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CHOICES SHOULD HAVE CONSEQUENCES: FAILURE TO VACCINATE, HARM TO OTHERS, AND CIVIL LIABILITY

*Douglas S. Diekema** †

INTRODUCTION

A parent's decision not to vaccinate a child may place others at risk if the child becomes infected and exposes others to the disease. Should an individual harmed by an infection transmitted from a child whose parents chose to forgo vaccination have a negligence claim against those parents? While I do not hold a legal degree and therefore cannot speak directly to issues of law, as a physician and ethicist it seems to me that the basic elements that comprise negligence claims—harm, duty, breach of duty, and causation—are met in some cases where parents forgo vaccination.

I. THE PRACTICE OF CHILDHOOD VACCINATION

The vaccination of children has proved to be one of the most effective and important health interventions of the twentieth century. With the possible exception of improved sanitation and clean water, no other intervention in modern history has impacted children's health as significantly. Yet despite the phenomenal success of childhood vaccination, thousands of parents in the United States choose not to vaccinate their children each year. In many cases, these children can still attend public schools by taking advantage of personal belief exemptions available in many states. These parents do not represent a homogenous group: some parents may object to immunization on religious or philosophical grounds, some may object to what appears to be a painful assault on their child, and others may believe that the benefits of immunization do not justify the risks to their child. The number of parents choosing to forgo vaccination for their children appears to be increasing, in part because of the success of vaccination programs. Parents today have little or no experience with vaccine-preventable diseases like polio, haemophilus influenzae type B, or

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measles. This fading social memory makes the benefits of vaccination more difficult to appreciate.

Currently, the Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention recommends that children under the age of six receive vaccination against fourteen infectious diseases: hepatitis B, hepatitis A, rotavirus, diphtheria, tetanus, pertussis, haemophilus influenzae type B, pneumococcus, poliovirus, measles, mumps, rubella, varicella (chicken pox), and influenza. Vaccination against two additional infectious diseases, meningococcus and human papillomavirus, is recommended between the ages of eleven and twelve.

With the exception of tetanus, these diseases spread only from person to person. In other words, to get a disease like measles, mumps, or influenza, you must be exposed in some way to an individual who is already infected with the disease agent. Vaccination not only provides direct protection to the individual who gets vaccinated, but also eliminates that individual as a source of infectious transmission. The latter effect is important because it provides indirect protection to unvaccinated individuals by surrounding them with vaccinated individuals—a phenomenon known as herd immunity.

Herd immunity is necessary to protect those individuals who are not yet vaccinated, those who must remain unvaccinated, and those few who remain or become susceptible to disease despite vaccination. Most vaccines cannot be given until a child is two to twelve months of age. Prior to that time, these young children remain susceptible to vaccine-preventable diseases. This age group is absolutely dependent on herd immunity to protect them from infection. Additionally, some children cannot be vaccinated against one or more diseases because of medical contraindications, past allergic reaction to a vaccine, or underlying medical conditions. Further, a small percentage of vaccinated individuals will either remain or become susceptible to disease despite vaccination. These children remain at risk despite every effort by their parents to protect them from disease acquisition through vaccination, and they depend on herd immunity for protection.

II. VACCINE-PREVENTABLE DISEASES HAVE THE POTENTIAL TO CAUSE HARM

All of the vaccine-preventable infectious diseases have the potential to cause death or significant disability. Some of these diseases, like measles, chicken pox, and influenza, are commonly perceived as minor illnesses that result in no more harm than several days of discomfort followed by a full recovery. This may lead some parents to question the need for vaccination against such diseases.

While severe complications are rare for most of these diseases, they can be devastating in those few who experience them. Measles, for example, causes pneumonia in 1 out of every 17 cases, encephalitis in 1 out of every 2000 cases, and death in 3 out of every 1000 cases. Otherwise healthy infants die of pertussis every year in the United States; chicken pox has been associated with devastating cases of necrotizing fasciitis, or “flesh-eating bacteria”; mumps can cause infertility in males; hepatitis can cause severe liver damage; a pregnant woman who contracts rubella is at significant risk of delivering a baby with devastating birth defects; and influenza still causes

thousands of deaths each year. Every one of the vaccine-preventable diseases has the potential to cause significant harm to those who get infected.

III. PARENTS HAVE A DUTY TO AVOID CAUSING HARM TO OTHERS

Do parents have a duty to take reasonable steps to prevent their children from spreading infectious diseases that have the potential to harm others? In *On Liberty*, John Stuart Mill seemed to recognize a duty not to cause harm to others. He argued that coercive state action could be justified where an individual's decision or action places others at risk of harm: "The only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others. His own good, either physical or moral, is not a sufficient warrant."

Mill's justification for interfering with the freedom of an individual has become known as the "harm principle." Vaccination laws rely on the harm principle for their justification. State immunization programs and school mandates exist not simply because they provide a direct health benefit to the vaccinated individual, but because they protect other individuals in the community—those who must remain unimmunized for medical reasons and those who remain nonimmune despite vaccination. The existence of these "school mandate laws" would suggest that there is, in fact, a civic duty to vaccinate one's children in the interest of protecting those in the population who remain susceptible.

Courts have repeatedly upheld compulsory vaccination laws in the United States as a reasonable exercise of the state's police power—even in the absence of a disease outbreak. Such laws survive constitutional challenge even in cases where they conflict with the religious beliefs of individuals. In the first such case, *Jacobson v. Massachusetts*, the Supreme Court held that:

the liberty secured by the Constitution of the United States 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.

