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Available at: https://uknowledge.uky.edu/klj/vol97/iss4/5
NOTES

The Difficult Road to Compelling Vaccination for Sexually Transmitted Diseases—How Gardasil and Those to Follow Will Change the Way that States Require Inoculation

Jonathan T. Scott

INTRODUCTION

Every year an estimated 19 million new infections of sexually transmitted diseases (STDs) occur in the United States. These new infections add to a health crisis that annually imposes an estimated $14.7 billion in direct medical costs on the U.S. economy. One of the most common STDs, human papillomavirus (HPV), currently affects 20 million people in the United States. It is estimated that slightly less than three-quarters of the adult population aged fifteen to forty-nine in the U.S. have been infected with a papillomavirus at some point in their lives. Proponents of sexually transmitted disease (STD) vaccination point to the value that eradicating STDs, such as HPV, would have for society.

Despite the clear societal benefits of eradicating STDs through vaccination, STD inoculations, such as Gardasil, may land outside of states' current judicial authority to compel vaccination. This lack of state power to compel vaccination presents a problem, because children that attend school in districts with seemingly low vaccine exemption rates face a higher risk during disease outbreaks. In fact, a 2007 report indicates that higher risks for outbreaks exist when exemption rates are as low as two to four percent. 

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1 J.D. expected, May 2009, University of Kentucky College of Law. The author would like to thank Kimberly Ray for suggesting the topic. The author would also like to thank Professor Robert Schwemm for his editorial guidelines and suggestions.


3 Id.

4 CDC, HPV Vaccine Information for Clinicians http://www.cdc.gov/STD/hpv/STDFact-HPV-vaccine-hcp.htm [hereinafter HPV Vaccine Information].


6 Council of State Gov'ts., Exemptions from School Immunization Requirements.
The risk to public health from higher exemption rates increases as more people refuse inoculation. These risks become more concerning given STD inoculation and the likelihood of an increase in exemption rates.

This Note argues that mandated vaccination of a STD may cause the number of religious objectors to rise, causing higher exemption rates and inhibiting the ability of the vaccination to control the spread of the disease. Therefore, a potentially serious problem exists. This Note will further examine how STD inoculation clashes with a vaccination jurisprudence that is conflicted and that ultimately cannot provide predictability in STD vaccinations. This Note will then establish the existence of a religious objection to STD inoculation and demonstrate how this objection would cause the number of religious and conscientious objectors to skyrocket. Finally, this Note will propose a nine–step format for assessing all vaccinations and provide a solution to the impending STD inoculation crisis.

A. The Rising Availability of STD inoculations

In June 2006, the Food and Drug Administration (FDA) approved Gardasil, a new vaccine to inoculate against the spread of HPV. The approval of this drug has raised several intriguing issues for the state legislatures that mandate vaccination. In all, forty–one states have attempted, through either executive or legislative action, to mandate, fund, or educate the public about Gardasil inoculation. At present, there is a dearth of articles focusing on compelled vaccinations and inoculations and the law, especially given the promised growth of STD vaccination. Compounding this issue, most of the case law concerning vaccinations proceeds from precedents stemming from smallpox inoculation, a battle waged at the beginning of the twentieth century in the United States and much earlier in other countries. Courts in the intervening century have continued this tradition of deciding cases based upon the easy transmissibility of diseases.
like smallpox. Because these cases focus on diseases that are easily transmissible, given the relative difficulty in transmitting STDs, many states may encounter a problem when attempting to mandate the use of Gardasil and other subsequent STD vaccinations.

Gardasil and future STD vaccinations create an arena for potentially deleterious conflicts surrounding public health for a number of reasons. First, STD vaccination diverges greatly from the traditional motives for vaccination—immediate protection from the spread of disease in public places. Second, this type of vaccination threatens to unleash hordes of religious objectors given the implications and insinuations surrounding it. Finally, the timing of the vaccination could raise further concerns. Gardasil works most effectively when patients receive inoculation early in life. The Centers for Disease Control and Prevention (CDC) recommend the vaccination for eleven- to twelve-year-old girls, and states that the series can be started as young as nine years of age. However, the early inoculation raises fears that it could affect (voluntary) behavior in the future.

Ultimately, this note will examine the shortfalls to the current vaccination case law, and will propose a new nine-step model for classifying diseases. The new format attempts to take into account the directions in which inoculations have recently grown and will grow as vaccinations to less virulent diseases develop. Of chief concern will be integrating and balancing the problems attendant to ease of transmissibility while permitting objections to vaccination to stand.

B. Historical Development of Vaccination Compulsion

In order to best trace the current need to account for the ease of transmissibility when allowing exemptions, some discussion of the development of vaccination compulsion is needed. Vaccines were first developed as a way to strengthen smallpox resistance. The use of vaccinations is credited to the work of Edward Jenner, an eighteenth-century English doctor. The smallpox vaccination and Jenner's research gave rise to the field of vaccinology. Other vaccines have followed, many of them now required for school attendance or certain jobs. Excitement

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12 E.g., Glover v. Bd. of Educ., 84 N.W. 761 (S.D. 1900).
13 See HPV Vaccine Information, supra note 4 ("The three-dose vaccine is routinely recommended for 11 and 12 year old girls. The vaccine series can be started at 9 years of age.").
15 Id.
16 Id.
about vaccination in the United States has followed diseases that provoke contemporary widespread public fear—usually these types of disease have possessed an easier degree of transmissibility than STDs. As such, the case law reflects a bias towards enforcing vaccination or providing a way to protect the society at large from easily transmissible diseases.

