical reasons for avoiding vaccinations can include allergies or preexisting medical conditions that render the immune system too weak to receive the vaccine. See *id.* The CDC has also promulgated guidance to parents about the small population of children who should not be vaccinated, including a child (1) who has a cold or other illness on the day the vaccination is scheduled, (2) who in the past had a life-threatening allergic reaction to that vaccine, or (3) who has a severe, life-threatening allergy to a substance in the vaccine. See *Vaccine Information Statement*, CTRS. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/vaccines/hcp/vis/vis-statements/multi.html> [<http://perma.cc/4PE2-5KPR>].

⁶⁷ See Calandrillo, *supra* note 7, at 420; Malone & Hinman, *supra* note 64, at 280 (indicating that states have imposed vaccination requirements to avoid the "tragedy of the commons" or the breaking down of herd immunity); Amanda Z. Naprawa, *Don't Give Your Kid That Shot!: The Public Health Threat Posed by Anti-Vaccine Speech and Why Such Speech Is Not Guaranteed Full Protection Under the First Amendment*, 11 CARDOZO PUB. L. POL'Y & ETHICS J. 473, 485 (2013) (asserting that government intervention is required to ensure vaccination to protect herd immunity).

⁶⁸ See Calandrillo, *supra* note 7, at 420; see also Lasher, *supra* note 23, at 130 (discussing herd immunity and the effect of not vaccinating on the community).

⁶⁹ See *supra* notes 64–68 and accompanying text (discussing the importance of herd immunity).

⁷⁰ See Lin et al., *supra* note 2 (detailing the recent measles outbreak in California); see also Kelsey Brugger, *Infant Dies from Whooping Cough*, SANTA BARBARA INDEP. (Jan. 13, 2015), <http://www.independent.com/news/2015/jan/13/infant-dies-whooping-cough/> [<http://perma.cc/Y2NF-BW28>] (reporting the second death from pertussis, also known as whooping cough, in California and citing a local public health department official who emphasized the importance of getting vaccinated to protect the entire community).

⁷¹ See Zipprich et al., *supra* note 1. Analysis from the CDC shows that of the 110 Californian patients who were infected with measles as a result of the outbreak, 45% were unvaccinated and 43% had unknown or undocumented vaccination status. See *id.* Only one patient had the standard three doses of the vaccine, and 11% had either one or two doses. See *id.*

⁷² See Loring Dales et al., *Measles Epidemic from Failure to Immunize*, 159 W.J. MED. 455, 455 (1993) (attributing the epidemic to low immunization levels); see also Calandrillo, *supra* note 7, at 423 (citing immunization levels as low as 50% in some areas of the state at the time of the outbreak);

anti-vaccination sentiment is popular become “hot spots” in which herd immunity deteriorates, leaving the community ripe for outbreaks.⁷³

2. The Economic Benefits of Stringent Vaccination Policy

Vaccines are extraordinarily cost-effective and refusing to take advantage of them could strain an already burdened medical system.⁷⁴ The cost of not vaccinating is hefty: studies show that each influenza vaccine administered saves an average of \$117 a year in healthcare costs.⁷⁵ The California measles outbreak of the early 1990s resulted in over \$100 million in health care costs.⁷⁶ In total, VPDs incur \$10 billion in health care costs each year.⁷⁷ Furthermore, the failure to vaccinate also affects the economy indirectly because preventable sicknesses sap the country’s workforce.⁷⁸

Natalie Smith et al., *California’s 1988–1991 Measles Epidemic—The Last One?*, 165 W.J. MED. 80, 80 (1996).

⁷³ Calandrillo, *supra* note 7, at 421–24 (discussing the emergence of “hot spots” due to exemptions); see also Jonel Aleccia, *In Texas and Beyond, Hot Spots for Vaccine Refusers Alarm Officials*, NBC NEWS (Aug. 31, 2013), <http://www.nbcnews.com/health/kids-health/texas-beyond-hot-spots-vaccine-refusers-alarm-officials-f8C11044898> [<http://perma.cc/YC3N-R67R>] (citing a pediatrician and spokesperson for the American Academy of Pediatrics who described concern with the creation of pockets of under-vaccinated communities and referencing herd immunity by noting that “[w]hen you hang out with other people who don’t vaccinate, you’re hanging out in the wrong herd”); Jason Millman, *Vaccine Deniers Stick Together. And Now They’re Ruining Things for Everyone*, WASH. POST (Jan. 22, 2015), <https://www.washingtonpost.com/news/wonk/wp/2015/01/22/vaccine-deniers-stick-together-and-now-theyre-ruining-things-for-everyone/> [<http://perma.cc/B5VH-3ZR7>] (describing the various clusters of unvaccinated children in California); Novak, *supra* note 55, at 1122–23 (discussing the “cluster problem”).

⁷⁴ See Calandrillo, *supra* note 7, at 427 (calling vaccines “among the most cost-effective form of health care ever provided”); Puneet Kollipara, *How the Anti-Vaccine Movement Is Endangering Lives*, WASH. POST (May 5, 2015), <https://www.washingtonpost.com/news/wonk/wp/2014/05/05/how-the-anti-vaccine-movement-is-endangering-lives/> [<http://perma.cc/GT24-9V5A>] (citing CDC research that determined that vaccinations administered between 1994 and 2013 will save \$1.38 billion by reducing health expenses and other expenses saved from avoiding illness).

⁷⁵ See Calandrillo, *supra* note 7, at 428; see also Patrick Y. Lee et al., *Economic Analysis of Influenza Vaccination and Antiviral Treatment for Healthy Working Adults*, 137 ANNALS INTERNAL MED. 225, 225 (2002) (finding that vaccination strategies yield a higher net benefit than non-vaccination strategies); Roush & Murphy, *supra* note 62, at 2160 (estimating that good vaccination practices save \$10 billion in direct costs in each birth cohort, and an additional \$33 billion in societal costs that include disability and lost productivity).

⁷⁶ See Calandrillo, *supra* note 7, at 427. See generally Nat’l Vaccine Advisory Comm., *The Measles Epidemic: The Problems, Barriers, and Recommendations*, 266 J. AM. MED. ASS’N 1547 (1991) (discussing the impact of the 1989–1990 measles outbreak).

⁷⁷ See Calandrillo, *supra* note 7, at 429. See generally Gustavo Dayan et al., *The Cost of Containing One Case of Measles: The Economic Impact on the Public Health Infrastructure—Iowa, 2004*, 116 PEDIATRICS e1, e1 (2005) (analyzing the cost of containment when one unvaccinated student returned to the United States after contracting measles abroad).

⁷⁸ See Calandrillo, *supra* note 7, at 427; Roush & Murphy, *supra* note 62, at 2155 (stating that the societal costs of not vaccinating include missed time from school and work, doctor’s visits, and hospitalizations); see also Dayan et al., *supra* note 77 (noting that 2525 hours of personnel time were logged in connection with spread-prevention for one case of measles). Consider an example: if a par-

3. Anti-Vaccination Arguments: The (Real and Perceived) Risks Associated with Vaccinations

Despite the proven benefits of vaccines, the anti-vaccination movement—a phenomenon as old as vaccines themselves—continues to voice its stalwart opposition to the practice in the United States.⁷⁹ The concerns span a wide range, but the most common objections are medical, fueled by (real or invented) religious beliefs, or pertain to civil liberties in general.⁸⁰

With regard to medical concerns, all vaccines do pose a small risk of side effects or adverse reactions, but the majority of these are very minor and fleeting.⁸¹ More serious reactions occur in rare circumstances, but research overwhelmingly has shown that the public health benefit of administering vaccines outweighs the marginal risks imposed by them.⁸² Consternation has been fed by the misperception of these risks and the fabrication (intentional or not) of myths about vaccines, such as a highly publicized link between vaccines and autism, which has been thoroughly repudiated.⁸³ Other opponents to vaccina-

ent or child falls ill the parent will presumably miss work and have to take a sick day, resulting in a net economic loss and the potential for unearned wages. See Calandrillo, *supra* note 7, at 429. Also, reducing the number of patients that enter the hospital with vaccine-preventable diseases would redistribute the work load for medical providers who could then focus on other patients and reduce overall hospital operating costs. See *id.*

⁷⁹ See Katherine Brooks, *Here's What a Depression Era Cartoonist Had to Say About the Anti-Vaccination Movement*, HUFFINGTON POST (Feb. 3, 2015), http://www.huffingtonpost.com/2015/02/03/anti-vaccination-cartoon-1900_n_6608366.html [<http://perma.cc/LV5P-N5U2>] (providing political cartoons dating back to the 1930s that comment on the anti-vaccination movement); see also Hodge & Gostin, *supra* note 9, at 884 (documenting the historical and contemporary opposition to vaccination); Kyra R. Wagoner, Note, *Mandating the Gardasil Vaccine: A Constitutional Analysis*, 5 IND. HEALTH L. REV. 403, 415 (2008) (discussing the reasons for anti-vaccination sentiment).

⁸⁰ See Hodge & Gostin, *supra* note 9, at 884; Wagoner, *supra* note 79, at 415; see also *Jacobson*, 197 U.S. at 25 (rejecting these various anti-vaccination arguments and affirming a state's power to mandate vaccination).

⁸¹ See Calandrillo, *supra* note 7, at 389–90. These minor risks include pain and swelling at the injection site, nausea, vomiting, or fever. See *id.* The CDC has provided literature on the risks of the side effects involved, which it characterizes as “mild” and “not serious.” See *Vaccine Information Statement*, *supra* note 66.

⁸² See Calandrillo, *supra* note 7, at 389–90. More severe complications include acute allergic reactions, seizures, deafness, or brain damage. See *id.* But these occur in one per thousands or millions of administered doses and a causal link cannot always be drawn between the vaccine and the condition. See *id.* at 390 n.256. The CDC also states that serious reactions are “possible” but “rare.” See *Vaccine Information Statement*, *supra* note 66; see also Linda E. LeFever, Comment, *Religious Exemptions from School Immunization: A Sincere Belief or a Legal Loophole?*, 110 PENN ST. L. REV. 1047, 1054 (2006) (discussing the rarity of occurrences of these risks).

⁸³ See Calandrillo, *supra* note 7, at 395. One of the most pervasive concerns regarding vaccinations is their alleged link to autism, after an article published in a reputable British medical journal, *The Lancet*, advocated a link in 1998. See LeFever, *supra* note 82, at 1054–55 (discussing the *Lancet* study and its effect on misperceptions regarding vaccines and autism). See generally A.J. Wakefield et al., *Ileal-Lymphoid-Nodular Hyperplasia, Non-Specific Colitis, and Pervasive Developmental Disorder in Children*, 351 LANCET 637 (1988) (retracted article). Indeed, overwhelming evidence from a multitude of more thorough trials shows no link between vaccinations and autism. See Stanley Plotkin

tion decay vaccines because they have mostly eliminated certain diseases to the point that infections are exceedingly rare or nonexistent.⁸⁴ Yet many physicians, politicians, and scholars point out that it is illogical to think that because vaccines have shrunk infection rates they are no longer necessary to administer.⁸⁵

Still others contend that mandatory vaccinations infringe on their religious or personal beliefs and notions of personal and bodily autonomy.⁸⁶ These arguments provide fodder for much of the litigation surrounding mandatory vaccination laws.⁸⁷ Although a small percentage of objectors may have valid religious reasons for opting out of vaccinations, no major religion prohibits vaccination, and indeed some even recommend it.⁸⁸ This indicates that many

et al., *Vaccines and Autism: A Tale of Shifting Hypotheses*, 48 *CLINICAL INFECTIOUS DISEASES* 456, 460 (2009) (concluding that large-scale epidemiologic studies have “dismissed the notion that vaccines cause autism”).