While both the harm principle and *Jacobson* are primarily concerned with justifying coercive state action, one could argue that laws requiring vaccination of citizens exist to enforce a duty that each citizen has to every other member of the community. These laws suggest that a duty exists, even though most states provide the opportunity to opt out of vaccination on the basis of personal beliefs. The existence of the duty to avoid harming others does not cease to exist simply because one objects to the mechanism (in this case vaccination) by which states ensure that protection.

In fact, parents who choose not to vaccinate their children illustrate the "free-rider" problem—they take advantage of the benefit created by the participation of others in the vaccination program while refusing to participate and share equitably in the risks and obligations of the program. These individuals act unfairly to others in the community by pursuing self-interest ahead of civic responsibility. Even if the community refuses to

coerce or punish these free riders, they remain morally culpable in an important way.

Finally, the expectation that parents vaccinate their children to prevent harm to others is a reasonable one for several reasons. First, vaccination offers direct, demonstrated benefit to the child. Second, the safety of childhood vaccines is well established and the risk of serious side effects or complications is exceedingly rare. Finally, existing data clearly support the conclusion that the risks to a child of remaining unvaccinated, even in the United States, exceed any risks that might be attributable to vaccines themselves. Given this, placing a duty on parents to vaccinate their children is reasonable and represents prudent public policy.

IV. FAILURE TO VACCINATE ONE'S CHILDREN CONSTITUTES A BREACH OF DUTY

If parents have a duty to vaccinate their children, then it would follow that most situations in which a parent fails to do so would constitute a breach of that duty. There may be at least three notable exceptions to this rule. First, a parent's duty to vaccinate a child requires vaccination of the child *at the recommended time*, and not before then. Second, the duty to vaccinate does not exist for those children who have specific and recognized contraindications or those who have previously experienced side effects that medical professionals agree preclude further vaccination against that agent. Finally, the duty to protect others by taking reasonable steps to keep one's child from spreading disease is discharged when a parent has made a good faith effort to get their child vaccinated. In the event of vaccine failure—where an individual child, despite vaccination, contracts and spreads disease to another—the parents can still be said to have fulfilled their duty. Likewise, inability to pay for vaccinations may also excuse a parent from this duty. Vaccination is a public good, but not all states assure that citizens can obtain vaccination at no cost. In those states, it may be unreasonable to expect parents to fulfill this duty without assistance.

V. THE QUESTION OF CAUSATION

The question of causation turns on whether a parent whose child has suffered serious harm from a vaccine-preventable disease can claim that the harm is the result of another parent's decision to forgo vaccination of their own child. In considering that question, several factors are important. First, there is little question that the harm in this case results from transmission of an infectious agent from one person to another. While it may not always be possible, when the specific person who spread disease to a harmed person can be reliably identified, establishing causation is a fairly easy task.

While the direct cause of the harm is the infectious agent, the vector—in this case, a child—is an essential link in the chain of causation between infectious agent and a serious consequence of infection. A reasonably foreseeable consequence of failure to vaccinate a child is the possibility that the child will contract the disease and spread it to others. In this situation, were it not for the failure to vaccinate that child, the spread of disease would almost certainly not have occurred. This case for causation may be

weakened if the person who has been harmed is also unvaccinated by choice. In that case, there is an intervening and more direct cause of the harm—the fact that the harmed person had forgone the opportunity to gain direct protection through vaccination. While this would not break the chain of causation, it might allow the defendant to claim contributory or comparative negligence, thus reducing or eliminating any damages.

CONCLUSION

I have argued that vaccine-preventable diseases can cause significant harm to infected individuals, that parents have a duty to take reasonable steps to avoid having their children spread infectious diseases to others, that failure to vaccinate an eligible child constitutes a breach of that duty, and that failure to vaccinate a child can be a proximate cause of harm to another. I recognize that negligence law may introduce important nuances into my analysis, but I would also argue that justice might demand that a tort remedy be available in this situation.

If an ethical basis for tort liability exists, it resides in providing a mechanism by which someone who is made worse off by the careless or self-serving actions of another can claim recompense for that harm. Negligence law recognizes that persons should be accountable for their decisions and actions when those decisions and actions unreasonably place others in harm's way. A parent whose child suffers brain damage, death, or disability as a result of contact with another child whose parents chose to forgo vaccination has been harmed unfairly. While the current system in the United States has a publicly funded mechanism for compensating those injured as a result of vaccine side effects, there is no corresponding public mechanism to guarantee that a child harmed by an unvaccinated child will receive the medical care, services, and support necessary. The best mechanism for justice in this situation may be the tort system. It would be unreasonable for those who have made good-faith efforts to participate in the vaccination program to suffer harm at the hands of those who have not, without some mechanism for recompense.

PARENTS SHOULD NOT BE LEGALLY LIABLE FOR REFUSING TO VACCINATE THEIR CHILDREN

*Jay Gordon** †

INTRODUCTION

Should a parent who takes advantage of a personal belief exemption to avoid vaccinating a child be held liable if that child infects other people? No, because there are valid medical reasons for choosing this exemption and tracing direct transmission of these illnesses from an unvaccinated child to another person is virtually impossible.

I have been a pediatrician in private practice for nearly thirty years. I was conventionally trained, completed a residency in pediatrics at Children's Hospital of Los Angeles and was the Senior Fellow in Pediatric Nutrition at Memorial Sloan-Kettering Institute in New York City. Over many years, seeing thousands of children, my point of view about childhood vaccines has changed. I believe that parents have the right to decide when and how their children receive vaccinations and also have the right to decline any or all vaccines. Like many medical interventions, vaccines have risks and benefits, and parents may elect nonvaccination as the better choice for an individual child. The societal ramifications are significant and should certainly be a part of any discussion.