The seminal Supreme Court decision on the subject of compelled vaccination was handed down in 1905 in *Jacobson v. Massachusetts.* In this case, a man objected on philosophical grounds to his compelled smallpox vaccination. The defendant did not believe that the smallpox vaccine worked. He refused vaccination, and was charged when he failed to agree to vaccination. Jacobson contended that he had a constitutional right under the Fourteenth Amendment of the U.S. Constitution that allowed him to avoid compelled vaccinations. The Court, quoting its decision in *Crowley v. Christensen,* stated that “[e]ven liberty itself, the greatest of all rights, is not unrestricted license to act according to one’s own will. It is only freedom from restraint under conditions essential to the equal enjoyment of the same right by others. It is, then, liberty regulated by law.” The Court then found that investing the board of health with the power to regulate or compel vaccination was not an “unusual, nor unreasonable or arbitrary, requirement.” Finding that the compelled vaccination was well-founded in the principle of “self-defense” and society’s need “to protect itself against an epidemic of disease which threatens the safety of its members,” the Court rejected the Fourteenth Amendment argument. It did allow, however, for the possibility that future litigants could show that as a group they were being unreasonably compelled to vaccinate.

Interestingly, the *Jacobson* Court acknowledged that some laypeople and a few doctors had misgivings about the smallpox vaccination. However, Massachusetts had enacted its statute based on a “common belief.” In strong language, the Court stated, “[a] common belief, like common

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18 See Bert Hansen, *America’s First Medical Breakthrough: How Popular Excitement about a French Rabies Cure in 1885 Raised New Expectations for Medical Progress,* 103 AM. HIST. REV. 373, 380–81 (1998) (examining the excitement generated by the creation of the rabies cure in contrast to other medical breakthroughs of the time).


20 Id. at 13.

21 Id.

22 Id. at 12.

23 Id. at 13.

24 Id. at 26–27 (quoting Crowley v. Christensen, 137 U.S. 86, 89–90 (1890)).

25 Id. at 27.

26 Id.

27 Id. at 28.

28 Id. at 34 (citing Viemeister v. White, 72 N.E. 97, 98 (N.Y. 1904)).

29 Id. at 35 (citing Viemeister, 72 N.E. at 98).
knowledge, does not require evidence to establish its existence, but may be acted upon without proof by the legislature and the courts.\textsuperscript{30} In this case, the common belief was that the vaccine was effective, and the legislature was reasonable in enacting a law to further immunization in society.

In addition to decrying objections to vaccination on the basis of a right to privacy, the decision in \textit{Jacobson} also hinders attempts to object on philosophical, medical, or scientific grounds. The Court drew a strong line between “common beliefs” and “universal beliefs” declaring that “[t]he fact that the belief is not universal is not controlling, for there is scarcely any belief that is accepted by everyone.”\textsuperscript{31} Returning to the “common belief” analysis, the Court foreclosed further litigation surrounding the effectiveness of a vaccine, stating that “[t]he possibility that the belief may be wrong, and that science may yet show it to be wrong, is not conclusive; for the legislature has the right to pass laws which, according to the common belief of the people, are adapted to prevent the spread of contagious diseases.”\textsuperscript{32}

The Court’s decision in \textit{Jacobson} validated a broad grant of authority to the states to exercise their police powers and legislate with a free hand to prevent the spread of disease through inoculation. As long as the law conformed with a “common belief” of presumably laypeople or medical professionals, the federal courts would not overturn it or grant exemptions. Therefore, this decision gives a great deal of leeway to the states in deciding vaccination policy, and protects them from a multitude of lawsuits which could attempt to nitpick and criticize every facet of those policies. This case also protects the public by insuring that mainstream medical beliefs become the mainstay of state vaccination law. Ideally, snap vaccination decisions will not be made at the legislative level because new vaccinations will need to gain some momentum in the medical, and perhaps, lay communities, before they are likely to be codified in state law. Through this process, the efficacy of new vaccinations could be debated and a vaccination jurisprudence would emerge where the best and most protective vaccines would become mandatory. Furthermore, the Court

\textsuperscript{30} \textit{Id.} (citing Viemeister, 72 N.E. at 98).

\textsuperscript{31} \textit{Id.}

\textsuperscript{32} \textit{Id.} Interestingly enough, there is no sufficient legal definition for “contagious diseases,” and only one case has really discussed the definition of a “contagious disease.” In \textit{Davis v. Rodman}, 227 S.W. 612 (Ark. 1921), an Arkansas court, quoting Webster’s Dictionary, concluded that “[a] contagious disease is one communicable by contact with a patient suffering from it, or with some secretions or object touched by such a patient.” \textit{Id.} at 613. This definition has been criticized for not being flexible enough to cover diseases transmissible through intimate sexual contact. Jill Suzanne Talbot, Note, \textit{The Conflict Between a Doctor’s Duty to Warn a Patient’s Sexual Partner that the Patient has AIDS and a Doctor’s Duty to Maintain Confidentiality}, 45 \textit{Wash. & Lee L. Rev.} 355, 378 n.119 (1988). A 1995 textbook lists 136 contagious diseases, Fernando M. Treviño, \textit{Foreword} to \textit{Am. Pub. Health Ass’n, Control of Communicable Diseases Manual}, at xv (Abram S. Benenson ed., 16th ed. 1995).
helped to circumvent losing philosophical and medical perspectives from continuing a fight in the court system that they had already lost in the legislative and medical arenas. Thus, the decision in *Jacobson* makes it possible for the legislature to take quick action to combat outbreaks of disease without litigation delaying vaccinations and threatening to allow the intensified spread of contagious diseases.

I. Splits of Authority Concerning State Power to Compel Vaccination of School–Age Children

A. Statutory Power and Compelled Inoculation

Following *Jacobson*, the trend of permitting states to pass laws compelling vaccination continued. These laws tended to attempt to protect those who spend time in public places. For example, the inoculation of schoolchildren became an important goal in stopping the transmission of contagious diseases. The different ways in which this power has been delegated and the precedents that follow from those statutes become important in understanding the potential legal hurdles to compelling STD vaccination for school–age children.