⁸⁴ See Hodge & Gostin, *supra* note 9, at 888; see also Kollipara, *supra* note 74 (indicating that one possible reason for anti-vaccination sentiment is the rarity of incidences of diseases that have vaccines).

⁸⁵ See Calandrillo, *supra* note 7, at 362 (suggesting that the historical success of vaccines in eliminating disease has led to the public believing they are unnecessary); see also *Senate Bill 277 Introduced to End California’s Vaccine Exemption Loophole*, DR. RICHARD PAN SENATE DISTRICT 6, <http://sd06.senate.ca.gov/news/2015-02-19-senate-bill-277-introduced-end-california%E2%80%99s-vaccine-exemption-loophole> [<http://perma.cc/LL3Y-T4DJ>] [hereinafter *Senate Bill 277 Introduced*]. Senators Dr. Richard Pan and Ben Allen of California introduced a bill to tighten vaccination requirements in their state, reminding citizens that it is “easy to forget” the period before vaccination practices when widespread suffering and death resulted from vaccine-preventable diseases, and that “we cannot risk a return to those days.” See *id.* The bill—which eliminates the philosophical exemption—was signed into law by Governor Brown in June 2015 and will take effect in July 2016. See S.B. 277, 2015 Cal. Leg., 2015–16 Reg. Sess. (Cal. 2015); *infra notes* 164–169 and accompanying text (discussing the bill); see also Elizabeth Earl, *The Victorian Anti-Vaccination Movement*, THE ATLANTIC (July 15, 2015), <http://www.theatlantic.com/health/archive/2015/07/victorian-anti-vaccinators-personal-belief-exemption/398321/> [<http://perma.cc/QQ2D-YEDK>] (stating that unlike movements of the past, “anti-vaxers” today are unaware of the consequences of their choice, since “in most developed countries, large-scale epidemics are confined to the annals of history or to flash-in-the-pan flare-ups”).

⁸⁶ See *Jacobson*, 197 U.S. at 38. In this seminal case permitting the state to impose mandatory vaccination requirements, the petitioner asserted that requiring a citizen to vaccinate is “nothing short of an assault upon his person.” See *id.* at 26.

⁸⁷ See *infra notes* 93–173 and accompanying text (discussing the judicial history of mandatory vaccination requirements).

⁸⁸ See Dorit Rubinstein Reiss, *Thou Shalt Not Take the Name of the Lord Thy God in Vain: Use and Abuse of Religious Exemptions from School Immunization Requirements*, 65 *HASTINGS L.J.* 1551, 1573 (2014) (describing how no major religion, including Judaism, Islam, and Christianity, opposes vaccination and how many times objectors will lie about a religious belief to get around vaccination requirements); see also *What Religions Actually Say About Vaccines*, ARIZ. P’SHIP FOR IMMUNIZATION, <https://www.whymmunize.org/what-religions-actually-state-about-vaccines/> [<http://perma.cc/3QJW-CSEU>] (finding no formal anti-vaccine doctrine in any major world religion and raising suspicion of religion as a “smokescreen” for personal beliefs).

objectors who claim “religious” reasons are actually using religion as a proxy for a non-religious motive.⁸⁹

Anti-vaccinationists also contend that notions of individualism and freedom from government interference in personal matters are emblematically American values, and that the state has no right to compel citizens to vaccinate themselves or their children.⁹⁰ These privacy concerns have animated the anti-vaccination movement since the inception of vaccines.⁹¹ Moreover, some opponents distrust a perceived relationship between the government and “big pharma” and others interested in profiting from the sale of vaccines.⁹²

II. TAKING VACCINES TO COURT: JUDICIAL HISTORY AND THE CONSTITUTIONALITY OF MANDATORY VACCINATION REQUIREMENTS AND EXEMPTIONS

Since the seminal U.S. Supreme Court case *Jacobson v. Massachusetts* in 1905, courts have consistently upheld the constitutionality of state statutes

⁸⁹ See Reiss, *supra* note 88, at 1553 (asserting that a majority of parents who object to vaccinations do so for non-religious reasons and highlighting websites that explicitly proclaim non-religious motives that instruct parents how to successfully qualify for a religious exemption); LeFever, *supra* note 82, at 1066 (suggesting that states can combat non-sincere religious exemptions “of convenience” by requiring stricter standards).

⁹⁰ See Calandrillo, *supra* note 7, at 393–94 (noting that many objectors to vaccinations characterize public health authorities as “abusive, untrustworthy and paternalistic”); Malone & Hinman, *supra* note 64, at 279 (suggesting that opponents to vaccination could try to use a recently recognized “right to privacy” in medical decision-making under a due process theory, though indicating this would likely fail since the Court has also acknowledged the state’s interest in balancing public health needs with individual freedoms).

⁹¹ See Earl, *supra* note 85 (“Many of the concerns of the 19th century, such as the government in personal choices, have reemerged.”). Although these concerns are perhaps more credible than typically misinformed medical objections, the judicial history, detailed in the next section, favors a clamping of personal liberties when the greater needs of public safety and health are concerned. See *infra* notes 91–173 and accompanying text; see also *Jacobson*, 197 U.S. at 26 (“[T]he liberty secured by the Constitution . . . to every person within its jurisdiction does not import an absolute right in each person to be, at all times and in all circumstances, wholly freed from restraint. There are manifold restraints to which every person is necessarily subject for the common good.”).

⁹² See Ilene Albala, Note, *Mandatory HPV Vaccination: Is There a Happy Medium?*, 12 U. PA. J.L. & SOC. CHANGE 221, 225 (2009) (discussing anti-vaccination websites that purport that doctors, pharmaceutical companies, and the government are conspiring to mandate vaccination); Paris Achen, *Parents Seek Way Around Vaccination Law*, BURLINGTON FREE PRESS (June 8, 2015), <http://www.burlingtonfreepress.com/story/news/politics/2015/06/08/vaccine-exemption-religious-philosophical/28568043/> [<http://perma.cc/UL4A-F6W3>] (quoting parents who oppose a new Vermont law removing philosophical exemptions to vaccination, including one who stated: “I don’t trust my children to pharmaceutical companies that are most probably only out for a profit”); see also Hodge & Gostin, *supra* note 9, at 888 (calling distrust of government and pharmaceutical corporations “often misplaced” but acknowledging some legitimate cases of corruption). Despite the fact that vaccines remain effective life-saving tools regardless of who profits from them, this skepticism is largely misdirected; in fact, few companies place high stakes in vaccines because they are not traditionally very profitable. See Calandrillo, *supra* note 7, at 397 & n.287 (referencing a *New York Times* article from 2003 that indicates that pharmaceutical companies say that vaccines are not large “money-makers”).

mandating vaccinations.⁹³ Further, courts have held that exemptions to these requirements are not constitutionally required.⁹⁴ Section A provides an overview of medical, religious, and philosophical exemptions to mandatory vaccination requirements, and the constitutional issues concerning them.⁹⁵ Section B examines New York’s “genuine and sincere” religious exemption, and the recent case history that discusses it.⁹⁶ Section C examines two states—Vermont and California—that have recently eliminated philosophical exemptions from their statutes.⁹⁷

A. Religious and Philosophical Exemptions: The Basics

Since *Jacobson*, states have enacted exemptions that allow certain citizens to forgo mandatory vaccination requirements.⁹⁸ There are three main categories for exemptions: medical, religious, and philosophical.⁹⁹

States unanimously agree that medical exemptions to vaccines are necessary and noncontroversial.¹⁰⁰ In *Jacobson*, the U.S. Supreme Court, through the use of the “harm avoidance” language, mentioned that certain medical conditions that made it unsafe for a person to receive a vaccine would exempt them from the requirement.¹⁰¹ Today, all fifty states permit medical exemptions.¹⁰²

⁹³ See 197 U.S. 11, 38 (1905).

⁹⁴ See *infra* notes 98–173 and accompanying text; see also Reiss, *supra* note 88, at 1563 (“The best conclusion is that, at present, the exemption jurisprudence is enabling, not mandating; it allows states to adopt a religious exemption, but does not require it.”).

⁹⁵ See *infra* notes 98–121 and accompanying text.

⁹⁶ See *infra* notes 122–157 and accompanying text.

⁹⁷ See *infra* notes 158–173 and accompanying text.

⁹⁸ See *States with Religious and Philosophical Exemptions to School Vaccination Requirements*, NAT’L CONFERENCE OF STATE LEGISLATURES (July 6, 2015), <http://www.ncsl.org/research/health/school-immunization-exemption-state-laws.aspx> [<http://perma.cc/7RLB-RSAB>] [hereinafter *School Vaccination Requirements*] (providing an up-to-date map of state vaccination exemptions); see, e.g., ME. REV. STAT. ANN. tit. 20-A, § 6355 (2015) (providing medical, religious, and philosophical exemptions); N.Y. PUB. HEALTH LAW § 2164 (McKinney 2015) (providing medical and religious exemptions); W. VA. CODE ANN. § 16-3-4 (LexisNexis 2015) (permitting children to forgo vaccination only for medical reasons, when it is “impossible or improper” to do so). The states that do not have religious exemptions are California, Mississippi, and West Virginia. See *School Vaccination Requirements*, *supra*.

⁹⁹ See *School Vaccination Requirements*, *supra* note 98; see also Novak, *supra* note 55, at 1102 (discussing non-medical exemptions and concluding they are “problematic”); Michael Poreda, Comment, *Reforming New Jersey’s Vaccination Policy: The Case for the Conscientious Exemption Bill*, 41 SETON HALL L. REV. 765, 781 (2011) (discussing categories of exemptions).

¹⁰⁰ See *School Vaccination Requirements*, *supra* note 98 (indicating that all states provide exemptions for medical reasons); see also Calandrillo, *supra* note 7, at 413 (stating that medical exemptions “make sense,” though noting that they are appropriate for “exceptional cases only”).

¹⁰¹ See *Jacobson*, 197 U.S. at 38–39; see also Hodge & Gostin, *supra* note 9, at 873–74.

¹⁰² See *School Vaccination Requirements*, *supra* note 98; see also Hodge & Gostin, *supra* note 9, at 874 (noting that although statutes vary, all states provide medical exemptions); Poreda, *supra* note 99, at 781 (discussing medical exemptions).

Religious and philosophical exemptions, however, have not gained universal acceptance among the states.¹⁰³ All but three states allow for religious exemptions to various extents, but only eighteen states have codified “philosophical exemptions,” or those based on moral or personal beliefs that need not have a religious component.¹⁰⁴

Although almost all states provide a religious exemption, the statutes vary in their wording and level of strictness.¹⁰⁵ The most lenient states, such as Washington, require only that parents complete a brief form to indicate their

¹⁰³ See *School Vaccination Requirements*, *supra* note 98 (providing a detailed map of the breakdown of religious and philosophical exemptions among the states); see also Hodge & Gostin, *supra* note 9, at 874 (noting that “virtually all” states have religious exemptions, while a “minority” have philosophical ones); Novak, *supra* note 55, at 1107–10 (discussing the phrasing of various religious and philosophical exemptions); Poreda, *supra* note 99, at 781 (discussing the breakdown of the types of exemptions among states).