When children or babies who have been in contact with other children (or adults) contract most illnesses, there is no feasible way to know from whom they got the disease. Whether one is talking about a routine winter viral illness, chickenpox, or whooping cough, the contagion could have come from a child with overt disease signs and symptoms, an asymptomatic carrier, or another, perhaps mutual, contact. Vaccines are not 100% effective, so that even a fully vaccinated child can contract an illness or carry that illness and give it to another child. Blaming a specific individual—let alone suing one—because your child gets sick has no credible medical basis.

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I. PARENTS MAY BE JUSTIFIED IN DECLINING TO VACCINATE THEIR CHILDREN

There are many valid reasons to support vaccination, but they *don't* support removing the right to *refuse* vaccinations. There are also situations—medical and personal—which justify waiving all or some childhood vaccines, but these are not good reasons to *abandon* vaccines altogether.

Twenty states (including Michigan) allow parents to waive any or all vaccines for personal or philosophical reasons. These children may still attend school at all levels, but the school system reserves the right to exclude these children in the event of an outbreak. This is a firm commitment on the part of the government to protect the rights of parents to participate fully in this important healthcare decision. Parents who feel that the risks of vaccinating outweigh the benefits are entitled medically and legally to waive vaccines. Section 6051 of the California Code states that “[a] pupil with a permanent medical exemption or a personal beliefs exemption to immunization shall be admitted unconditionally.” Similar wording appears in most of the state laws allowing a personal belief exemption. These are not whimsical choices on the part of the legislators, the parents, or the doctors who support this right. Parents who vaccinate their children base their decisions on the advice they receive from their pediatricians and the other knowledge they have gathered. Parents who choose to waive vaccinations do so for similarly valid reasons.

Adverse outcomes can occur from both vaccination and nonvaccination. Vaccines work very well at creating immunity to illnesses, so there are very few situations that would likely lead to transmission of an illness from an unvaccinated child to a vaccinated child. The obvious exceptions would be infants too young to have received a full complement of shots and immunocompromised children. Parents must protect these two groups of children by keeping them away from too many other children. Period. Newborns and young babies are at risk any time they are in public. We can only vaccinate against a *very* small minority of contagious illnesses; it is unwise to bring your newborn into preschool when you pick up your toddler, and equally risky to attend older children’s birthday parties with this baby. Further, parents of children taking high dose steroids for asthma or receiving immunosuppressive medicine for other diseases are strongly cautioned by their doctors to avoid the potential dangers I have described.

There are valid reasons for giving all the recommended vaccines, but parents’ ambivalence is supported not just by instinct or alleged self-interest but also by medical literature questioning the effectiveness of immunizations. The Centers for Disease Control and Prevention (“CDC”) funded a peer-reviewed article about flu shots published in the October 2008 issue of the highly respected *Archives of Pediatric and Adolescent Medicine*. It concluded:

[S]ignificant influenza VE [vaccine effectiveness] could not be demonstrated for any season, age, or setting after adjusting for county, sex, insurance, chronic conditions recommended for influenza vaccination, and

timing of influenza vaccination (VE estimates ranged from 7%–52% across settings and seasons for fully vaccinated 6- to 59-month-olds). . . . In 2 seasons with suboptimal antigenic match between vaccines and circulating strains, we could not demonstrate VE in preventing influenza-related inpatient/ED or outpatient visits in children younger than 5 years. Further study is needed during years with good vaccine match.

We have known for years that flu shots do not work well in older adults; newer research questions their efficacy in children, too.

Another example involves chickenpox. The Varicella Zoster virus (“VZV”) causes chickenpox in children; the illness is virtually always benign and leaves the child with immunity to chickenpox. In adults, this virus also can cause “shingles,” an extremely painful illness. VZV can live in the nervous system for years and then reactivate in adults whose immune systems no longer suppress it.

Fortunately, continued occasional exposure to children with chickenpox usually keeps the antibody level against the virus high enough so that shingles is not terribly common. That is the state of medical care in most of Europe where governments and the medical establishment have refused to officially recommend universal vaccination against chickenpox. Among many studies supporting this refusal is a [report](#) in the prestigious medical journal *Vaccine* written by researchers at Britain’s Public Health Laboratory Service, who found that “eliminating chickenpox in a country the size of the United States would prevent 186 million cases of the disease and 5,000 deaths over 50 years. However . . . *they said it could also result in 21 million more cases of shingles and 5,000 deaths.*”

Of course, we have been quite successful in reducing certain childhood diseases to almost insignificant numbers in the United States, Western Europe, and many other places. (Somalia experienced its first polio-free year in 2008.) And widespread vaccination directly led to this success.

In March 2005, Julie Gerberding, Director of the CDC, held a press conference to announce that “[t]he elimination of rubella in the United States is a tremendous step in protecting the health and well being of pregnant women and infants.” A viral illness feared by pregnant women “is no longer considered to be a major public health threat in the United States.”

Another success story involves measles. The United States averages about 60 cases of this viral illness each year. In 2008, the country is on course to have about 160 cases among 300 million Americans. However, the media have managed to turn these extra 100 cases into a cause célèbre for vilifying parents who question the currently recommended schedule of twenty-five or more separate injections over the first two years of life.

In 1960, if a parent were presented with a dilemma about the polio vaccine and hypothetical side effects, the decision would not have been too difficult given the prevalence of polio during that time period. In 2008 or 2009, the illness is rare worldwide: we are on target for about 1700 cases on the entire planet in 2008 with all but 100 of the cases being in India, Nigeria, Pakistan, Angola, or Afghanistan. The benefits, both personal and

societal, of the polio vaccine were so clear thirty or forty years ago that parents and doctors easily agreed on universal vaccination.