Cases that have treated the legal issues surrounding vaccinations for school–age children have split in three directions. First, some courts have found the power to compel vaccination contingent upon a statute that specifically confers authority to require a vaccination certificate with the school board. In *People ex rel. Jenkins v. Board of Education*, a child refused vaccination, and her parents supported this decision. When the school board denied her permission to attend school, she filed for a writ of mandamus attempting to override the school board’s decision. The Illinois trial court denied the request, but the appeals court granted the demurrer, because no statute authorized the board of education to compel vaccinations in the absence of an outbreak of smallpox. Importantly, the appellate court stated that an occasional case of smallpox in a city as large as Chicago was not enough to allow the Board to use its emergency powers to require ongoing smallpox vaccination.

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34 See id. at 355.
35 *People ex rel. Jenkins v. Bd. of Educ.*, 234 Ill. 422 (Ill. 1908).
36 Id. at 423.
37 Id.
38 Id.
39 Id. at 427.
40 Id.
State ex rel. Freeman v. Zimmerman\(^{41}\) typifies the response of the second line of cases. In Zimmerman, statutory language helped to create a different result than that reached by the court in Jenkins. Like Jenkins, this case also involved a child who refused vaccination, and her guardian also sued when the school board denied admission.\(^{42}\) The Minnesota Supreme Court held that "the power to enforce vaccination, as a condition to the right of admission to the public schools, may be exercised by local authorities in cases of emergency only."\(^{43}\) The school board only had the ability to deny admission for failure to vaccinate if the legislature had "expressly or by fair implication conferred" an exception to the aforementioned general rule.\(^{44}\) Here the court found that the legislature intended to confer the power to enforce vaccinations on the school boards, and thus denied the mandamus order.\(^{45}\)

In yet another approach, some courts are willing to go further than the cases discussed above, by considering whether a statute giving general power to the school board is sufficient to compel vaccinations. For example, in State v. Martin,\(^{46}\) Arkansas parents challenged their indictment for failing to provide certificates of immunization against smallpox when their children began to attend public school.\(^{47}\) The defendants insisted that no act of the legislature allowed school boards to compel vaccination as a condition of attendance.\(^{48}\) The Arkansas Supreme Court disagreed and greatly expanded the school board's power, finding that "the language of the sections [of the statute] is broad enough to include all diseases and all remedies, and specifically includes diseases which are infectious, contagious, and communicable."\(^{49}\) The court specifically concluded that smallpox, being an infectious disease, impliedly fit into this framework.\(^{50}\) The South Dakota Supreme Court reached a similar result in Glover v. Board of Education,\(^{51}\) where a student was again suspended after prevailing

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\(^{41}\) State ex rel. Freeman v. Zimmerman, 90 N.W. 783 (Minn. 1902).

\(^{42}\) Id. at 783.

\(^{43}\) State ex rel. Freeman, 90 N.W. at 784. "Local authorities," as mentioned in the text, most likely mean school officials requiring vaccination. Two cases, Cude v. State, 377 S.W.2d 816 (Ark. 1964), and Mannis v. State ex rel. DeWitt School District, 398 S.W.2d 206 (Ark. 1966), illustrate how one state has enforced inoculation orders. These cases show that the mechanics of enforcing such an order, in extreme cases, could include action by state departments to appoint a guardian or take temporary custody of children for the purpose of vaccination. See Cude, 377 S.W.2d at 817–19; Mannis, 398 S.W.2d at 207.

\(^{44}\) Id.

\(^{45}\) Id. at 784–85.

\(^{46}\) State v. Martin, 204 S.W. 622 (Ark. 1918).

\(^{47}\) Id. at 623.

\(^{48}\) Id. at 624.

\(^{49}\) Id.

\(^{50}\) Id.

\(^{51}\) Glover v. Bd. of Educ., 84 N.W. 761 (S.D. 1900).
on a writ of mandamus to be allowed to attend classes without being vaccinated. The court found that the existence of an outbreak of smallpox in the general area did warrant suspension and the members of the board should not be held in contempt for their actions. The court stated that the board members "had good reason to be most seriously apprehensive, and, in the emergency that existed, they were fully justified in suspending appellant during the continuance of danger" even when no statute gave them express authority to do so.

When confronted with whether to give school boards enforcement power absent express statutory authority, other courts have refused to recognize a general authority to legislate that exists within the school board, like that established in Glover. In the Ohio case of State v. Turney, the court affirmed the lower court's decision to overturn a parent's conviction for failing to provide a certificate of vaccination. In strong language, the court stated: "[b]y the clear weight, if not the universal trend of authority, it is held that a general order or rule adopted by a board of education requiring vaccination of pupils, except in the emergency of an actual impending epidemic, can only be sustained by direct and specific legislation." One outlier case does imply that the power of the county board of health has been underestimated in this area of the law. In State ex rel. Cox v. Board of Education, a Utah statute creating the local boards of health contained the following phrase: "[l]ocal boards of health shall have jurisdiction in all matters pertaining to the preservation of the health of those in attendance upon the public and private schools in the city, to which end it is hereby made the duty of each of the local boards of health." The Utah Supreme Court held that this jurisdiction included the ability to mandate smallpox vaccination or require the local school board to prohibit unvaccinated children from going to school.