¹⁰⁴ See *School Vaccination Requirements*, *supra* note 98 (providing current analysis and a detailed map of the breakdown of religious and philosophical exemptions among the states). California and Vermont recently passed bills eliminating personal and religious belief exemptions in the state, effective in 2016. See *infra* notes 165–175 and accompanying text; see also Jessica Firger, *California Governor Signs Vaccine Exemption Law*, NEWSWEEK (June 30, 2015), [http://perma.cc/TGG2-P2W9](http://www.newsweek.com/california-governor-signs-vaccine-exemption-law-348926) (reporting on new California exemption law); *Governor Signs SB277 into Law*, IMMUNIZATION UPDATE (Immunization Branch, Cal. Dep’t of Pub. Health, Richmond, CA), July 2015, at 1, 1, http://eziz.org/assets/docs/IZUpdate_2015_07.pdf [<http://perma.cc/794X-7WJZ>] (instructing immunization coordinators of the change in law eliminating philosophical and religious exemptions); Michael Specter, *Vermont Says No to Anti-Vaccine Movement*, NEW YORKER (May 29, 2015), [http://perma.cc/3RMY-Y6L2](http://www.newyorker.com/news/news-desk/vermont-says-no-to-the-anti-vaccine-movement)] (discussing Vermont’s removal of a philosophical exemption). Some scholars point out the murky line between “religious” and “philosophical” and question if this is even a meaningful distinction. See Reiss, *supra* note 88, at 1593–94 (calling this terminology troubling, indicating that many “philosophical” beliefs are often “quasi-religious” in nature and proposing that instead states might implement a “personal choice” exemption that could include both religious and philosophical beliefs under the same umbrella).

¹⁰⁵ See Novak, *supra* note 55, at 1107–08 (providing a detailed discussion of the various wordings); see, e.g., N.Y. PUB. HEALTH LAW § 2164(9) (“This section shall not apply to children whose parent, parents, or guardian hold genuine and sincere religious beliefs which are contrary to the practices herein required, and no certificate shall be required as a prerequisite to such children being admitted or received into school or attending school.”); 24 PA. CONS. STAT. § 13-1303a (2014) (“The provisions of this section shall not apply in the case of any child whose parent or guardian objects in writing to such immunization on religious grounds.”). New Jersey’s statute exempts students who provide,

[A] written statement submitted to the secondary school or institution of higher education, as applicable, by the student, or the student’s parent or guardian if the student is a minor, explaining how the administration of the vaccine conflicts with the bona fide religious tenets or practices of the student, or the parent or guardian, as appropriate; except that a general philosophical or moral objection to the vaccination shall not be sufficient for an exemption on religious grounds.

religious opposition to vaccination.¹⁰⁶ Stricter states, like New York, omit any such criteria, but require the religious beliefs to be “genuine and sincere.”¹⁰⁷ As a further check on the religious exemption, Massachusetts qualifies its version with an exception that during a health emergency, such as an epidemic, the state may be able to require religiously exempted students to comply.¹⁰⁸

A 2001 study showed that the complexity of the exemption process (i.e., requiring more than a simple box-check) has a direct effect on the number of parents who chose to seek exemptions to vaccination requirements.¹⁰⁹ In states that ranked at the top of the complexity scale, no more than one percent of their population was exempt from their vaccination laws.¹¹⁰ On the opposite end, states whose exemption laws presented the least amount of complexity had exemption rates of over one percent.¹¹¹

A minority of states (currently eighteen) provide for some form of philosophical exemption.¹¹² Often, to satisfy the exemption, a parent need only pre-

¹⁰⁶ See Novak, *supra* note 55, at 1108. Initially, some states, such as Washington, permitted parents to opt out simply by checking a box indicating their opposition to the vaccine requirement. See Calandrillo, *supra* note 7, at 356–57. Washington has since raised the bar slightly, and now requires parents to consult with a health care provider before submitting a two-page exemption form, which the medical provider must sign. See *Certificate of Exemption*, WASH. STATE DEP’T OF HEALTH, http://www.doh.wa.gov/Portals/1/Documents/Pubs/348-106_CertificateofExemption.pdf [<http://perma.cc/F7RQ-NGAC>]. The form simply asks the parent to provide the name of the religious organization; it does not require a statement of why or how their beliefs conflict with vaccination. See *id.*

¹⁰⁷ See N.Y. PUB. HEALTH LAW § 2164(9) (“This section shall not apply to children whose parent, parents, or guardian hold genuine and sincere religious beliefs which are contrary to the practices herein required, and no certificate shall be required as a prerequisite to such children being admitted or received into school or attending school.”).

¹⁰⁸ MASS. GEN. LAWS ch. 76, § 15 (2014) (“*In the absence of an emergency or epidemic of disease declared by the department of public health, no child whose parent or guardian states in writing that vaccination or immunization conflicts with his sincere religious beliefs shall be required to present said physician’s certificate in order to be admitted to school.*” (emphasis added)). Virginia has a similar provision, exempting a child from vaccination if “the parent or guardian of the child objects thereto on the grounds that the administration of immunizing agents conflicts with his religious tenets or practices, *unless an emergency or epidemic of disease has been declared by the Board.*” VA. CODE ANN. § 32.1-46 (2015) (emphasis added).

¹⁰⁹ See J.S. Rota et al., *Processes for Obtaining Nonmedical Exemptions to State Immunization Laws*, 91 AM. J. PUB. HEALTH 645, 647 (2001) (detailing a study linking more complex exemption requirements to lower exemption rates). For example, Washington, which at the time allowed a simple box check in order to get an exemption, proved one of the least immunized states with only 69.2% of toddlers getting all of their shots. See Lauran Neergaard, *CDC: Not Enough Kids Are Getting Vaccinations*, SEATTLE TIMES (Aug. 1, 2003), <http://community.seattletimes.nwsourc.com/archive/?date=20030801&slug=vaccine01> [<http://perma.cc/A7XX-7MJG>].

¹¹⁰ See Rota, *supra* note 109, at 647.

¹¹¹ See *id.*

¹¹² See *School Vaccination Requirements*, *supra* note 98. States providing philosophical exemptions are Arizona (school enrollees), Arkansas, Colorado, Idaho, Louisiana, Maine, Michigan, Minnesota, Missouri (child care enrollees only), New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania, Texas, Utah, Washington, and Wisconsin. See *id.*; see also *infra* notes 158–173 and accompanying text (discussing recent bills in California and Vermont to eliminate philosophical exemptions).

sent a notarized document illustrating a “conscientiously held belief” opposing vaccinations.¹¹³ Other states use the terms “personal” or “philosophical” beliefs, while some use the catch-all “other,” which often makes it easier to claim a philosophical exemption than a religious one.¹¹⁴ Recent trends indicate that parents are using philosophical exemptions with growing frequency.¹¹⁵ Furthermore, in the thirty-two states in which statutes provide no philosophical exemption, parents may be using the religious exemption as a proxy for non-religious, personal reasons.¹¹⁶

Although the U.S. Supreme Court has never explicitly ruled on exemptions to mandatory vaccinations, scholars generally support the proposition that religious and philosophical exemptions are matters of legislative grace, and are not required by the Constitution.¹¹⁷ The genesis of this proposition comes from dictum in the Court’s ruling in *Prince v. Massachusetts* in 1944, a case that dealt with child labor laws as they applied to a Jehovah’s Witness

¹¹³ See Novak, *supra* note 55, at 1107 (quoting MINN. STAT. § 121A.15(3)(d) (West 2003)).

¹¹⁴ See Novak, *supra* note 55, at 1109 (discussing and citing to statutes with such exemptions); see also COLO. REV. STAT. § 25-4-1704 (2015) (providing for “personal belief” exemption); ME. REV. STAT. ANN. tit. 20-A, § 6355 (permitting exemptions based on “philosophical” reasons); MICH. COMP. LAWS ANN. § 333.9215 (West 2001) (providing exemption for “other objection” to vaccination).

¹¹⁵ See Novak, *supra* note 55, at 1109; see also Daniel R. Feikin et al., *Individual and Community Risks of Measles and Pertussis Associated with Personal Exemptions to Immunization*, 284 J. AM. MED. ASS’N 3145, 3147 (2000) (documenting marked increases in the use of philosophical exemptions to forgo vaccination).

¹¹⁶ See *School Vaccination Requirements*, *supra* note 98; see also Reiss, *supra* note 88, at 1553 (arguing that religious exemptions are easily abused and that many parents who claim a religious exemption lie because their reasons for not vaccinating are non-religious in nature). A study from 1998 found that thirty-two of the forty-eight states that allowed religious exemptions had never denied one, illustrating the ease with which parents can qualify. See Hinman et al., *supra* note 56, at 125. Still other testimonials and evidence point to parents engaging in “exemptions for convenience,” preferring to opt-out not for religious or philosophical reasons, but simply because they would prefer to skip a trip to the doctor or rustle through drawers to locate immunization paperwork. See EMILY OSHIMA LEE ET AL., CTR. FOR AM. PROGRESS, THE EFFECT OF CHILDHOOD VACCINE EXEMPTIONS ON DISEASE OUTBREAKS 5 (Nov. 14, 2013), <https://cdn.americanprogress.org/wp-content/uploads/2013/10/VaccinesBrief-1.pdf> [<http://perma.cc/S7Y5-243V>] (discussing “exemptions of convenience” and the problem of people applying for personal belief exemptions because it is easier than vaccinating); see also, Hinman et al., *supra* note 56, at 125 (explaining that some parents find it easier to claim an exemption than to locate paperwork).

¹¹⁷ See Calandrillo, *supra* note 7, at 429–30 (asserting that religious exemptions are “probably not required” and that philosophical exemptions are “certainly not required”); Reiss, *supra* note 88, at 1563 (characterizing the judicial history as “enabling, not mandating,” permitting but not requiring religious exemptions); see also *Phillips v. City of New York*, 27 F. Supp. 3d 310, 313 (E.D.N.Y. 2014), *aff’d*, 775 F.3d 538 (2d Cir. 2015) (stating that the Constitution does not require a religious exemption and that the U.S. Supreme Court has not required states to provide them); *Sherr v. Northport-E. Northport Union Free Sch. Dist.*, 672 F. Supp. 81, 88 (E.D.N.Y. 1987) (stating that New York’s religious exemption goes beyond what is required). In fact, the Supreme Court declined to grant certiorari to a case in which they could have ruled on religious exemptions. See *Brown v. Stone*, 378 So. 2d 218, 224 (Miss. 1979) (holding that Mississippi’s religious exemption statute was unconstitutional), *cert. denied*, 449 U.S. 887 (1980).

whose child distributed religious pamphlets.¹¹⁸ The Court mentioned mandatory immunization, stating that a parent cannot claim exemption from compulsory vaccination on religious grounds because freedom to practice religion stops short of exposing the community or the child to disease, sickness, or death.¹¹⁹ Following *Prince*, no court has ever required a state to include anything other than a medical exemption to compulsory vaccination laws, despite the fact that most states have religious exemptions.¹²⁰ Moreover, at least one court has gone so far as to hold that religious exemptions are unconstitutional.¹²¹

B. New York's "Genuine & Sincere" Religious Exemption

New York requires that those seeking a religious exemption to the vaccination requirement demonstrate that their religious beliefs are "genuine and sincere."¹²² This requirement—as it currently stands—represents a balance

¹¹⁸ See 321 U.S. 158, 166–67 (1944); see also Calandrillo, *supra* note 7, at 385 (including *Prince* in a discussion of cases that affirm the principle of compulsory vaccination laws); Hodge & Gostin, *supra* note 9, at 859 (suggesting that U.S. Supreme Court jurisprudence in cases like *Prince* indicates that an individual's free exercise right does not exempt them from compliance with laws aimed at the public good).

¹¹⁹ See *Prince*, 321 U.S. at 166–67.