“Childhood vaccines save 33,000 lives each year in the United States.” This statement has been made so often that no one seems to question the absence of logical thinking behind it. The numbers are based on medical care in the early to mid-1900s. There is no way to estimate how many lives vaccines are saving, and a similar estimate of harm from vaccines is difficult to calculate. As a result, a parent’s decision not to vaccinate a child is being unfairly vilified.

II. PARENTS SHOULD NOT BE LIABLE FOR PLACING THEIR CHILDREN’S BEST INTERESTS ABOVE UNIVERSAL VACCINATION POLICIES

In the absence of facts, doctors and others are trying to frighten people into vaccinating or not vaccinating. That fear includes the notions that unvaccinated children pose a great threat to others and that parents of these children are not being responsible. In fact, these parents are choosing what they consider to be the safest course of action for their children and pose very little, if any, danger to other children and adults.

Some medical interventions are not controversial, and some prompt only mild controversy. For example, if a child has acute lymphocytic leukemia, the cure rate with conventional medical care approaches ninety percent, and very few doctors or parents will argue against the standard treatments offered in spite of their known complications and adverse reactions. But vaccines are presently controversial, and purported truths about safety and efficacy are challenged daily by lay people and physicians.

Very few medical actions are risk free. Prior to surgery or when medication is prescribed, your doctor explains the risks and benefits. For surgery, the consent form is often many pages long with dire warnings about what can go wrong. Childhood vaccines are shipped to my office with a long thin package insert detailing how the shots are manufactured, what they contain, and what can and has gone wrong. The last lines in many of these inserts sound ominous: “This vaccine has not been evaluated in animals for its carcinogenic or mutagenic potentials or for impairment of fertility.” I seriously doubt that vaccines are a large source of cancer, genetic mutation, or impaired fertility. However, any time I inject a vaccine into a child there is potential for adverse outcome. I respect parents’ questions and objections to our current vaccine schedule. Parents have the absolute right to participate in these medical discussions, and not giving them the information they need to make informed decisions is inadequate medical care. Not seeking out this information is an abrogation of parental responsibilities.

The list of side effects from adverse reactions to vaccines, in a *Physicians’ Desk Reference* “warning” section, given *out of context*, would probably frighten many parents out of vaccinating at all. There are thirty or more items on that list. Similarly, the list of symptoms and complications of the illnesses against which we vaccinate could scare parents into giving every shot available as soon as possible.

Pediatricians and other physicians use the latter option on a daily basis. I share my colleagues' disdain for scare tactics from the "antivaccine" camp, but I object equally to doctors using fear and misinformation to try to convince parents (and legislators) that vaccines are risk free. Both sides are distorting the truth for their own purposes. Childhood illnesses are part of the first decade of life; immunity is acquired, and the consequences are almost always minor.

Modern medical care has completely changed the morbidity and mortality rates associated with virtually every single infectious disease. Yet, the "33,000" number is used in the media as if we actually know how many children would succumb to these illnesses in the absence of vaccines in the twenty-first century. We do not really have any idea what this number would actually be with twenty-first century medications and care. And unvaccinable diseases are far, far more common and, realistically, a greater concern for parents: toddlers get eight to ten or more colds each year. To restate a very important point, even vaccinated children can carry diseases like pertussis and mumps. There are no completely reliable medical or laboratory tests showing who infected whom.

CONCLUSION

Vaccines work. They carry some risk but are a viable method of preventing contagious diseases. Parents who choose not to vaccinate their children accept responsibility for their actions, do not endanger others, and must retain this right. There is no medical basis for holding them liable.

UNINTENDED CONSEQUENCES: THE PRIMACY OF PUBLIC TRUST IN VACCINATION

Jason L. Schwartz* †

INTRODUCTION

The increasing availability of personal belief exemptions from state vaccination requirements is a growing concern among proponents of vaccination. Holding parents of non-vaccinated children liable to those they infect is among the responses proposed to maintain high vaccination rates. Even if motivated by a sincere desire to maximize the benefits of vaccination throughout society, such a step would be inadvisable, further entrenching opponents of vaccination and adding to the atmosphere of confusion and unnecessary alarm that has become increasingly common among parents of children for whom vaccination is recommended.

I. U.S. VACCINE POLICY AND ITS CRITICS

Despite considerable media attention to the controversy over alleged links between vaccines and autism or other serious conditions, vaccination rates in the United States are at or above ninety percent for nearly all recommended pediatric vaccines. When asked to explain these impressive statistics, public health officials point most often to two factors: one, federal and state programs that provide vaccines to uninsured or underinsured children, and two, vaccination requirements for attendance in public schools and state-licensed day care programs.

While the specific list of required vaccines varies among states, all grant medical exemptions for children who have an allergy to a vaccine component, a compromised immune system, or a similar condition. Forty-eight states allow for religious exemptions from vaccine school-entry requirements, twenty of which also permit “personal belief” exemptions, also known as philosophical exemptions. (Whether a state can grant exemptions on the basis of religious beliefs but not for nonreligious personal beliefs is an ongoing matter of debate.) As research by Daniel Salmon and his colleagues has shown, the difficulty of obtaining nonmedical exemptions varies widely among states, and, not surprisingly, states with less onerous processes have higher exemption rates.

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While exemption rates are still low, their recent growth troubles advocates of vaccination. The ongoing, well-publicized controversies over vaccine safety have no doubt been major contributors to the popularity of nonmedical exemptions, fueled in part by a small but passionate group of vaccine-policy critics. Their efforts have gained influential and well-known supporters, including Congressman Dan Burton, environmental activist and author Robert F. Kennedy, Jr., and actress Jenny McCarthy. Despite agreement among the vast majority of the medical community and a large and growing body of scientific evidence regarding the safety of vaccines, the concerns of these critics persist, with new hypotheses often rapidly replacing those that are refuted by research findings.