The manner in which the Cox case attaches significance to the rulings of the board of health is beneficial to anyone attempting to compel vaccination of STD vaccines such as Gardasil. Given the unique way in which HPV and other STDs are transmitted when compared to other diseases that require vaccination, unusual problems appear. For example, because transmission of this disease requires sexual contact it would be unlikely to occur while on school grounds. Thus, regulation of transmission could conceivably fall

52 Id.
53 Id. at 762-63.
54 Id. at 763.
55 State v. Turney, 12 Ohio C.C.(n.s.) 33 (Ohio Cir. Ct. 1909).
56 Id. at 33-36.
57 Id. at 35.
58 State ex rel. Cox v. Bd. of Educ., 60 P. 1013 (Utah, 1900).
59 Id. at 1015 (citing 1899 Utah Laws 70).
60 Id. at 1016.
outside the purview of the school boards—even if an STD epidemic was currently recognized.

Given the limits that some courts place on compelled inoculation, in some cases school board regulation of STD vaccinations may be ruled overreaching. By referring to Cox, county health boards could possibly attempt to utilize their authority to order inoculations. Local health boards would contain an advantage in this circumstance because they would be able to recognize the signs of an outbreak of an STD by studying data that they routinely collect in their role in the community. If these boards recognized the dangers that HPV caused in that society, they would have the authority to direct the school board to act in such a way as to either compel vaccination or encourage behavior at schools that would result in lessened likelihood of STD transmission. The school's involvement could conceivably stop short of outright suspension and could instead be reflected through attempts to curtail social interactions between likely sex partners in public school settings.

B. Philosophical Objectors and Compelled Vaccination

Moving beyond some of the procedural ways in which compelled vaccination can be achieved, it is important to consider the nature of the actual complaints that individuals make when attempting to avoid compelled vaccination. Objectors to vaccinations appeared early in the nineteenth century.61 "Anti-vaccinationists," as they came to be called objected to vaccines on moral, intellectual, and philosophical levels.62 Additionally, religion came to be another justification for refusing vaccination.63 American jurisprudence, as the Jacobson64 case shows, tends to weigh these interests differently. Arguments stemming from moral and philosophical views tend to receive far less protection by the courts. Also important to this discussion is that the case law surrounding vaccines has developed through state court decisions. After Jacobson, cases dealing with compelled vaccination have returned to the Supreme Court, and even the Federal Circuit level, very rarely.65 Similarly, on very few occasions following Jacobson have federal district courts reached decisions about compelled vaccination using federal law.66

61 See Wolfe & Sharp, supra note 11, at 430.
62 Id.
63 See Andrew Dickson White, Theological Opposition to Inoculation, Vaccination, and the Use of Aesthetics, in A HISTORY OF THE WARFARE OF SCIENCE WITH THEOLOGY IN CHRISTENDOM (1898).
65 Galinsky v. Bd. of Educ., 213 F.3d 626 (2d Cir. 2000).
State courts interpreting their own statutes and the spirit of Jacobson have become the arena in which the fight against compelled vaccination has continued. States have passed statutes that allow for exemptions to vaccination most often limited to religion, but broader objections are common in about half of the states.

Often, courts have taken a narrow approach in allowing religious exemptions, while philosophical, scientific, and moral objections receive very little credence. Several cases highlight this hesitancy to allow for a broad exemption. In Wright v. DeWitt School District, the Arkansas Supreme Court held that conflicting evidence surrounding the need for smallpox vaccination was irrelevant. The court decided that this was an issue of legislative concern, and parents in a school district could not prove “lack of imminent, grave, or present danger from smallpox” as a sufficient reason to avoid vaccination.

In Syska v. Montgomery County Board of Education, Maryland children who had not received their rubella immunizations were excluded from school. Their mother sued, alleging violations of her constitutional rights stemming from her personal philosophical objections to the immunization. In this district, the relevant statute allowed for religious objection to vaccination. However, her philosophical objections were not given the same weight as religious objections, and thus the court held that her constitutional rights were not violated through her children’s exclusion.

In In re Christine M., a father in New York objected to his child receiving the measles vaccine. He was a member of the Church of God Seventh Day, and attempted to couch his objection in terms of his religion. The court examined the extensive fact-finding conducted into the father’s motives and found that his objections, while “sincerely held,” had their basis in his own “medical and scientific concerns” and not the dictates of his particular faith. Further, the court concluded that his beliefs were not sufficient grounds for a religious objection exemption, especially considering that the teachings of the Church of God Seventh Day did not

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67 See Hodge & Gostin, supra note 17, at 869–73.
68 See id.
70 Id. at 645–47.
71 Id. at 644.
72 Syska v. Montgomery County Bd. of Educ., 415 A.2d 301 (Md. 1980).
73 Id. at 627.
74 Id. at 631–32.
75 Id. at 632.
77 Id. at 610.
78 Id. at 618.
oppose vaccinations.\textsuperscript{79}

The New Hampshire case of \textit{State v. Drew}\textsuperscript{80} also reflects an instance of philosophical objections being insufficient to achieve a religious exemption. A father refused vaccination, alleging that he “didn’t want that poison injected into his child.”\textsuperscript{81} He also had some religious objections, but none that were tied to a particular doctrine of his faith.\textsuperscript{82} The court refused a religious exemption, pointing out that no particular religious liberty was endangered through his son being vaccinated.\textsuperscript{83}

Another important aspect of the philosophical objection line of cases concerns the continued refusal to recognize “chiropractic ethics”\textsuperscript{84} as sufficiently religious to garner an exemption. In \textit{Mason v. General Brown Central School District},\textsuperscript{85} parents who believed in chiropractic ethics attempted to receive an exemption to prevent their child’s vaccination. The court recognized chiropractic ethics to be a philosophical rather than religious belief, and denied the exemption.\textsuperscript{86} This is another example of the courts distinguishing between religious and philosophical belief strongly, and not allowing what they deem to be essentially philosophical beliefs to receive exemptions from vaccination.

\textbf{C. Religious Objectors and Compelled Vaccination}

Broadly speaking, religious objectors have enjoyed greater success in avoiding compelled vaccines than have scientific, medical and philosophical beliefs. However, upon closer examination a broken pattern of treatment emerges.