¹²⁰ See Reiss, *supra* note 88, at 1560. In 1965, in *Wright v. DeWitt School District*, the Arkansas Supreme Court upheld a state statute that contained only a medical exemption, explaining that the statute was a valid exercise of the state's police power and that free exercise did not prevent the state from curtailing an individual's rights in order to ensure the health of the community. See 385 S.W.2d 644, 646 (Ark. 1965). Nevertheless, Arkansas has since added both religious and philosophical exemptions to its statute. See ARK. CODE ANN. § 6-18-702(d)(4)(A) (2013). The court addressed the free exercise argument by holding that the "rights of religious freedom cease when they transgress upon the rights of others." See *Wright*, 385 S.W.2d at 648. Similarly, in 2011, in *Workman v. Mingo County Board of Education*, the U.S. Court of Appeals for the Fourth Circuit upheld West Virginia's vaccination statute, which provides only for a medical exemption and no religious exemption, and cited the state's compelling interest in preventing the spread of communicable diseases. See 419 F. App'x 348, 356 (4th Cir. 2011). The court also held that the absence of a religious exemption did not infringe on the plaintiff's free exercise rights. See *id.*

¹²¹ See *Brown*, 378 So. 2d at 223. In 1979, in *Brown v. Stone*, the Mississippi Supreme Court found that including a religious exemption violated the Equal Protection Clause. See *id.* The court reasoned that allowing students whose parents have religious convictions opposed to vaccination to be exempt from the laws discriminates against those children whose parents do not hold such beliefs. See *id.* Although only one state court has ruled exemptions explicitly unconstitutional, it demonstrates that religious exemptions are by no means an inalienable right. See *id.*; see also Reiss, *supra* note 88, at 1561 (referring to the decision in *Brown* as "somewhat of an outlier").

¹²² See N.Y. PUB. HEALTH LAW § 2164(9); *supra* note 107 and accompanying text (providing the text of the statute). The statute used to be narrower, restricting the religious exemption to "bona fide members of a recognized religious organization." See Sean Coletti, Note, *Taking Account of Partial Exemptions in Vaccination Law, Policy, and Practice*, 36 CONN. L. REV. 1341, 1348 (2004) (discussing the change to the New York statute). In 1987, in *Sherr v. Northport-East Northport Union Free School District*, the U.S. District Court for the Eastern District of New York invalidated that part of the former New York exemption because it violated the Establishment Clause, but upheld the "genuine and sincere" requirement. See *Sherr*, 672 F. Supp. at 89; see also Poreda, *supra* note 99, at 782 (referring to the change in wording as a "less stringent but more constitutionally sound strategy").

between the legislature's "highly praiseworthy urge to minimize imposition" of vaccination requirements on those whose religion disagrees with the practice, and the need to prevent those who wish to couch their own personal opposition to vaccines in religious rhetoric.¹²³

New York allows each individual school to evaluate the merits of a parent's religious objection, but provides a sample request form.¹²⁴ The form is more extensive than the simple box-check forms of more lax states.¹²⁵ It requires a written submission that must include an explanation of why the parent requests the exemption, a description of the religious principles that guide the objection to immunization, and an indication of whether the parent opposes all immunizations, and if not, the religious basis that prohibits particular immunizations.¹²⁶ The form also requires a notarized signature.¹²⁷ Furthermore, the New York State Department of Health permits principals who are dissatisfied with the application to request supporting documentation.¹²⁸

In 2010, in *Caviezel v. Great Neck Public Schools*, the U.S. District Court for the Eastern District of New York grappled with the "genuine and sincere" language in the state's statute regarding religious exemptions to mandatory vaccinations.¹²⁹ The plaintiffs, relying on this state statute, sought to compel the school district to register their four-year-old daughter in pre-kindergarten without being vaccinated.¹³⁰ The question before the court was not only

¹²³ See *Sherr*, 672 F. Supp. at 88, 94.

¹²⁴ See *Sample Request for Religious Exemption to Immunization Form*, N.Y. STATE EDUC. DEP'T, <http://www.p12.nysed.gov/sss/schoolhealth/schoolhealthservices/modelreligiousexemptionformmarch10.pdf> [<http://perma.cc/WC6V-SGDF>]; see also N.Y. PUB. HEALTH LAW § 2164.

¹²⁵ See *Sample Request for Religious Exemption to Immunization Form*, *supra* note 124; see also Calandrillo, *supra* note 7, at 434 (discussing the problem with simple "check a box" forms that qualify children for religious exemptions); Rota et al., *supra* note 109, at 647 (detailing a study linking more complex exemption requirements to lower exemption rates).

¹²⁶ See *Sample Request for Religious Exemption to Immunization Form*, *supra* note 124. The New York City Department of Education's Office of School Health also distributed a letter regarding vaccinations and the process of applying for an exemption. Letter from Julia Sykes, Dep't of Educ. Immunization Program, to Parents of New York City Public School Children (2014), <http://schools.nyc.gov/NR/rdonlyres/E369FA10-ABC0-43AB-BDE6-062F4ACF7D0D/0/parentlettorequestexemptionletterhead92014.pdf> [<http://perma.cc/8363-DRPN>] [hereinafter *Request for Exemption from Immunization Requirements*]. The letter states in bold typeface: "A letter from you, a lawyer, a member of the clergy or other individual simply indicating that you have such a religious belief, without any further explanation, is inadequate to support the granting of an exemption." *Id.* at 3.

¹²⁷ See *Sample Request for Religious Exemption to Immunization Form*, *supra* note 124, at 3.

¹²⁸ See *id.* Supporting documentation can include a letter from an authorized representative of a church or religious organization, a letter to prior school districts or health care providers, or further explanation of the sincerity of the parent's religious belief, such as whether the parent or other children are vaccinated. See *id.* New York law permits parents who receive denials from principals to appeal their denial to the Commissioner of Education. See N.Y. EDUC. LAW § 310 (McKinney 2015).

¹²⁹ See 701 F. Supp. 2d 414, 416 (E.D.N.Y. 2010).

¹³⁰ See *id.*

whether the plaintiffs' beliefs were genuine and sincere, but also if the beliefs were religious in nature.¹³¹

The court found that while the child's mother, who identified as a pantheist, may have held genuine and sincere beliefs, they were not, in fact, religious.¹³² The court discussed how the Second Circuit had previously held that "philosophical and personal belief systems" are not religious, despite the fact that these beliefs might inform critical life choices.¹³³ After questioning the parents, the court ruled that the exemption did not apply to their daughter, because their beliefs and objections to vaccinations were non-religious.¹³⁴ *Caviezel* represents the dual nature of New York's religious exceptions: the beliefs in question must not only be genuine and sincere, but also religious.¹³⁵ The case also follows the U.S. Supreme Court's *Jacobson* precedent that the state's interest in maintaining public health and safety can trump individual, personal liberties.¹³⁶

In 2014, in *Phillips v. City of New York*, the U.S. District Court for the Eastern District of New York once again encountered a challenge to the state's vaccination policy.¹³⁷ The joined plaintiffs, all of whom were parents with unvaccinated children that had qualified under a religious exemption, challenged a city policy that excluded unvaccinated children from school whenever a schoolmate reports a case of a vaccine-preventable disease.¹³⁸

¹³¹ See *id.* at 427.

¹³² See *id.* at 429. During questioning, the parent of the child indicated that her religion takes no stance on vaccinating and that she was concerned about whether vaccines caused autism, indicating a medical, rather than religious objection to vaccination. See *id.* at 421.

¹³³ See *id.* at 429 (citing *Mason v. Gen. Brown Cent. Sch. Dist.*, 851 F.2d 47, 52 (2d Cir. 1988)). Nevertheless, other cases from the Second Circuit have held that religion need not stem from a formal religious sect or church, nor must the religion come from a traditional belief in any God. See *United States v. Seeger*, 380 U.S. 163, 166 (1965); *Mason*, 851 F.2d at 51; *Sherr*, 672 F. Supp. at 91. The court in *Caviezel* acknowledged that defining religion is an "eminently elusive and constitutionally perilous" endeavor and must not be conducted lightly. See *Caviezel*, 701 F. Supp. 2d at 427.

¹³⁴ See *Caviezel*, 701 F. Supp. 2d at 429. The court noted that the mother's religion did not object to vaccinations, that her beliefs were "cultural," and that her fear of vaccines was medical, having nothing to do with religion. See *id.*

¹³⁵ See *id.*

¹³⁶ See *id.* at 428.

¹³⁷ See *Phillips*, 27 F. Supp. 3d at 312.

¹³⁸ See *id.* New York City recently implemented a new flu vaccine requirement for all of the city's preschoolers. See NYC Health, *Influenza Vaccination Requirements for Children in Daycare or Preschool: Frequently Asked Questions for Parents*, NYC.GOV, <http://www.nyc.gov/html/doh/downloads/pdf/imm/day-care-flu-faq.pdf> [<http://perma.cc/D47L-HEZ2>]; see also Sharon Otterman, *New York City Requiring Flu Shots for Preschoolers*, N.Y. TIMES (Jan. 2, 2015), <http://www.nytimes.com/2015/01/03/nyregion/new-york-city-to-mandate-flu-shots-for-preschoolers.html> [<http://perma.cc/KH3R-CGK9>]. The city will fine any school that does not comply with the rule. See Otterman, *supra*. Unlike the vaccines at issue in *Phillips*, the flu vaccine is not yet mandated by the state and therefore the city cannot force schools to exclude unvaccinated children. *Id.* Rather, the choice is left to individual schools to decide whether to exclude the child or incur the fine. *Id.*

The plaintiffs brought First Amendment claims, as well as other constitutional claims, all of which the court rejected.¹³⁹ The plaintiffs argued that New York's vaccination program denied their children their constitutional right to free exercise of religion, but the court flatly rejected the claim under *Jacobson* and *Caviezel*, holding that religious objectors are not constitutionally exempt from vaccination requirements.¹⁴⁰ The court reiterated that any state that provides a religious exemption does so as a matter of legislative grace and not because the Constitution requires it.¹⁴¹ The court noted that New York's religious exemption statute offers even more protections than that which the U.S. Supreme Court has deemed to be required by the First Amendment.¹⁴²

On January 7, 2015, the Second Circuit upheld the district court's decision in *Phillips* and concluded that New York's vaccination requirements, as a prerequisite for school admission, did not violate the Free Exercise Clause of the First Amendment.¹⁴³ Citing past U.S. Supreme Court decisions, the court reaffirmed the proposition that a parent's right to exercise religion freely does not include the freedom to expose a child or the community to dangerous communicable diseases.¹⁴⁴ According to the court, because New York could constitutionally require every child to be vaccinated before entering school, its

¹³⁹ See *Phillips*, 27 F. Supp. 3d at 312–13. The plaintiffs also brought due process and equal protection claims. See *id.*

¹⁴⁰ See *id.* at 312; *Caviezel*, 739 F. Supp. 2d at 428; see also *Jacobson*, 197 U.S. at 35–39. Plaintiffs further argued that *Jacobson* was “bad law” and that the court should overturn the U.S. Supreme Court's decision in that case. See *Phillips*, 27 F. Supp. 3d at 313. The court rejected the plaintiffs' due process argument, asserting that the state's right under the police power to require vaccinations is “too well established to require discussion.” See *id.* Finally, the court dismissed the plaintiffs' equal protection argument, holding that they failed to allege any facts indicating that the vaccination policy favors any religion over another. See *id.* The court held that the plaintiffs failed to state a claim under which relief could be granted under the Equal Protection Clause. See *id.*; *Caviezel*, 739 F. Supp. 2d at 282 (dismissing plaintiffs' equal protection claims after an amended complaint).

¹⁴¹ See *Phillips*, 27 F. Supp. 3d at 313.

¹⁴² See *id.* The court cited to a prior New York decision when discussing the matter of legislative grace. See *Sherr*, 672 F. Supp. at 88. In *Sherr*, the court found that New York's religious exemption statute “goes beyond” what the U.S. Supreme Court has declared the Constitution requires, but that it “undoubtedly reflects a highly praiseworthy urge” to provide relief for those who hold religious beliefs at odds with vaccination. See *id.* Nevertheless, the court reasoned, the requirement within the exemption that the beliefs be “sincerely held” could not violate plaintiffs' constitutional rights since technically these exemptions are not required by the Constitution in the first place. See *id.* The court also cited a 1969 New York state appellate case, *McCartney v. Austin*, to reiterate that the vaccination practice fell within the state's police power, again favoring public safety over individual freedoms. See *id.*; *McCartney v. Austin*, 298 N.Y.S.2d 26, 26 (App. Div. 1969).