In light of the individual and societal consequences that would follow a drop in vaccination rates, physicians and public health officials have suggested various responses, including significantly restricting or eliminating nonmedical exemptions and increasing enforcement of school-entry requirements. Concurrent with these discussions has been a relatively recent attempt to examine the “rights of the vaccinated,” a response to what advocates of this concept see as years of disproportionate attention to the rights of those who oppose vaccination. It is in this context that discussions have emerged over holding parents of unvaccinated children liable to those whom they infect.

II. HERD IMMUNITY AND THE ETHICS OF VACCINATION

Other contributors to this Symposium examine the applicability of principles of tort law to harm caused by unvaccinated children, but the question of liability in this context invites a discussion of ethical considerations in addition to legal analysis. The relationship between the vaccinated and unvaccinated underscores the unique ethical issues raised by vaccination. The ethics of prevention differ considerably from the ethics of treatment, with corresponding implications for discussions of policy.

As a preventive intervention, vaccines are given to individuals who are healthy, at least with respect to the diseases for which vaccinations are being administered. Moreover, in the context of school-entry requirements and exemptions, children are the target population of such vaccination programs. Given that healthy children are the recipients of most vaccines, health care providers, policy makers, and parents are, for good reason, acutely conscious of vaccine-related risk. Although recent controversies surrounding vaccine safety may suggest otherwise, vaccines must undergo larger prelicensure clinical testing and more postlicensure safety surveillance than pharmaceuticals or any other medical intervention.

When discussing vaccine safety, a common refrain among advocates of vaccination is that “vaccines are victims of their own success.” That is, while confirmed or alleged vaccine safety concerns are well publicized, the diseases that vaccines help prevent are exceedingly rare in the United States today. Many of the vaccines included in school-entry requirements—polio, measles-mumps-rubella, and diphtheria-pertussis-tetanus—are often viewed

by parents (and younger physicians) as preventing historical diseases rather than contemporary health threats. Accordingly, vaccine-related risk can overshadow the risks associated with those diseases, even though health officials note that high vaccination rates are essential to ongoing prevention efforts. Recent outbreaks of measles and mumps have confirmed the continued threat of vaccine-preventable diseases.

Perhaps the key consideration complicating the ethical analysis of vaccination policy is that vaccines not only provide direct benefits to recipients but also contribute to community protection against vaccine-preventable diseases. Known as herd immunity, this effect occurs when a high rate of vaccination (typically greater than eighty-five to ninety percent, depending on the vaccine) leads to an overall reduction of a pathogen's presence in a community. Maintaining vaccination rates high enough to reap the benefits of herd immunity is central to vaccination programs, since no vaccine provides complete protection against its target infection and some people cannot be vaccinated due to medical contraindications.

Virtually all public health programs require balancing respect for personal liberty and individual autonomy—bedrocks of contemporary bioethics—with concern for the health of the community as a whole. However, the increased interconnectedness of individual and society in vaccination programs due to herd immunity complicates the ethics of vaccination policy beyond the tensions already present in the ethics of public health.

III. GOVERNMENT VACCINE PROMOTION AND CONTROVERSIES

More than any other aspect of vaccination policy, the use of school-entry requirements has generated tremendous public interest, attention, and criticism. What vaccination-requirement proponents see as a key weapon in the efforts to maintain high vaccination rates is viewed by vaccine-safety critics and civil libertarians as an unnecessary infringement on parental authority that exposes children to unnecessary risk. While some members of the public health community call for greater restrictions on nonmedical exemptions from vaccination requirements, opponents argue that such exemptions should be more widely available and easier to obtain.

Recently, states have expanded the list of vaccinations required for school and day care attendance. For example, the 2008 addition of an annual influenza vaccination requirement in New Jersey was the first of its kind. The most widely publicized recent controversy related to school-entry requirements involved efforts in many states to require vaccination of sixth-grade girls with the human papillomavirus (“HPV”) vaccine. The 2007 decision by Texas Governor Rick Perry to issue an executive order requiring HPV vaccination generated tremendous attention, most of it negative. In addition to the standard criticisms of vaccine mandates, opponents—including well-respected members of the medical and public health communities—argued that it was too soon to require the relatively new vaccine or that a vaccine against a sexually transmitted infection should not be required

for school attendance. The executive order was reversed by the state legislature, and while dozens of other states have introduced bills that would require HPV vaccination, none have been implemented thus far.

For vaccines already required, some states and municipalities have increased enforcement, in some cases prohibiting unvaccinated children's attendance at school. In 2007, officials in Prince George's County, Maryland required parents of unvaccinated children to appear in court, where county officials threatened fines and a ten-day jail term for continued noncompliance.

Local and national media outlets have covered these events and others, often featuring protests at state capitols and interviews with parents who believe vaccines injured their children. One could easily get the impression from these stories that vaccination programs in the United States are government initiatives forced upon a largely unwilling populace, yet this is far from an accurate description of the overall vaccination-policy landscape. To the contrary, Centers for Disease Control and Prevention data from the National Immunization Survey shows high levels of compliance with its recommended vaccination schedule, the majority of which occurs long before most children are subject to school-entry requirements.

IV. PRESERVING PUBLIC TRUST IN VACCINATION

Talk of state requirements, protests, mandated court appearances, and threats of imprisonment obscures the fact that vaccination in the United States depends foremost on widespread confidence among parents and health care providers in the value and safety of vaccines. This trust is the result of decades of public health achievements attributed to vaccines and is reflected by vaccination's place as a largely routine aspect of pediatric care beginning at birth.