A strong baseline rule is exemplified by the New York case of \textit{Brown v. City School District}.\textsuperscript{87} In this case, the parents possessed religious beliefs that were deemed to be “actively practiced in [their] home.”\textsuperscript{88} Also, there were no “present circumstances which, in the opinion of public health authorities, represent[ed] a clear and present danger of the particular communicable disease.”\textsuperscript{89} Because this important combination existed,
the parent obtained an exemption relieving him of the obligation to obtain certain immunizations for his son.90 This case highlights the fact that courts in these cases are willing to scrutinize the tenets of a parent's religious belief, and may inquire into the sincerity and substance of those religious beliefs before they will allow those parents to receive an inoculation exemption for their children.

Christian Science, a faith that objects to vaccinations in its teachings,91 has spurred conflict in such cases as Matthews v. Board of Education.92 In another case, a New York trial court accepted a belief that was very similar to Christian Science as a religious belief.93 Courts have recognized religious exemptions in the case of pantheism,94 "spiritual perfection,"95 and with respect to a gentleman who practiced elements of Judaism so as to make a new religion.96 Some states, such as Wyoming, have taken very generous stances on religious exemptions. For example, in In re LePage97 the Wyoming Supreme Court held that an exemption should be granted despite a mother's refusal to characterize her religion.98

The willingness of courts to find a solid reason to refuse vaccination vanishes in certain specific circumstances. In the event of an outbreak of a disease, these courts have tended to side strongly with enforcing vaccination or forcing the sequestration of students who remain unvaccinated. However, beyond this principle, the granting or withholding of a religious exemption is unpredictable. For example, in other cases, courts have refused to grant exemptions to Christian Scientist foster parents,99 Roman Catholics,100 and parents whose claims of a religious objection were "not credible."101

Further highlighting the inconsistencies in this area of the law, other courts have enforced vaccination over religious beliefs that they found to

90 Id. at 358.
93 Maier v. Besser, 341 N.Y.S.2d 411, 414–15 (N.Y. Sup. Ct. 1972) (granting a preliminary injunction to allow children to return to school and permitting plaintiff to prove at trial that he had a "genuine and sincere religious belief . . . substantially similar to the Christian Scientist faith").
97 In re LePage, 18 P.3d 1177 (Wyo. 2001).
98 Id. at 1181.
be sincerely held, and where no outbreak of disease appeared imminent. In *Cude v. State*, an Arkansas court enforced a petition to allow the removal of unvaccinated children from their homes. This petition was allowed even over objections based on the parents' good-faith religious beliefs.

In *Mannis v. State ex rel. DeWitt School District*, another Arkansas court upheld a ruling that the parents had neglected their child because they refused to allow the child to be vaccinated, citing their membership in a religious organization. The court appointed a guardian solely for the purpose of vaccinating the child.

A Georgia court had a strongly worded case, *Anderson v. State*, in which it refused to issue a religious exemption. In this case, defendants objected to vaccination due to their religious beliefs in "divine healing through faith." The court affirmed their criminal conviction and said that "the right to exercise religious freedom . . . ceases where it overlaps and transgresses the rights of others."

In the three cases discussed above, the courts ignored legitimate religious beliefs and ordered vaccination, and in one case went so far as to label children "neglected" and appoint a new guardian. These cases indicate that in the field of vaccination and public health, the courts afford a great deal of protection to societal safety, even to the extent of seriously abridging religious freedoms. However, these cases also show reasoning that unpredictably differentiates between religious groups when permitting exemptions. Furthermore, many cases highlight the difficulty that courts have in assessing the beginning point of disease outbreaks. This differing manner of treatment indicates problems with creating predictability in religious exemption cases.

**D. Philosophical and Religious Controversy and STD Vaccines**

The philosophical objection case law narrows the ability of parents or guardians to obtain valid exemptions to vaccination substantially. Gardasil, for example, has been a source of controversy since its announcement. Much of this controversy, however, has philosophical rather than religious underpinnings. Some philosophical and medical objections to Gardasil have alleged that Gardasil does not protect against many of today's known strains.
of HPV.\textsuperscript{111} Other objectors have raised a more cynical argument, pointing to the great profits provided to Merck should Gardasil be widely adopted.\textsuperscript{112} Still others object that the FDA testing of this vaccine was too exclusive of school children.\textsuperscript{113} While these types of philosophical arguments may well be valid, they provide little protection to defendants attempting to defy regulations requiring Gardasil vaccination. As previously discussed, in many states the philosophical objections to vaccination of school-age children have not succeeded.\textsuperscript{114} Thus, these arguments, if they are to be made, must be made at the policy level, and not to the courts, which have a long history of discounting philosophical argument in this field.\textsuperscript{115}

As such, because many religious groups believe in celibacy before marriage, the issue of abstinence will likely become a decisive issue in the Gardasil debate.\textsuperscript{116} These concerns will be given constitutional importance, and they have the ability to derail any attempt to mandate HPV vaccination. In American vaccine jurisprudence, religious objectors have had arguably greater success than their philosophically and morally objecting counterparts.\textsuperscript{117} The record for religious objection is far more successful than any other type of vaccination objection.\textsuperscript{118} However, religious objections have not always prevailed, and the case law overall is inconsistent and unpredictable on a national scale.