¹⁴³ See *Phillips*, 775 F.3d at 540. The court reiterated the notion that the New York statute goes beyond what the Constitution required; theoretically the statute could bar an unvaccinated student from school altogether, let alone during times of an outbreak of a vaccine-preventable disease. See *id.* at 543. The court stated that given this more “limited exclusion” during times of an outbreak, it is “clearly constitutional.” See *id.*

¹⁴⁴ See *id.* at 543 (citing *Prince*, 321 U.S. at 166–67; *Jacobson*, 197 U.S. at 38).

limited exception for genuine and sincere beliefs went beyond what was required.¹⁴⁵

The Second Circuit also highlighted the issue of parents attempting to use religious exemption as a pretext for other concerns regarding vaccinations.¹⁴⁶ The court cited the testimony of one of the plaintiffs who was originally granted a religious exemption, but whose exemption was later rescinded when it became clear that her objection to vaccinations was not based on genuine and sincere religious beliefs.¹⁴⁷ The lower court decided that her objections were actually based on health concerns regarding vaccinations and that the plaintiff, who was Catholic and argued for a religious exemption, testified that she did not know of any Catholic tenets that opposed vaccination.¹⁴⁸

Notably, the Second Circuit showed considerable legislative deference to the vaccine requirements.¹⁴⁹ The plaintiffs argued that growing medical evidence shows that the harm inflicted by vaccines outweighs the good they provide, a concern echoed by many of those nationwide who are opposed to vaccinations.¹⁵⁰ Rejecting this argument, the court deferred to the legislature, assigning the responsibility of determining the efficacy and alleged dangers associated with vaccines to lawmakers, not to the courts or to individuals who take issue with inoculation.¹⁵¹

Although no court has struck down New York's "genuine and sincere" requirement, some scholars have discussed the constitutionality of statutes that force courts to become "entangled" in the religious beliefs of citizens, thus potentially violating the Establishment Clause of the First Amendment.¹⁵² The

¹⁴⁵ See *id.*; *Prince*, 321 U.S. at 166–67.

¹⁴⁶ See *Phillips*, 775 F.3d at 541.

¹⁴⁷ *Id.*

¹⁴⁸ *Id.* The plaintiff initially testified, "How I treat my daughter's health and her well-being is strictly by the word of God," but then admitted that she believed that vaccination "could hurt my daughter. It could kill her. It could put her into anaphylactic shock. It could cause any number of things." *Id.* Other statements by the plaintiff also seemed to indicate a hybrid medical-religious objection to vaccinations, such as this statement following the district court's decision: "Disease is pestilence, and pestilence is from the devil. The devil is germs and disease, which is cancer and any of those things that can take you down. But if you trust in the Lord, these things cannot come near you." See Benjamin Mueller, *Judge Upholds Policy Banning Unvaccinated Students During Illnesses*, N.Y. TIMES (June 22, 2014), <http://www.nytimes.com/2014/06/23/nyregion/judge-upholds-policy-barring-unvaccinated-students-during-illnesses.html> [<http://perma.cc/6XTN-9TJ7>].

¹⁴⁹ See *Phillips*, 775 F.3d at 542.

¹⁵⁰ See *id.*; see also *supra* note 83 and accompanying text (describing the repudiated *Lancet* article and its proposal of a link between vaccines and autism).

¹⁵¹ See *Phillips*, 775 F.3d at 542. Legislative deference with regard to vaccinations harkens back to the *Jacobson* opinion, in which the U.S. Supreme Court stated that overruling a mandatory vaccination statute would "strip the legislative department of its function to care for the public health." See *Jacobson*, 197 U.S. at 37.

¹⁵² See, e.g., Timothy J. Aspinwall, *Religious Exemptions to Childhood Immunization Statutes: Reaching for a More Optimal Balance Between Religious Freedom and Public Health*, 29 LOY. U. CHI. L.J. 109, 132 (1997) (discussing exemptions and the Establishment Clause, and suggesting that

Establishment Clause prohibits the state or federal government from setting up a church, or passing laws that promote one religion, all religions, or prefer one religion over another.¹⁵³ The U.S. Supreme Court developed the “*Lemon test*” in 1971, in *Lemon v. Kurtzman*, which is sometimes used to determine if a law is constitutional under the Establishment Clause.¹⁵⁴ For a court to uphold a law, the law must satisfy the following three requirements: (1) the legislature must have had a secular purpose for adopting the enactment in question; (2) the primary effect of the law must be one that neither advances nor inhibits religion; and (3) the statute must not result in an excessive entanglement of government with religion.¹⁵⁵

When applying the test to a state’s vaccination requirement, the first two prongs are sufficiently satisfied, but some believe that having a state official evaluate the validity of a parent’s genuine and sincere religious belief constitutes “excessive entanglement.”¹⁵⁶ In spite of these concerns, in 1987, in *Sherr v. Northport-East Northport Union Free School District*, the U.S. District Court for the Eastern District of New York upheld the “genuine and sincere” requirement, indicating that it passed muster under the Establishment Clause, but the court did invalidate part of the statute that required parents seeking exemption to be “bona fide members of a recognized religious organization.”¹⁵⁷

the New York statute has not “resolved the tension” between religious freedom and public health); Hodge & Gostin, *supra* note 9, at 860; Novak, *supra* note 55, at 1114.

¹⁵³ See *Everson v. Bd. of Educ.*, 330 U.S. 1, 15 (1947); see also Caroline L. Kraus, Note, *Religious Exemptions—Applicability to Vegetarian Beliefs*, 30 HOFSTRA L. REV. 197, 205 (2001) (analyzing whether parents with vegetarian beliefs could meet New York’s requirements to receive a religious exemption).

¹⁵⁴ See 403 U.S. 602 (1971).

¹⁵⁵ See *id.*; Novak, *supra* note 55, at 1111.

¹⁵⁶ See *Sherr*, 672 F. Supp. at 89 (holding that the first prong is clearly satisfied and that the vaccine requirements are “obviously . . . designed to achieve the purely secular purpose” of preventing the transmission of dangerous, communicable diseases); see also, Novak, *supra* note 55, at 1114 (arguing that the genuine and sincere requirement would likely fail the third prong only).

¹⁵⁷ See *Sherr*, 672 F. Supp. at 99. Although the most common arguments against mandatory vaccination requirements utilize free exercise or Establishment Clause claims, objectors have also unsuccessfully raised other state and U.S. constitutional arguments, such as the right to an education, illegal search and seizure, and substantive due process claims. See Hodge & Gostin, *supra* note 9, at 862. In 1903, in *Viemester v. White*, a New York parent challenged the state’s vaccination requirements by arguing that it interfered with his child’s constitutional right to an education. See 72 N.E. 97, 98–99 (1904) (holding that the right to attend the public schools of the state is necessarily subject to some restrictions and limitations in the interest of the public health). The court noted:

A child afflicted with leprosy, smallpox, scarlet fever, or any other disease which is both dangerous and contagious, may be lawfully excluded from attendance so long as the danger of contagion continues. Public health, as well as the interest of the school, requires this, as otherwise the school might be broken up and a pestilence spread abroad in the community.

Id. The court held that there exists no absolute constitutional right to an education in New York, and that the reasonable legislative regulations imposed on the privilege of a public education, such as vaccination

C. Dropping the Philosophical Exemption: Vermont and California at the Forefront

Based in part on public health threats like the Disneyland measles outbreak, over the past year some states have reconsidered their philosophical exemptions.¹⁵⁸ In May of 2015, Governor Shumlin of Vermont signed a bill into law that removed philosophical exemptions from the state statute, but left religious and medical exemptions in place.¹⁵⁹ The Governor, who initially opposed the legislation, expressed hope that the revision will increase vaccination rates in a state that suffers from some of the lowest nationwide, likely due to the philosophical exemption.¹⁶⁰ Still, senators who fought the new law argued that the safety of vaccines is still in dispute, and even posited that the requirement would lead to a decline in school attendance.¹⁶¹ The new law has also met backlash arising from distrust of vaccines and the companies that develop and sell them.¹⁶² With the philosophical exemption removed, some are concerned that parents may try to exploit the religious exemption, which requires only a signed statement, thus undermining the new law's purpose of shoring up vaccination rates in the state.¹⁶³

requirements, are not limited. *See id.*; *see also* State *ex rel.* Mack v. Bd. of Educ. of Covington, 204 N.E.2d 86, 90 (Ohio Ct. App. 1963) (holding that a pupil's right to attend school in Ohio is contingent on compliance with vaccination requirements).

¹⁵⁸ *See* Specter, *supra* note 104 (discussing Vermont's legislation and noting that childhood disease outbreaks, like measles in Disneyland, are becoming "increasingly difficult for politicians to ignore"); *Senate Bill 277 Introduced*, *supra* note 85 (quoting California Senators Pan and Stone who discuss their state's recent measles outbreak in support of a bill to drop the philosophical exemption).

¹⁵⁹ *See* Specter, *supra* note 104; *see also* VT. STAT. ANN. tit. 18, § 1122 (2015) (the edited statute, which provides only for religious exemptions, takes effect July 1, 2016).

¹⁶⁰ *See* Specter, *supra* note 104 (quoting Governor Shumlin as stating, "We're not where we need to be to protect our kids from dangerous diseases, and I hope this legislation will have the effect of increasing vaccination rates."); *see also* Achen, *supra* note 92 (noting that Vermont has one of the lowest vaccination rates in the nation and that the philosophical exemption is the most commonly used).

¹⁶¹ Paul Heintz, *Senate Votes to Nix Philosophical Exemption of Vaccine Mandate*, SEVEN DAYS (Apr. 22, 2015), <http://www.sevendaysvt.com/OffMessage/archives/2015/04/22/senate-votes-to-nix-philosophical-exemption-to-vaccine-mandate> [<http://perma.cc/8YND-CQNT>]. Interestingly, one opponent to the law suggested waiting to pass the bill until the CDC has developed a test to predict allergic reactions to vaccines before administering them. *See id.*

¹⁶² *See* Achen, *supra* note 92 (quoting parents who distrust pharmaceutical companies); Specter, *supra* note 104 (reporting that many oppose the new law, which reflects an issue that is "emotional and highly contested").

¹⁶³ *See* Achen, *supra* note 92. This article included interviews from parents who plan to use a religious exemption in lieu of the now-extinct philosophical one, and noted the ease with which parents can attain a religious exemption, contrasting it with New York's more rigorous application process. *See id.* The article quotes one parent who said, "I will become religious, if need be, to get a religious exemption . . . I will believe whatever I have to believe to not have my kids vaccinated." *See id.* VT. STAT. ANN. tit. 18, § 1122 (requiring that parents annually present a signed statement on a form that indicates that the person "holds religious beliefs opposed to immunization" and "has reviewed evidence-based educational material provided by the Department regarding immunizations").

In June of 2015, California followed suit and passed Senate Bill 277, which eliminated philosophical exemptions, leaving the state—which included religious objectors under the philosophical umbrella—with only medical exemptions as an option.¹⁶⁴ The bill came in the wake of the Disneyland outbreak that originated in southern California earlier in the year.¹⁶⁵ The bill is the brainchild of Senator Richard Pan, a pediatrician from Sacramento who drafted and pushed the new legislation.¹⁶⁶ Some have proclaimed the new law as a “stunning victory for public health” which could be used as a model for the rest of the country.¹⁶⁷ Nevertheless, as in Vermont, the new law has garnered its share of community outrage.¹⁶⁸ Volunteers, led by a former assemblyman, attempted to file petitions to overturn the new law by referendum but failed to acquire the requisite number of signatures.¹⁶⁹

In addition to the new laws passed in Vermont and California in 2015, a handful of other states have also revisited their exemption laws.¹⁷⁰ Connecticut passed House Bill 6949 that will require parents to submit annual statements indicating that vaccinations are contrary to their religious beliefs, which must be signed by a judge, clerk, notary, justice of the peace, an attorney licensed in

¹⁶⁴ S.B. 277, 2015 Cal. Leg., 2015–16 Reg. Sess. (Cal. 2015); *see also* CAL. HEALTH & SAFETY CODE § 120325 (West 2015) (reflecting the new statute, which took effect on January 1, 2016, and providing exemptions only for medical reasons). California joins West Virginia and Mississippi as the only states to provide solely a medical exemption. *See School Vaccination Requirements, supra* note 98.