More than any specific policy aimed at increasing vaccination rates, the most important objective of public health officials and other vaccination advocates should be to maintain the public trust in vaccination. Without the public's support, it is difficult to imagine how an already overburdened, understaffed, and profoundly underfunded public health community could enforce school-entry requirements in the face of widespread opposition. In a 2007 statement, state immunization managers pointed to the importance of building public and provider support for a specific vaccine before even initiating discussions of a state requirement, a principle not followed in the case of HPV vaccines. Controversies linked to aggressive government programs to enforce vaccination requirements do little to preserve public confidence in vaccines; instead they further inflame critics of vaccination, while leaving other parents confused as to why a long-established and highly respected part of pediatric medicine is so contested.

As a strategy to maintain high vaccination rates and preserve herd immunity, talk of holding parents of unvaccinated children liable to those whom they infect is woefully shortsighted. Putting aside the scientific challenges of identifying with precision the specific source of an infection, such

a policy would only add to the antagonism between supporters of vaccination and what, despite appearances to the contrary, remains a small opposition movement.

If policy makers wish to reduce rates of nonmedical exemptions, a far less contentious and more effective strategy would be to continue to demonstrate the value of vaccination as a disease-preventing and life-saving public health initiative. While the number of nonmedical exemptions has grown slightly in recent years, the option is still used by a very small minority of parents, and efforts to change the views of these critics have had little demonstrable impact. Rather than turning to police powers or the courts to coerce or compel these parents to vaccinate their children, the goals of public health would be better served by focusing attention on the vast majority of parents who support vaccination. Research and educational programs should be enhanced to show why such support continues to be deserved, and additional efforts should aim to reduce or eliminate persistent racial and socioeconomic disparities in vaccination rates that are unrelated to vaccine opposition movements.

CONCLUSION

Despite reports in the media and on the internet, vaccines continue to have a remarkable record of safety and an unmatched history of achievement. The overriding ethical obligation for vaccine policy is to strive to maximize the societal benefits of vaccination while minimizing the infringement on personal liberty. The current system of state school-entry requirements and limited nonmedical exemptions has been criticized, for various reasons, by both supporters and opponents of U.S. vaccine policy. However, provided that vaccination rates remain sufficiently high to preserve herd immunity, this model may continue to be the best available approach to vaccine promotion, even if it is an imperfect one.

Efforts should be aimed at ensuring school-entry requirements are implemented only when a compelling public health need exists, as well as strengthening requirements for nonmedical exemptions so that they include only those with deeply held beliefs against vaccination. A program of research and public education should strive to demonstrate the continued safety of vaccination and inform parents about its importance to their children's health. Holding parents of unvaccinated children liable to those whom their children infect would greatly exacerbate tensions, confusion, and controversy over vaccination, jeopardizing the public trust that vaccination has long deserved and on which the success of U.S. vaccination policy relies.

CHALLENGING PERSONAL BELIEF IMMUNIZATION EXEMPTIONS: CONSIDERING LEGAL RESPONSES

Alexandra M. Stewart^{*†}

INTRODUCTION

Public health agencies and citizens should employ legal approaches to hold parents accountable for refusing to vaccinate their children. The judiciary would craft an effective response to defeat the threat posed by these parents. Public-nuisance law may offer a legal mechanism to hold vaccine objectors liable for their actions.

Questions about the societal costs of personal belief exemptions highlight simmering tensions that have long surrounded compulsory vaccination. The debate usually occurs between families who reject one or more vaccines and state administrators who seek to implement vaccination policy goals.

Increasingly, parents use personal belief exemptions to excuse their children from school-entry immunization requirements. These parents believe that their refusal (1) serves their children's best interests, and (2) affects only their family. However, unvaccinated children experience an increased risk of developing vaccine-preventable illnesses, and needlessly expose the larger community to disease.

Another perspective demands consideration. Families who are unable to vaccinate their children and those who support broad vaccination programs question whether the ability to refuse immunization infringes on their right, as members of the public, to be free from unnecessary exposure to vaccine-preventable disease. These parents recognize that while exemptors have a right not to vaccinate their children, they do not have a right to risk the health of others. Postings on internet forums, suggest that many parents propose measures that would prohibit exemptors from accessing schools, roads, sidewalks, or other public services. Others propose that parents of children who cannot be vaccinated should sue exemptors if their children spread vaccine-preventable disease.

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The opponents of personal belief exemptions may demand that courts recognize their interests. Accordingly, private citizens and state governments should be able to use tort law to ensure that all members of the public have safe environments that conform to national public health standards.

I. BACKGROUND

Vaccines save more lives than any surgical technique or medication, including antibiotics. Global vaccination has eradicated smallpox and drastically reduced the incidence of diphtheria, polio, congenital rubella syndrome, and influenza type b. Because of their unparalleled success, vaccines are universally heralded as one of the greatest achievements of public health.

Population-wide vaccination has long been an accepted strategy to protect communities from vaccine-preventable disease. For over 100 years, the basic tenets of immunization policy and law have supported the goal of public protection, even in the face of individual objections. Courts have upheld state laws that require vaccinations, while carefully weighing parents' rights to make medical decisions for their children against the public's well-being, and personal beliefs regarding vaccines against the accepted standard of care.

In 1905, in *Jacobson v. Massachusetts*, the Supreme Court recognized that compulsory vaccination laws are an appropriate exercise of state authority. The Court noted that states may develop and implement policies to "protect the public health and safety." Two decades later in *Zucht v. King*, the Court upheld vaccination laws in the context of school attendance. In so holding, the Court found that Texas was not exercising "arbitrary power, but only that broad discretion required for the protection of the public health."

Today, despite dozens of court challenges, all states have developed school-entry vaccination requirements. These laws have proven to be the most effective techniques ever implemented to ensure that all children receive appropriate and timely vaccinations. More than ninety-five percent of all school-age children comply with the requirements, and the incidence of vaccine-preventable disease has declined to historic lows.