In some cases, great credence has been given to those claiming a religious exemption.\textsuperscript{119} Yet, in other cases, strongly held religious beliefs, recognized as such, were still unable to garner an exemption from vaccination.\textsuperscript{120} The

\begin{footnotes}
\item[113] See Lawrence O. Gostin & Catherine D. DeAngelis, Mandatory HPV Vaccination, Public Health vs. Private Wealth, 297 J. AM. MED. Ass'N 1921, 1921-23 (2007).
\item[114] See supra text accompanying notes 61-86.
\item[116] See Deborah MacKenzie, Will Cancer Vaccine Get to All Women?, NEW SCIENTIST, Apr. 18, 2005, at 8, 8 (discussing the fact that religious groups in the United States are “gearing up to oppose vaccination”).
\item[117] See Ciolli, supra note 7, at 130.
\item[118] See supra text accompanying notes 62-112.
\item[119] See In re LePage, 18 P.3d 1177, 1181 (Wyo. 2001) (“We do not believe that the legislature, through its adoption of §21-4-309(a), anticipated or authorized a broad investigation into an individual’s belief system in an effort to discern the merit of a request for exemption.”).
\item[120] See Cude v State, 377 S.W.2d 816, 818 (Ark. 1964) (“For the purposes of the appeal, we will assume that the Cudes, in good faith because of their religious beliefs, will not permit the children to be vaccinated. Then the question is whether they have the legal right to prevent vaccination. The answer is that they do not have such right.”); Anderson v State, 65
\end{footnotes}
existence of an outbreak has appeared decisive in some cases, but in others, it appeared that religious exemptions were denied when an outbreak was not expected or occurring. As such, national predictability for protection from vaccines is nonexistent because in many cases judges in neighboring states and even neighboring districts will make opposite rulings about compelled vaccination. Accordingly, should the practice of STD vaccination develop religiously based opposition, a predictable doctrinal method of deciding these cases would appear to be wholly lacking. Therefore, it is important to see if there are any religious groups that could have a genuine religiously based objection to vaccinating against STDs.

At first glance, it would appear that objections to Gardasil will be couched in terms of only morals rather than a religious tenet. However, many Christian denominations may have a valid objection to Gardasil and other STD vaccinations. The validity of their objection depends on how much weight should be afforded to the claims by religious groups against non-abstinence based sex education. A religious argument could say that sex education encourages young people to break religious rules. For example, the Seventh Commandment, has been interpreted by many Christian denominations to prohibit sexual promiscuity. One must be celibate before marriage and monogamous afterwards, ideally marrying one who has followed the same pattern. To many, STD vaccination may encourage the breaking of the Seventh Commandment and undermine the institution of marriage. Similarly, STD vaccination could threaten religious teachings from other religious groups concerning the sanctity of marriage. Members of many religious communities may also desire not to send a message to their children that may encourage sexual promiscuity.

An instructive case is State v. Miday, which involved a North Carolina man who belonged to a small religious community that did not have clear teachings concerning vaccination. Miday came to believe that his faith required him to eschew vaccination for his children, and he did so, relying on guidance provided in letters written by a leader in his organization. Miday failed to provide a statutorily demanded certificate of immunization required for his child to attend public school, but the child was allowed


121 See Cude, 377 S.W.2d 816; Mannis v. State ex rel. DeWitt Sch. Dist., 398 S.W.2d 206 (Ark. 1966); Anderson, 65 S.E.2d 848.

122 Exodus 20:14; Deuteronomy 5:18.


125 Id. at 326-27.
to enroll anyway. After a certain time, the board of education ruled that Miday's unvaccinated child could not return to school. Miday was soon convicted for failing to inoculate his child, and for failing to send his child to school. On appeal, the North Carolina Supreme Court held that a religious belief need not forbid vaccination in order for its followers to receive protection under the state's vaccination exemption statute. This reasoning created a jury question as to whether or not a religious belief against vaccination existed and whether the exemption should have been granted in this case. Importantly, this precedent recognizes the ability of a religion to develop positions that may oppose vaccination. More appropriately, to the current situation, a court such as this could recognize the growth of vaccination into territory which threatens the religious practices of many.

Finally, the original compulsory vaccination case, Jacobson, would offer some refuge to a compelled inoculation challenger. The Court in Jacobson did allow for circumstances in which a community could protect itself from an epidemic "in particular circumstances and in reference to particular persons in such an arbitrary, unreasonable manner, or might go so far beyond what was reasonably required for the safety of the public, as to authorize or compel the courts to interfere for the protection of such persons." Challengers could attempt to argue that in STD inoculation, the phrase "safety of the public" could encompass different, and possibly fewer, groups than a mandatory smallpox vaccination law. By showing that STDs are virulent in a different way than smallpox or influenza, the challengers could show that some individuals do not need inoculation because they will likely never be exposed to the disease. Therefore, inoculation would not be reasonably required for some groups because the disease could still be eradicated even without vaccinating those segments of the community. Thus, societal trends and the actual behavior of some likely anti-STD inoculation groups merit examination.

II. Herd Vaccination Threshold and Religious Objectors to STD Inoculation

In recent years, polls have shown the religious motivation behind drives to ban gay marriage, and indicated that a majority of Americans still oppose
It is possible many of the people who oppose gay marriage will also oppose attempts to vaccinate against STDs. In that event, the number of opponents of STD vaccinations could be substantial. Arguably, a strong desire appears to exist to protect the institution of marriage, and because of the deleterious effect that vaccination could have on religious teachings in this area with respect to abstinence, many parents may refuse to allow their children to receive this message.

The potential for large numbers of parents to refuse, on religious grounds, to allow their children to receive STD inoculation could cause a key failure in STD vaccination strategy. Like most vaccines, STD vaccines probably will work in two ways. First, the vaccine will give individual immunity to the recipient. Ideally, then, that individual could not catch or transmit this disease. However, in some cases individual vaccination will fail, revealing the value of "herd vaccination." Herd vaccination or herd immunity, as discussed earlier, is protection from disease afforded to an entire population through high vaccination levels. Once these high vaccination levels are attained the entire population gains resistance to the disease. Thus, a secondary goal of inoculating a large population is protection for those who—due to failed vaccination, religious exemption, or medical condition—do not have sufficient immunity from the targeted disease. Though there are some diseases for which this does not hold true, such as tetanus, herd immunity could eventually become a goal for Gardasil vaccination and will certainly be a goal for future vaccines developed to fight STDs.