¹⁶⁵ Michael Martinez & Amanda Watts, *California Governor Signs Vaccine Bill That Bans Personal, Religious Exemptions*, CNN (June 30, 2015), <http://www.cnn.com/2015/06/30/health/california-vaccine-bill/> [<http://perma.cc/9KDP-VZC6>] (reporting that the bill was drafted in part over concerns regarding the Disneyland outbreak).

¹⁶⁶ *See* Jeffrey Kluger, *Meet the Heroes and Villains of Vaccine History*, TIME (July 29, 2015), <http://time.com/3977055/vaccine-heroes-villains/> [<http://perma.cc/486Z-E6S6>] (naming Senator Pan among the heroes of vaccine history, along with Edward Jenner); *Senate Bill 277 Introduced, supra* note 85 (discussing Senator Pan’s work on the bill).

¹⁶⁷ Michelle M. Mello et al., *Shifting Vaccination Politics—The End of Personal-Belief Exemptions in California*, 373 N. ENG. J. MED. 785, 785–87 (2015) (a report written by both Stanford and Northeastern University lawyers and doctors praising the new law and vouching for its legal and health soundness); Clifton B. Parker, *California’s New Vaccination Law Serves as a National Model for Children’s Health, Stanford Scholars Say*, STANFORD NEWS (July 23, 2015), <http://news.stanford.edu/news/2015/july/exemptions-vaccine-model-072315.html> [<http://perma.cc/Z2AS-GK69>] (reflecting on the Stanford professors’ report).

¹⁶⁸ *See* Mello et al., *supra* note 167 (describing the opponents who “mobilized fiercely against it” and stating that the sponsor of the bill received death threats); Firger, *supra* note 104; Patrick McGreevy, *Foes of California Vaccine Law File Petitions for Referendum*, L.A. TIMES (Sept. 28, 2015), <http://www.latimes.com/local/political/la-me-pc-vaccine-law-foes-referendum-drive-20150925-story.html> [<http://perma.cc/3UYK-3GG6>] (reporting on early efforts to file petitions for referendum).

¹⁶⁹ Patrick McGreevy, *Not Enough Signatures: Vaccine Opponents Fall Short in Ballot Effort*, L.A. TIMES (Sept. 30, 2015), <http://www.latimes.com/local/political/la-me-pc-vaccine-law-foes-fall-short-in-petition-drive-for-referendum-20150930-story.html> [<http://perma.cc/XB56-FJKC>] (reporting that the effort fell “far short” of the required number of signatures).

¹⁷⁰ *See School Vaccination Requirements, supra* note 98 (compiling a list of passed and considered legislation for 2015).

the state, or possibly a school nurse.¹⁷¹ A number of other states have either passed or proposed legislation that would require greater disclosure of vaccination information and rates.¹⁷² In New York, separate bills were introduced to discard the existing religious exemption and to add a personal belief exemption, and in Washington a bill was proposed to drop the state's current personal belief exemption.¹⁷³

III. PROPOSED REVISIONS TO MANDATORY VACCINATION POLICY IN THE UNITED STATES

Considering the dangers that unvaccinated individuals pose to the health of society, legislators have an obligation to strengthen compulsory vaccination requirements in this country.¹⁷⁴ To fulfill this duty, legislators must reform the lax religious and philosophical exemption standards in place in many states.¹⁷⁵

This Part proposes three ways in which legislators can achieve this goal.¹⁷⁶ Section A proposes that legislatures in states that currently have philosophical or personal belief exemptions follow the lead of Vermont and California by eliminating those exemptions.¹⁷⁷ This would increase the number of students that are vaccinated in those states by sealing at least one frequently

¹⁷¹ See H.B. 6949, 2015 Gen. Assemb., Reg. Sess. (Ct. 2015). Connecticut will require vaccination unless the child

presents a statement from the parents or guardian of such child that such immunization would be contrary to the religious beliefs of such child or the parents or guardian of such child, which statement shall be acknowledged . . . by (A) a judge of a court of record or a family support magistrate, (B) a clerk or deputy clerk of a court having a seal, (C) a town clerk, (D) a notary public, (E) a justice of the peace, (F) an attorney admitted to the bar of this state, or (G) . . . a school nurse

CONN. GEN. STAT. ANN. § 10-204a(a) (West, Westlaw through 2015 Reg. Sess. The changes in the law make it harder for parents to get the exemption by using a third party to verify the statements, whereas before Connecticut had something closer to a box-check process. See Daniela Altimari, *Bill Sets New Hurdle for Parents Refusing to Vaccinate Their Children*, HARTFORD COURANT (Mar. 27, 2015), <http://www.courant.com/politics/hc-childhood-immunizations-ct-20150327-story.html> [<http://perma.cc/9GH5-K3BV>] (reporting on the new law, noting that the number of religious exemptions have risen from 300 to 1400 within ten years, but that the state still has a 98.5% vaccination rate).

¹⁷² See *School Vaccination Requirements*, *supra* note 98. These states include South Dakota and Vermont (which both passed legislation), while Arizona, Illinois, Missouri, and Texas each proposed similar disclosure-related bills. See *id.*

¹⁷³ See *School Vaccination Requirements*, *supra* note 98; S.B. 1536, 2015–16 Gen. Assemb., Reg. Sess. (N.Y. 2015) (New York's proposed bill to add philosophical exemption); S.B. 6017, 2015–16 Gen. Assemb., Reg. Sess. (N.Y. 2015) (New York's proposed bill to drop religious exemption); H.B. 2009, 64th Leg., Reg. Sess. (Wash. 2015) (Washington's proposed bill to drop personal belief exemption).

¹⁷⁴ See *infra* notes 176–232 and accompanying text.

¹⁷⁵ See *infra* notes 176–232 and accompanying text.

¹⁷⁶ See *infra* notes 176–232 and accompanying text.

¹⁷⁷ See *infra* notes 184–190 and accompanying text.

utilized loophole through which parents try to evade vaccination.¹⁷⁸ Section B then proposes that state legislatures refashion existing individual state laws using certain states with particularly strong vaccination requirements as models.¹⁷⁹ This method would both allow the nation to benefit from stronger vaccination laws and ensure that drafting remains vested in the police power of each individual state.¹⁸⁰ Finally, section C proposes creating a uniform vaccination statute, which would include comments to clarify the meaning of and give instructions for the implementation of each provision.¹⁸¹ Individual states would then adopt this statute and use it in lieu of their current state vaccination laws.¹⁸² This would provide for uniformity and predictability in an increasingly mobile and transitory nation.¹⁸³

A. Eliminating the Philosophical Exemption

The first way legislators might approach revising their state's vaccination standards would be to eliminate the philosophical or personal belief exemptions from their statutes, if their state currently has this kind of exemption as an option.¹⁸⁴ Certainly, states that presently do not provide such an exemption should refrain from adding one.¹⁸⁵ The recent legislation passed in Vermont and California indicates that the movement to eliminate philosophical exemptions is already underway.¹⁸⁶

Eliminating the option of a philosophical exemption removes the risk that parents will abuse this exemption or use it out of convenience.¹⁸⁷ Indeed, many states have seen increases in the number of parents utilizing the philosophical exemption to avoid vaccinating their children, underscoring the urgent need to

¹⁷⁸ See *infra* notes 184–190 and accompanying text.

¹⁷⁹ See *infra* notes 191–218 and accompanying text.

¹⁸⁰ See *infra* notes 191–218 and accompanying text.

¹⁸¹ See *infra* notes 219–232 and accompanying text.

¹⁸² See *infra* notes 219–232 and accompanying text.

¹⁸³ See *infra* notes 219–232 and accompanying text.

¹⁸⁴ See *School Vaccination Requirements*, *supra* note 98; *supra* note 112 and accompanying text (providing a list of eighteen states that currently have some form of philosophical exemption).

¹⁸⁵ See *School Vaccination Requirements*, *supra* note 98 (showing a map of thirty-two states that presently do not have philosophical exemptions); see also S.B. 1536, 2015–16 Gen. Assemb., Reg. Sess. (N.Y. 2015) (New York's proposed bill—currently in Senate committee—to add philosophical exemption); *Senate Bill S1536*, N.Y. STATE SENATE, <http://www.nysenate.gov/legislation/bills/2015/s1536> [<http://perma.cc/BPU5-S3GL>] (discussing the justifications for the proposed bill to add a philosophical exemption).

¹⁸⁶ See *infra* notes 158–173 and accompanying text (discussing recent legislation in California and Vermont that has removed philosophical exemptions); see also Mello et al., *supra* note 167, at 785 (suggesting that California's move to eliminate a philosophical exemption could serve as nationwide model).

¹⁸⁷ See Calandrillo, *supra* note 7, at 432–33 (discussing exemptions of convenience); Hinman et al., *supra* note 56, at 125 (explaining that some parents find it easier to claim an exemption than to locate paperwork).

curb this dangerous trend.¹⁸⁸ Furthermore, because philosophical exemptions do not carry the potential constitutional problems of religious exemptions, extinguishing them is less legally burdensome.¹⁸⁹ In light of recent outbreaks and the threat posed to herd immunity, states should not enable parents to forgo vaccination unless it is absolutely necessary.¹⁹⁰

B. Revising Religious Exemptions Using New York and Massachusetts as Examples

This section proposes a second way legislators might approach revising their state's standards: by looking at another state as a model for how to draft the religious exemption.¹⁹¹ Subsection 1 argues that states should adopt New York's "genuine and sincere" religious belief requirement into their vaccination statutes to raise the bar for parents applying for religious exemptions.¹⁹² Subsection 2 proposes borrowing an emergency exception from Massachusetts law that addresses the vaccination of all individuals—including those who have been granted a religious exemption—during public health crises.¹⁹³

1. New York's "Genuine and Sincere" Requirement

A strong choice for a model state is New York.¹⁹⁴ As noted previously, New York's religious exemption provision includes the adjectives "genuine" and "sincere" when describing religious beliefs that contradict vaccination

¹⁸⁸ See Feikin et al., *supra* note 115, at 3147 (showing increases in the use of philosophical exemptions to avoid vaccination); Mello et al., *supra* note 167, at 785 (citing the doubling of personal belief exemptions in California since 2007 as one reason for the state's recent elimination of the exemption); Novak, *supra* note 55, at 1109; see also Achen, *supra* note 92 (reporting on recent Vermont legislation removing a philosophical exemption, the most commonly used exemption in the state, and noting that Vermont has one of the lowest vaccination rates in the country).

¹⁸⁹ See Calandrillo, *supra* note 7, at 429–33 (declaring that although religious exemptions are "probably" not constitutionally required, philosophical exemptions are "certainly" not constitutionally required); Mello et al., *supra* note 167, at 786 (predicting that constitutional challenges to the new California legislation eliminating philosophical exemptions are "unlikely to succeed"); see also *infra* notes 210–212 and accompanying text (discussing a theoretical constitutional challenge to religious exemptions).

¹⁹⁰ See Mello et al., *supra* note 167, at 786 (citing the 2015 measles outbreak in California—caused by "substandard" vaccination compliance—as one motive for the state's new legislation eliminating the philosophical exemption); Achen, *supra* note 92 (reporting that Vermont's vaccination rate falls below that which is necessary to establish herd immunity).