School-entry vaccination requirements permit parents to refuse immunizations for their children by granting exemptions, or opt-outs: all states issue exemptions for medical reasons, most states allow parents to refuse vaccination based on a religious belief, and eighteen states permit exemptions based on a parent's personal, moral, or philosophical belief. In *Childhood Vaccine and School Entry Laws: The Case of HPV Vaccine*, I identify the two jurisdictions that have adopted school-entry requirements for the human papillomavirus ("HPV") vaccine. These statutes have expanded personal belief exemptions even further, allowing parents to refuse vaccination without offering *any* reason, as long as they have reviewed educational materials that describe the connection between HPV infection and cervical cancer.

In the past decade, personal belief exemptions have increased from one percent to approximately three percent nationally, with clusters where ex-

emption rates are several times higher than the national average developing in specific areas. This trend is troubling—even a small increase in the use of exemptions translates to a higher percentage of unvaccinated individuals, which threatens “herd immunity.” Herd immunity is the defense against disease that develops in an entire community when sufficient numbers of people have been vaccinated. Lower herd immunity exposes vulnerable children and the larger community to dangerous diseases.

Consequently, recent outbreaks of vaccine-preventable disease throughout the country have been directly attributed to the use of personal belief exemptions. For example, according to the Centers for Disease Control and Prevention, cases of measles have reached a ten-year high; with over half of the cases involving children whose parents refused to immunize their children. Others who developed measles during these outbreaks include those who were too young to receive vaccines.

These outbreaks may presage difficult times ahead if individual interests defeat community interests. There is a strong public health argument in favor of strengthening existing measures to obtain the highest vaccination coverage rates to ensure community protection. It is possible for communities to confront personal belief exemptors—if they have the collective will.

II. DEFINING PUBLIC-NUISANCE TORTS

A tort is a private or civil injury that results from a breach of society’s expectation regarding interpersonal conduct. People who have been injured by a tort may file a claim, and the accused may be required to pay damages to the injured party. Torts are distinguishable from criminal acts because crimes are prosecuted solely by the government and may be punishable by imprisonment or the imposition of a monetary fine. As Larry Gostin notes in *Public Health Law: Power, Duty, Restraint*, “tort litigation can be an effective tool to reduce the burden of injury and disease.”

“Public nuisance” is a category of tort that arises when particular conduct interferes with the health, safety, or welfare of the general community. The Restatement (Second) of Torts section 821B defines public nuisance extremely broadly, as conduct that constitutes “an unreasonable interference with a right common to the general public.” The conduct “involves a significant interference with the public health, the public safety . . . or . . . is of a continuing nature or has produced a permanent or long-lasting effect and, to the actor’s knowledge, has a substantial detrimental effect on the public right.”

The case *State of Rhode Island v. Lead Industries Association, Inc.* defined a public right as “an indivisible resource shared by the public at large, like air, water, or public rights of way.” Similarly, the Restatement defines a public right “as one common to all members of the general public. It is collective in nature and not like the individual right that everyone has not to be assaulted.”

In describing public-nuisance litigation, Gostin indicates that state legislatures may delegate to public health agencies the power “to define, prevent,

and abate nuisances.” Agency definitions of public nuisance are extremely expansive and include “anything which is injurious to health. . . so as to interfere with the comfortable enjoyment of life or property.”

Further, legislatures or agencies may label specific conditions public nuisances. Courts are willing to accept that the definitions developed by legislatures and administrative agencies are constitutional; however, they reserve the right to conduct their own review in order to determine whether a nuisance exists.

Upon a judicial finding that a public nuisance is present, courts have wide latitude to devise equitable remedies: 1) award damages to the injured parties; 2) require the destruction of dangerous property; or 3) issue an order of abatement. The order of abatement is appropriate as long as it is reasonably necessary to avert a health threat, even if it is a derogation of a pre-existing private property right. A government body implements all of the decisions on behalf of the public.

Additionally, section 821C of the Restatement outlines the three categories of plaintiffs who may file a public-nuisance claim:

1. A public health agency may file suit to prevent conduct that is harmful to the public.
2. An individual may file a claim if s/he can show that the conduct constitutes a substantial interference with a right common to the public, *and* that the individual has suffered harm different in type or quality from that suffered by other members of the public.
3. The class representatives of a class action or anyone with standing to bring a citizen suit under state or federal law.

Finally, plaintiffs may file a public-nuisance claim before the harm occurs. Courts will often act preemptively in these prospective-nuisance cases, and may grant an injunction or order of abatement to prevent future harm where the risk of harm is substantial and imminent.

III. PUBLIC-NUISANCE TORTS AND IMMUNIZATION EXEMPTORS

Public-nuisance claims could be a valuable tool allowing courts to consider whether exemptors who exercise personal beliefs have violated the public’s right to live in a reasonably disease-free environment. Public-nuisance claims may be appropriate, even in those states that permit personal belief exemptions. The legal right to opt out of school-entry immunization requirements should not be construed as a right to create an unreasonable public health threat. The parameters of public-nuisance law are expansive enough to abrogate the right to opt out, in order to serve the public good.

Attorneys representing state departments of health could file prospective public-nuisance claims against exemptors. Using this category of public-nuisance claim would permit the state to move forward without being

required to wait for an outbreak of vaccine-preventable disease in their immediate community before bringing suit.

The state could argue that exemptors present an unreasonable interference with the public health, and that they pose a substantial risk of having a future detrimental effect on the public's right to enjoy the community and to be free from an unnecessary threat of vaccine-preventable disease.