The herd immunity threshold, the percentage of the population that must be vaccinated in order to provide added protection and help to move towards the eradication of the disease, tends to be very high. Of the various diseases for which most children are inoculated, the lowest threshold number is 75%. Diptheria's herd immunity threshold is 85%, measles'
is a range of 83–94%, mumps’ is 75–86%, pertussis’s is 92–94%, polio’s is 80–86%, rubella’s is 83–85%, and smallpox’s is 80–85%.139

The high percentages demanded to achieve the herd immunity threshold contrasts unfavorably with the high numbers of potential religious objectors to HPV or other STD vaccination. For example, in the 2004 presidential election, 23.7% of voters nationally cited “moral values” as the issue most important to them.140 This number was much higher in states won by George W. Bush.141 Perhaps more revealingly, opposition to gay marriage has maintained a “stable majority” over time,142 sex education has for years focused mostly on abstinence,143 and millions of students have taken virginity pledges.144 Clearly, a strong showing of support exists against measures that would undermine the traditional ideas of marriage and abstinence.145 Should religious groups oppose STD vaccination and tie their opposition to a central tenet of their beliefs, as they certainly can, then potentially a larger group than ever before could claim a legitimate religious exemption to a vaccine.

Given the unusual transmission method of HPV or other STDs as opposed to other commonly vaccinated diseases, a large group claiming a legitimate religious exemption may not be as serious a problem as it initially appears. Should the unvaccinated children follow the tenets of their religious belief, they will be unlikely to ever contract HPV. However, studies conducted concerning the abstinence pledges have revealed some disturbing trends. Most children and teenagers who make abstinence pledges break them, and usually well before marriage.146 Furthermore,

139 Id.
140 John C. Green & Mark Silk, Why Moral Values Did Count, 8 RELIGION IN THE NEWS 5, 5 & tbl.1 (2005).
141 Id.
145 Interestingly enough, one author argues that this result would be “quite unlikely.” R. Alta Charo, Politics, Parents, and Prophylaxis—Mandating HPV Vaccination in the United States, 356 NEW ENG. J. MED. 1905, 1907 (2007).
due to abstinence-based sex education, many of these children are far less likely to use safer sex practices, leaving them far more vulnerable to STDs, including HPV.\textsuperscript{147}

For STD vaccination purposes, this failure to honor abstinence pledges indicates that the herd immunity threshold will not be reached, and that much of the unvaccinated population will become sexually active. Thus, HPV and other STDs could become impossible to eradicate, though many inoculated members of the community would still retain immunity.

\textbf{A. A Potential Solution to the Impending Vaccination Crisis}

In order to best weather the approaching storm, the focus should be on degree of transmissibility informed by the consequences of governmental inaction. This Note proposes a nine-step format for characterizing diseases from the perspective of needed governmental action. This format depends on three main levels of transmission risk—high, moderate, and low. In each of these levels, three subdivisions classify the consequences that follow from broad exposure of this disease to a population—severe, moderate, and low consequences. By classifying the diseases in this way, a framework can be created that protects society from the most dangerous of diseases, but allows for greater debate should the disease be proven to exist on a lower rung of the transmissibility and consequence scales.

At the outset, it is important to remember that some individuals, owing to medical concerns about their ability to handle immunization, should never be vaccinated, and nothing written today is meant to suggest or advocate the forced inoculation of these individuals. In the gravest of circumstances, it may be necessary to encourage that these individuals stay home for their own safety during particularly dangerous outbreaks.

\textbf{B. A Nine-Level Format for Assessing Vaccination and Constitutionality}

1. \textit{High Risk of Transmission}.—

   i. Severe Consequences

At this level, vaccination or sequestration should be mandatory for school-aged children. Classification at this level should be relatively flexible to allow for responsiveness to outbreaks, or new developments in vaccines. The standard here should be to protect society from diseases that have the
dont-cut-std-rates.

\textsuperscript{147} Stephen Hawes et al., \textit{Is There a Role for Abstinence Only Programmes for HIV Prevention in High Income Countries?}, \textit{335 Brit. Med. J.} 217 (2007) ("A robust systematic review finds no evidence that such programmes reduce risky sexual behaviours, incidence of sexually transmitted infections, or pregnancy").
potential to kill, disfigure, or disable at very high numbers. An excellent starting point would be the 2003 Presidential Executive Order requiring quarantine of individuals exposed to severe acute respiratory syndrome (SARS), diphtheria, cholera, infectious tuberculosis, plague, smallpox, yellow fever, and viral hemorrhagic fevers.\(^\text{148}\) In 2005 an Executive Order was issued that allowed the CDC to quarantine individuals that have an influenza virus with the potential to cause a pandemic.\(^\text{149}\)

These Executive Orders, and the medical advice that prompted them, indicate a heightened interest in containing outbreaks of these diseases. The willingness to quarantine individuals exposed to these diseases speaks to the seriousness with which governmental actors view them. This concern is well founded, because outbreaks of these diseases could have serious repercussions throughout the world. To combat these diseases, outbreaks should be met with the highest level of governmental power to act.

ii. Moderate Consequences

At this level, vaccination should still be mandatory, but courts could feel less constrained to issue more religious exemptions. As such, this should include any remaining diseases for which vaccines are typically given to children before entering school not covered in the first level. This level could be useful for mitigating the economic effects of high transmission diseases that will not leave lasting damage but may prevent workers, schoolchildren, or others from missing valuable time. By preventing these outbreaks through mandatory inoculation, states could preserve billions of dollars.

iii. Low Consequences

At this level vaccination should only be mandatory if the government shows that there is a severe potential impact on a particular population that can best be protected through forced inoculation. All other vaccinations should be either optional or subject to avoided vaccination through religious, moral, scientific, or philosophical objections.