¹⁹¹ See Reiss, *supra* note 88, at 1589 (suggesting New York's statute as a potential model).

¹⁹² See *infra* notes 194–212 and accompanying text.

¹⁹³ See *infra* notes 213–218 and accompanying text.

¹⁹⁴ See *Phillips v. City of New York*, 775 F.3d 538, 540 (2d Cir. 2015) (upholding New York's "genuine and sincere" religious exemption); see also Calandrillo, *supra* note 7, at 433–34 (praising New York as one of the only states to deny "bogus requests" for vaccination exemption); Reiss, *supra* note 88, at 1589 (recommending New York as a model).

practices.¹⁹⁵ The “genuine and sincere” requirement—a hallmark of the New York statute—imposes a higher, but not onerous, burden of proof on the parent requesting an exemption.¹⁹⁶ This in turn increases the likelihood that only parents who truly oppose vaccines for religious reasons qualify for the exemptions and reduces the potential for abuse.¹⁹⁷ The recent *Phillips v. City of New York* case illustrates the requirement’s practicality: the court rejected one plaintiff’s request for a religious exemption after it determined through questioning that the reason she applied for the exemption was medical in nature, not religious.¹⁹⁸ Many state laws fall prey to such improper use of religious exemptions as a proxy for either a medical concern or a philosophical objection to vaccinations.¹⁹⁹ This higher burden of proof would also prevent parents from engaging in “exemptions of convenience.”²⁰⁰ In addition, parents who cite financial concerns regarding the cost of vaccines can take advantage of various governmental programs that ensure low cost or free vaccination for their chil-

¹⁹⁵ N.Y. PUB. HEALTH LAW § 2164(9) (McKinney 2015). The provision reads: “This section shall not apply to children whose parent, parents, or guardian hold *genuine and sincere* religious beliefs which are contrary to the practices herein required, and no certificate shall be required as a prerequisite to such children being admitted or received into school or attending school.” *Id.* (emphasis added). New York’s medical exemption provision states: “If any physician licensed to practice medicine in this state certifies that such immunization may be detrimental to a child’s health, the requirements of this section shall be inapplicable until such immunization is found no longer to be detrimental to the child’s health.” *Id.* § 2164(8); see also Calandrillo, *supra* note 7, at 433–34 (noting that New York tends to impose stricter requirements when it comes to medical exemptions, is one of the only states to highly scrutinize the medical necessity of the exemption, and denies requests that fall short).

¹⁹⁶ See Reiss, *supra* note 88, at 1589; Coletti, *supra* note 122, at 1349 (discussing the genuine and sincere requirement); see also *Phillips*, 775 F.3d at 541 (denying an exemption that was not based on sincere religious belief); Caviezel v. Great Neck Pub. Schs., 701 F. Supp. 2d 414, 429 (E.D.N.Y. 2010) (denying exemption); *Sample Request for Religious Exemption to Immunization Form*, *supra* note 124.

¹⁹⁷ See *Sherr v. Northport-E. Northport Union Free Sch. Dist.*, 672 F. Supp. 81, 96 (E.D.N.Y. 1987) (granting one plaintiff’s exemption after finding that plaintiff’s religious beliefs to be sincere); Reiss, *supra* note 88, at 1589 (admitting that the “genuine and sincere” language cannot completely preclude parents from using the religious exemption under false pretenses); Poreda, *supra* note 99, at 782–83 (discussing the genuine and sincere requirement).

¹⁹⁸ See *Phillips*, 775 F.3d at 541. The Second Circuit’s opinion quoted a magistrate judge’s report which found that: “plaintiff’s testimony that she did not adopt her views opposing vaccination until she believed that immunization jeopardized her daughter’s health [was] compelling evidence that plaintiff’s refusal to immunize her child [was] based on medical considerations and not religious beliefs.” *Id.* (quoting Report and Recommendation at 12, *Check v. N.Y. City Dep’t of Educ.*, No. 13-CV-00791, 2013 BL 132744 (E.D.N.Y. May 20, 2013)).

¹⁹⁹ See Calandrillo, *supra* note 7, at 416. A federal district court denied a religious exemption to a family in New York who “couched” their opposition to vaccination in religious beliefs, when “the heart of their opposition did not in fact lie in theological considerations.” See *Sherr*, 672 F. Supp. at 94.

²⁰⁰ See LEE ET AL., *supra* note 116, at 5 (finding that many exemptions reflected a matter of convenience rather than a deeply held religious beliefs); see also Hinman et al., *supra* note 56, at 125 (explaining that some parents find it easier to claim an exemption than to locate paperwork).

dren.²⁰¹ Vaccination should rank as a top priority for parents, not a casual option.²⁰²

States cannot afford to allow “vaccinophobia” to affect immunization rates among schoolchildren, and a more demanding system would mitigate that risk.²⁰³ As studies have shown, the complexity of the exemption process has a direct effect on vaccination rates.²⁰⁴ Exemptions shrink and immunization rates rise when the state makes it more difficult to qualify for them.²⁰⁵ By adding the genuine and sincere language to religious exemption statutes and implementing a more comprehensive process—similar to that of New York’s—to apply for an exemption, states would see a drop in the number of exemption applications.²⁰⁶

To that end, states should adopt a form like New York’s that requires parents to detail in a particularized statement the reasons why they wish to apply for an exemption and require notarization of the form.²⁰⁷ States should also

²⁰¹ See Hodge & Gostin, *supra* note 9, at 881–82.

²⁰² See Hinman et al., *supra* note 56, at 125 (“It should not be easier to get an exemption than it is to get immunized.”). New York has also subjected those looking to qualify for a medical exemption to similar scrutiny. See *Lynch v. Clarkstown Cent. Sch. Dist.*, 590 N.Y.S.2d 687, 690 (App. Div. 1992) (holding that the school district did not abuse its discretion when it denied a medical exemption request and that it is not obligated to accept a doctor’s note at face value). Certainly all states should maintain their medical exemptions to protect the allergic and the immuno-compromised, but states should nonetheless proceed with caution to ensure that science is the motivator, and not pure “quackery.” See Donald G. McNeil, Jr., *Worship Optional: Joining a Church to Avoid Vaccines*, N.Y. TIMES (Jan. 14, 2003), <http://www.nytimes.com/2003/01/14/science/worship-optional-joining-a-church-to-avoid-vaccines.html?pagewanted=1> [<http://perma.cc/779E-H5JJ>] (quoting Dr. Terry Marx, who evaluates applications for medical exemptions, as noting that many are “bogus” and are rejected if “they’re based on quackery”). Allowing fake medical exemptions only hurts the vulnerable individuals that states seek to protect with medical exemptions. See Calandrillo, *supra* note 7, at 433 (asserting that “no regulation should require vaccination where the harm imposed is greater than the benefit received”).

²⁰³ See Rota et al., *supra* note 109, at 647 (detailing a study linking more complex exemption requirements to lower exemption rates); see also Bruce Jancin, *Tips on Dealing with “Vaccinophobic” Parents*, FAMILY PRACTICE NEWS (Sept. 15, 2010), [http://www.familypracticenews.com/index.php?id=2633&cHash=071010&tx_ttnews\[tt_news\]=51217](http://www.familypracticenews.com/index.php?id=2633&cHash=071010&tx_ttnews[tt_news]=51217) [<http://perma.cc/2CJ5-ZYJT>] (citing Dr. Marsha Anderson of the University of Colorado School of Medicine, who advocates that pediatricians take time to debunk parents’ fear of risks by referring to the mechanisms that ensure vaccine safety and explaining that they recommend vaccines to benefit the child and to preserve herd immunity).

²⁰⁴ See Rota et al., *supra* note 109, at 647 (showing an “inverse relationship” between requirement complexity and proportion of exemptions claimed); see also Calandrillo, *supra* note 7, at 434–35 (discussing the relationship between complexity of the exemption approval process and the number of exemptions requested); Neergaard, *supra* note 109 (providing Washington as an example of a state with low exemption complexity and a low vaccination rate).

²⁰⁵ See Calandrillo, *supra* note 7, at 435 (arguing that the imposition of more “red tape” will help streamline exemptions to exclude those of convenience); Rota et al., *supra* note 109, at 647.

²⁰⁶ See Calandrillo, *supra* note 7, at 434–35 (implying that stricter exemption process would yield lower exemption rates); Rota et al., *supra* note 109, at 647.

²⁰⁷ See *Sample Request for Religious Exemption to Immunization Form*, *supra* note 124; *Request for Exemption from Immunization Requirements*, *supra* note 126 (explaining to New York parents

follow New York's lead in permitting—and encouraging—principals to request further documentation if they are dissatisfied with the materials presented.²⁰⁸ The totality of these elements would ensure that parents with sincerely held religious beliefs will be absolved from immunization requirements while creating a high enough hurdle for those attempting to use the exemption to get out of immunization requirements for unsatisfactory reasons.²⁰⁹

Opponents may object to this method, relying on an “excessive entanglement” argument under the Establishment Clause.²¹⁰ But, as the Eastern District of New York recognized in *Sherr v. Northport-East Northport Union Free School District*, giving the government discretion to decide whether religious membership is “bona fide” and part of a “recognized” religion is different than allowing the government to evaluate the general sincerity of a parent's religious beliefs as they are applied to vaccination.²¹¹ Furthermore, the request that a parent produce an affidavit verifying their religious beliefs and how they pertain to vaccinations can hardly be considered “excessive,” especially when balanced with the risk to the public health that is exacerbated every time someone opts out of vaccinating their child.²¹²

what they must provide to apply for an exemption); *supra* note 171 and accompanying text (discussing Connecticut's recent change to religious exemption that now requires notarization of a statement regarding religious belief).

²⁰⁸ See *Sample Request for Religious Exemption to Immunization Form*, *supra* note 124 (outlining a principal's right to request more information). But see Jie Jenny Zou & Robert Miller, *Increasing Number of New York School Children Skipping Vaccinations*, N.Y. WORLD (Jan. 29, 2015), <http://www.thenewyorkworld.com/2015/01/29/vaccine-rates/> [<http://perma.cc/XA73-HYYE>] (discussing the procedures principals follow, but finding that many New York City schoolchildren are still getting religious exemptions).

²⁰⁹ Specter, *supra* note 104 (discussing the change in Vermont's law and lamenting that as of yet, no one has figured out how to properly balance public health needs and individual rights); *Sample Request for Religious Exemption to Immunization Form*, *supra* note 124; see also *Sherr*, 672 F. Supp. at 96 (providing an example of appropriate balancing by accepting one and denying another exemption based on genuine and sincere analysis).

²¹⁰ See Novak, *supra* note 55, at 1114 (arguing that the “genuine and sincere” requirement would fail the *Lemon* test because it gets the government excessively involved and entangled in an analysis of someone's religious beliefs when engaging in a sincerity analysis); see also Aspinwall, *supra* note 152 (analyzing the Establishment Clause argument); Hodge & Gostin, *supra* note 9, at 860 (discussing the Establishment Clause issue).

²¹¹ See *Sherr*, 672 F. Supp. at 94 (striking down “bona fide” or “recognized” requirement but upholding “genuine and sincere” requirement); see also Coletti, *supra* note 122, at 1348 (discussing *Sherr*'s holding).

²¹² See *Sherr*, 672 F. Supp. at 94 (applying the *Lemon* test and holding that requirement that parents be “bona fide members of a recognized religious organization” fails the *Lemon* test, but nonetheless denying the parent's religious exemption because their religious beliefs regarding vaccination were not genuine and sincere).