2. Moderate Risk of Transmission.—

i. Severe Consequences

At this level, vaccination or sequestration should continue to be mandatory for school–aged children. This level should also reflect a desire

to control and eradicate diseases that have the potential to kill, disfigure or disable at very high numbers. Because they can usually be spread through intimate sexual contact, many STDs should occupy this level. These diseases, while less communicable than some, still represent a great danger to many individuals in society and they do so in a way that is impossible to predict. The evidence examined indicates that these diseases continue to propagate at a high level, and that religious objectors do themselves, and the general population, more physical harm than good by refusing these inoculations. Thus, stemming from the severe consequences and the still considerable transmission risk of STDs, vaccination at this level should remain subject only to a medical exemption.

Second, most diseases that can be contracted while traveling abroad should also occupy this level. Specifically, those diseases that pose a risk of transmission upon the carrier's return should be inoculated against before the traveler's departure.

ii. Moderate Consequences

At this level, vaccination should be encouraged, as in the high transmission level, primarily in the interest of protecting populations from undue economic loss. However, mandatory inoculation should not be absolute. At this level, vaccination, when mandatory should also be subject to some religious exemptions.

iii. Low Consequences

As in the high risk of transmission level, vaccination here should only be mandatory when a particular population can show an immediate and dire need for inoculation. Such need would probably only occur at a small community level. Besides these special circumstances, all other mandated vaccinations of diseases at this level should be subject to religious, moral, scientific, or philosophical objections and exemptions.

3. Low Risk of Transmission.—

i. Severe Consequences

Some diseases, while they have the ability to kill, disfigure, or disable—retain a low risk of transmission. When these diseases are confined to certain geographic regions, mandatory inoculation subject only to a religious exemption should be enforced in that geographic area. If certain professions are likely to retain a greater likelihood of exposure, then the government should continue to enforce mandatory inoculation of members of that profession. The risks of transmission of these types of diseases
should also be closely monitored by relevant agencies to see that the risks do not become higher and warrant movement to a different level. For the main population, mandatory vaccination should continue to be subject to religious, moral, scientific, or philosophical exemptions.

ii. Moderate Consequences

Damages at this level would be primarily economic. Vaccinations for these types of diseases, when in place, should also be subject to religious, moral, scientific, or philosophical exemptions.

iii. Low Consequences

When vaccinations are in place for diseases that fit in this category, they should reflect a desire to protect a specific population from an immediate and dire danger. When mandatory vaccinations are in effect for these types of diseases they should be subject to religious, moral, scientific, or philosophical exemptions.

C. Application of Nine-Step Format to STD Inoculation

By enacting this nine-step model, a more organized approach can be taken when compelled vaccination is necessary to combat disease outbreaks. By better organizing the nexus between dangerous diseases and exemptible beliefs, unfettered methodical action against the most dangerous diseases can continue. Eradication through vaccination efforts then becomes easier to prioritize and implement.

This model will not only make vaccination efforts easier, but the creation of a more nuanced rubric will assist governmental openness. Such a model would hopefully lead to a better grassroots effort at vaccination, and especially eradication. With this system, individuals have a better opportunity to assess a disease's classification. Such a rubric also can assist individuals to better understand the gravity of an outbreak and whether a compelled vaccination response is appropriate.

An immediate benefit of this nine-step model is seen when it is applied to STD inoculations. By applying religious, philosophical, and moral arguments in a more detached manner, the virulence and prevalence of many STDs can better inform compelled vaccination decisions.

In the case of Gardasil and HPV, the flood of religious, philosophical, and moral objections often drowns out convincing arguments for inoculation. "Approximately 20 million Americans are currently infected with HPV, and another 6.2 million people become newly infected each year."

Furthermore, it is estimated that 11,070 women will be diagnosed with cervical cancer in 2008.\(^{151}\) In addition, 11,990 people will be diagnosed with other HPV-related cancers.\(^{152}\)

When the potential harm that HPV could cause is assessed against the nine-step format, it should qualify, as most STDs, as a disease with a "Moderate Risk of Transmission, Severe Consequences." HPV has the potential to kill, disfigure, or disable at very high numbers, and, as the numbers show, it has ability to spread throughout society at a very high rate. Granted, this disease cannot be transmitted as easily as some, however, its prevalence in society underscores a need to act. This is why diseases on this level of the format, should also trigger governmental ability to compel vaccinations.

Of course, some STDs would not fall into the same category as HPV. HPV's virulence and societal impact are easily measured. Still, as a baseline, STDs should be classified in the "Moderate Risk of Transmission, Severe Consequences" step, unless data indicates that, for some reason, they have a lowered risk of transmission or their consequences are less severe.

**Conclusion**

Developments in vaccines can potentially cause religious objections of a scope that threatens to endanger many worthy goals of an inoculation strategy. A large volume of religious objectors could derail STD vaccination, indicating, that in order to stop the spread of these diseases in society the herd immunity threshold must be attained and sustained. This nine-step format attains this threshold by acknowledging both transmissibility and consequences of the diseases themselves, and ultimately showing that STD vaccination can be achieved over religious objection. By adopting a format such as the nine-step model proposed here in considering vaccination law, a more accurate portrait of the disease landscape can be created when attempting to create an inoculation strategy. The model presented here has the additional effect of allowing for dissent, but in a way that recognizes the danger to society when large populations fail to obtain vaccination against the most dangerous diseases. This model then should allow for the protection of life, and the furthering of herd immunity, leading to the eradication of disease, while allowing individuals some expression of their preferences, should they have them, in vaccination.

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\(^{151}\) *Id.*

\(^{152}\) *Id.*