2. Massachusetts' Exception to the Exemption

Another state which legislators might consider emulating is Massachusetts, the birthplace of vaccines in this country and a state that has historically shown a commitment to amply vaccinating its schoolchildren.²¹³ The state's vaccination statute includes a preamble to its sincere religious belief exemption that reserves the right to rescind the exemption in the event that the Department of Public Health declares an emergency or epidemic situation.²¹⁴

This clause, combined with the "sincerity" requirement, creates a safety valve and workable balancing act for the state: sincere religious objectors can attain exemptions, but must acquiesce to immunization in times of serious threats to the public health.²¹⁵ Opponents may argue that this infringes on their First Amendment rights.²¹⁶ But, as the Second Circuit recognized in *Phillips*, the First Amendment does not command a religious exemption at all, enabling legislatures to limit, or even repeal, those rights.²¹⁷ This simultaneously provides for religious freedom while ensuring the capability of the state to protect the public health in times of crisis.²¹⁸

C. All for One and One for All: Creating a Uniform Vaccination Standard for Adoption by the States

An alternative to encouraging states to strengthen their own existing vaccination requirements is to create a model or uniform law, which states could

²¹³ See Neergaard, *supra* note 109. Massachusetts ranks number one in the nation for percentage of toddlers vaccinated (86%). *Id.*

²¹⁴ See *supra* note 108 and accompanying text (providing text of Massachusetts and Virginia statutes that contain exceptions for emergency situations in their religious exemptions); see also MASS. GEN. LAWS ch. 76, § 15 (2014); Lu, *supra* note 40 (describing Virginia's exemption exception for emergencies).

²¹⁵ See Novak, *supra* note 55, at 1127. Nevertheless, one scholar has argued that this could create a "slippery slope" and that parents who were on the edge between vaccinating and not vaccinating might chose the latter, knowing that their child can be vaccinated if need be when a threat arises. *Id.* This would lead to more unvaccinated children and thus be counterproductive. *Id.* This also undermines the "preventative" aspect of vaccination. *Id.*

²¹⁶ See *Phillips*, 27 F. Supp. 3d at 312–13 (discussing plaintiffs' First Amendment claims).

²¹⁷ See *id.* at 313 (stating that religious exemptions are not constitutionally required, nor does the U.S. Supreme Court require them); *Sherr*, 672 F. Supp. at 88 (stating that New York's religious exemption goes beyond what is required).

²¹⁸ See Sara Mahmoud-Davis, Note, *Balancing Public Health and Individual Choice: A Proposal for a Federal Emergency Vaccination Law*, 20 HEALTH MATRIX 219, 222 (2010) (discussing an emergency health law that would "minimize[] the tensions" between individual interests and the state's interest in maintaining the public health). This type of provision would be helpful to remedy the recent measles outbreak in California; if the state were permitted to require non-vaccinated students to get vaccinated, it could effectively halt the spread of the disease before a larger outbreak ensues. See Lin et al., *supra* note 2 (reporting the spread of the measles outbreak in early 2015 in California and noting that schools barred unvaccinated students from attending).

adopt.²¹⁹ This section proposes a model law based on the New York vaccination requirements and practices, described in section B, above, which utilizes a genuine and sincere requirement.²²⁰ A model law would standardize vaccination policy and protect the country from an interstate epidemic.²²¹

A uniform health law is not unprecedented.²²² In response to the terrorist attacks of September 11, 2001, a team from the Centers for Law and the Public's Health from Johns Hopkins and Georgetown Universities drafted a uniform health law called the Model State Emergency Health Powers Act ("MSEHPA").²²³ The goal of MSEHPA is to grant power to state and local governments during health emergencies in order to effectively manage the threat, including provisions that allow state officials to vaccinate individuals in order to protect them from, and repress the spread of, contagious diseases.²²⁴ Currently, thirty-eight states and the District of Columbia have adopted some portions of the Act in their legislation.²²⁵ MSEHPA could serve as a good mod-

²¹⁹ See Mahmoud-Davis, *supra* note 218, at 222 (arguing for a standardized policy on vaccination exemptions). This is preferable to trying to enact a federal regulation. See Carlyle C. Ring, Jr., *The UCC Process—Consensus and Balance*, 28 LOY. L.A. L. REV. 289, 307 (1994) (discussing reasons why state uniform statutes are superior to federal statutes in certain cases). Examples of the drawbacks of enacting laws at the federal level are the difficulty in achieving federal enactment, the lack of congressional involvement in the drafting process, the lack of experts involved in the process, and the threat of lobbying and political issues impacting the federal legislation. See *id.* at 305–06. Furthermore, allowing states to independently adopt a uniform law (as opposed to a federal law) would allow *Jacobson* precedent—that mandating vaccinations falls within the state's police power—to stand. See *Jacobson v. Massachusetts*, 197 U.S. 11, 38 (1905).

²²⁰ See *supra* notes 194–212 and accompanying text (discussing New York's religious exemption).

²²¹ See Mahmoud-Davis, *supra* note 218, at 222 (arguing that "inconsistencies" among emergency laws and exemptions in different states foster instability during times of large scale, multi-state health crises); see also Deborah L. Erickson et al., *Power to Act: Two Model State Statutes*, 30 J.L. MED. & ETHICS 57, 58 (2002) (discussing model health statutes and stating that variation among state health laws could jeopardize the response during multi-state health crises such as the spread of infectious diseases that do not stay within one jurisdiction).

²²² See MODEL STATE EMERGENCY HEALTH POWERS ACT (CTRS. FOR LAW & THE PUB.'S HEALTH 2001), <http://www.publichealthlaw.net/MSEHPA/MSEHPA.pdf> [<http://perma.cc/8Z7R-FQH9>]; see also Erickson et al., *supra* note 221, at 58–60 (discussing two model health statutes); Horowitz, *supra* note 34, at 1728 (discussing the Model State Emergency Health Powers Act).

²²³ See MODEL STATE EMERGENCY HEALTH POWERS ACT; see also Erickson, et al., *supra* note 221, at 57, 60.

²²⁴ See MODEL STATE EMERGENCY HEALTH POWERS ACT § 103.

²²⁵ See *The Model State Emergency Health Powers Act (MSEHPA)*, CTRS. FOR LAW & THE PUBLIC'S HEALTH, <http://www.publichealthlaw.net/ModelLaws/MSEHPA.php> [<http://perma.cc/P2MV-PCC4>]. Nevertheless, the drawback with MSEHPA is that it applies only to emergency situations and does not delegate any power to states to vaccinate during "non-emergency" situations. See generally MODEL STATE EMERGENCY HEALTH POWERS ACT. MSEHPA defines an emergency as:

[A]n occurrence or imminent threat of an illness or health condition that . . . poses a high probability of any of the following harms: (i) a large number of deaths in the affected population; (ii) a large number of serious or long-term disabilities in the affected population; or (iii) widespread exposure to an infectious or toxic agent that poses a sig-

el for a uniform health statute that addresses non-emergency situations, which state legislatures could adopt.²²⁶

State adoption of independently created standards or model laws has seen varying degrees of success in other contexts besides health, particularly in areas such as commercial and criminal law.²²⁷ The area of public health (and in particular vaccination) presents a compelling case for a uniform set of regulations: like commerce and criminal activity, vaccine-preventable diseases do not halt at state lines, and uniformity among the inoculation laws across the entire country would ensure their efficacy by preventing certain states' lax vaccination laws from rendering residents of other states susceptible to disease.²²⁸

There are a few drawbacks to the uniform law method.²²⁹ First, some—or even many or all—state legislatures may decline to adopt the model vaccination law, which would defeat the purpose.²³⁰ Second, if state legislatures did adopt the law, but substantively changed it before enacting it, then each state would have varying versions of the original model, effectively reverting the country to the current system.²³¹ Regardless of these challenges, a model law

nificant risk of substantial future harm to a large number of people in the affected population.

MODEL STATE EMERGENCY HEALTH POWERS ACT § 104(m). This renders MSEHPA inadequate to preventatively administer vaccines so that the emergency health conditions that promulgated the drafting of MSEHPA do not occur. *See id.*

²²⁶ *See* Erickson et al., *supra* note 221, at 57 (advancing MSEHPA as a model for consideration).

²²⁷ *See Uniform Laws*, CORNELL UNIV. LAW SCH. LEGAL INFO. INST., <http://www.law.cornell.edu/ucc/uniform> [<http://perma.cc/5UHL-9GXB>]; *see also* RAYMOND T. NIMMER ET AL., COMMERCIAL TRANSACTIONS: SECURED FINANCING 2 (LexisNexis 3d ed. 2003) (discussing the Uniform Commercial Code and the “accessibility and predictability” it provides to transactional attorneys to enable rational planning). Article 1 of the Uniform Commercial Code states its purpose: “(1) to simplify, clarify, and modernize the law governing commercial transactions; (2) to permit the continued expansion of commercial practices through custom, usage, and agreement of the parties; and (3) to make uniform the law among the various jurisdictions.” U.C.C. § 1-103 (AM. LAW INST. & NAT’L CONFERENCE OF COMM’RS ON UNIF. STATE LAWS 2014); *see also* Paul H. Robinson, *Element Analysis in Defining Criminal Liability: The Model Penal Code and Beyond*, 35 STAN. L. REV. 681, 683 (1983) (crediting the Model Penal Code with advancements in “precision, clarity, and rationality” in American criminal law); Paul H. Robinson & Markus D. Dubber, *The American Model Penal Code: A Brief Overview*, 10 NEW CRIM. L. REV. 319, 320 (2007) (discussing the Model Penal Code and its commentaries which have proven to be “the intellectual focus of much American criminal law scholarship since the code’s promulgation”).

²²⁸ *See* Mahmoud-Davis, *supra* note 218, at 222 (warning against inconsistencies among state exemption laws); *see also* Erickson et al., *supra* note 221, at 58 (asserting that when dealing with infectious diseases that ignore state boundaries, cooperation at the state and national level is “vital” but “undermined by disparate legal structures”).

²²⁹ *See Uniform Laws*, *supra* note 227. The “uniform” laws are not binding until adopted, and could be revised not only by the states that enact them but also by the drafters themselves. *See id.*

²³⁰ *See id.* Consider, for example, that not a single state has adopted even half of the proposals made to state legislatures by the National Conference of Commissioners on Uniform State Laws. *Id.*

²³¹ *See* NIMMER ET AL., *supra* note 227, at 2 (discussing the initial attempt at state adoption of the U.C.C. and describing how some states enacted “non-uniform amendments”).

presents a compromise between relying on states to independently remodel their own laws, and allowing current, inadequate laws to remain the same.²³²

CONCLUSION

Vaccine-preventable diseases represent a serious, albeit often clandestine, threat to public health in the United States. State mandatory vaccination laws that require parents to vaccinate schoolchildren mitigate the threat of these diseases resurging. Nevertheless, accompanying religious and philosophical exemptions, when exercised too liberally, work in the opposite direction, weakening the herd immunity that keeps communities—and the country as a whole—safe and healthy. Lawmakers must tighten the valve on compulsory vaccination requirements in order to prevent the deterioration of the nation's health. Laws should reflect the need for diligence in vaccination practices and prevent unnecessary or unwarranted medical, religious, and philosophical exemptions. States should first abolish philosophical exemptions, and then re-fashion their existing vaccination laws to reflect New York's model. Alternatively, a new, uniform law drafted for adoption by each state would fortify vaccination policy nationwide by providing the uniformity to combat contagious diseases that, because they ignore state boundaries, are a distinctly national problem. Regardless of the method chosen, stronger vaccination policy across the country will lead to the eradication of these menacing diseases and the preservation of a healthy, productive, and immunized citizenry.

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²³² See Ring *supra* note 219, at 307. A final option, aside from tightening existing state laws and creating a model vaccination law, would be to have Congress draft a federal vaccination law. See Mahmoud-Davis, *supra* note 218, at 222 (advocating for Congress to draft a federal vaccination law that “minimizes the tensions among government power, public health, and individual choice”). *But see supra* note 219 (discussing the drawbacks of a hypothetical federal statute).