Courts may agree that a defendant's conduct contributes to the risk of disease outbreaks that would cause permanent or long-lasting effects on the public. The judiciary might be especially receptive to a prospective public-nuisance claim if (1) the state could show that the jurisdiction had greater numbers of exemptors than the national average, or (2) that the community had experienced past outbreaks of vaccine-preventable disease that were traceable to the use of personal belief exemptions. If these claims prove successful, the court could issue an order of abatement, requiring the exemptor to discontinue the unsafe conduct of vaccination refusal.

CONCLUSION

The public-nuisance litigation suggested here would be a case of first impression in every jurisdiction and would likely be highly controversial. Defendant exemptors would protest loud and long; courts would hear all about *their* children, *their* autonomy, *their* rights, and *their* fears.

But the question remains, "What about the rest of us?" Tort plaintiffs will be left to defend the role of community-wide immunization and the school-entry requirements that protect the public's health, and to explain the danger we face if herd immunity fails. If courts review these facts, they will rely on foundational principles of law and policy that have always been used to protect the many against the hazards created by the few.

GAMBLING WITH THE HEALTH OF OTHERS

Stephen P. Teret* & Jon S. Vernick**†

The health and wellbeing of the public is, in part, a function of the behavior of individuals. When one individual's behavior places another at a foreseeable and easily preventable risk of illness or injury, tort liability can play a valuable role in discouraging that conduct. This is true in the context of childhood immunization.

I. THE GOVERNMENT REGULATES PRIVATE CONDUCT TO PROMOTE HEALTH

In public health, what one person does has the potential to affect others. The effect may be disease related, such as when a person with a cold goes to work and passes the cold on to coworkers. The effect can also be economic, as when a motorcyclist rides helmetless, he suffers a head injury that could have been averted by the use of a helmet, and we then all share the expense of his care and rehabilitation.

Sometimes, when an individual makes a decision, he or she may think only of the personal consequences of that decision. The motorcyclist who wants to feel the wind in his hair may ignore the risk of riding without a helmet, or may calculate and then assume the risk, incorrectly thinking he is the only one involved in the possible consequences. In order to reduce the likelihood of such conduct and to control the economic costs of head injuries to motorcyclists, all states have passed mandatory helmet laws, though some states have repealed them. These laws, passed over the vocal objection of some motorcyclists, have proven to be both constitutional and effective in reducing severe head injuries and deaths.

In the field of childhood infectious diseases, the state has several interests to protect: the health of the child (under the *parens patriae* role of the state), the health of others who may come in direct or indirect contact with the child, and the economic interests of society, which will inevitably cover some or all of the costs incurred by childhood illnesses. To address infectious diseases such as diphtheria, pertussis, tetanus, mumps, measles, and others that historically have been devastating to children and others, each

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state has, through an exercise of the police power reserved to the states, passed mandatory immunization laws requiring parents to demonstrate that their children have been vaccinated in order to attend school. These laws are generally recognized as among the most successful interventions in the field of public health, having enormously reduced the incidence of morbidity and mortality that previously plagued childhood populations.

II. RISKS RESULTING FROM PHILOSOPHICAL EXEMPTIONS TO VACCINATION REQUIREMENTS

All states have included in their mandatory immunization laws a provision that if a vaccination is medically contra-indicated for an individual child, that child need not be vaccinated. The vast majority of states have also included a religious exemption within the law, so that children for whom vaccination would be a violation of a religious tenet can still attend schools without being vaccinated. But some parents of children for whom immunization is neither medically contra-indicated nor proscribed by their religion do not want to have their children vaccinated due to other, strongly held, personal reasons. These reasons include beliefs about medical responses to vaccines that are not substantiated by epidemiologic research, or beliefs based on personal moral grounds that might not fully meet the requirements of the religious exemption. The political response to the antivaccinationists has been to create a personal or philosophical exemption to mandatory immunization laws. Research, such as a 2006 study in *JAMA* by Dr. Omer and his colleagues has shown that states with such philosophical exemptions have geographic pockets of nonimmunized children attending schools—and such clusters have been related to infectious disease outbreaks involving previously controlled diseases.

Not only are these nonimmunized children exposed to the risk of acquiring these sometimes serious diseases, but so are children who have not been immunized for medical contra-indications and religious beliefs. Also, a modest percentage of children who do get vaccinated against an infectious disease are also at risk, because vaccinations are not 100% effective. Thus, the decision of a parent not to vaccinate his or her child poses serious risk to the public.

III. TORT LIABILITY AS A DETERRENT

Tort liability could encourage vaccination of children among parents who might otherwise take advantage of the easy availability of a philosophical exemption. Tort liability not only serves the purpose of compensating a damaged plaintiff, but it also serves as an incentive for preventing injury and disease. This was recognized long ago by William Prosser who wrote in his seminal treatise that with tort litigation, “there is of course a strong incentive to prevent the occurrence of the harm. Not infrequently one reason for imposing liability is the deliberate purpose of providing that incentive.”

The availability of tort liability influences the behavior of potential defendants. Product manufacturers have often changed the design of their products to reduce risks, in an effort to minimize their exposure to liability. In fact, one study conducted by RAND in the early 1980s concluded that for lightly regulated manufacturers, liability was the single greatest factor influencing product design decisions. Similarly, professionals such as physicians engage in defensive practices based on the threat of liability. But the extent to which individuals acting in their personal capacity, such as parents making decisions about the health care of their children, adjust their behaviors for the purpose of avoiding liability is less well known.

Although a parent's exposure to tort liability for failure to have a child immunized might improve vaccination (and infection) rates, there are obstacles to imposing liability under existing principles of negligence. To succeed in an action for negligence, the plaintiff must generally establish by a preponderance of the evidence that (1) the defendant owed him or her a legally recognized duty; (2) the defendant breached that duty; (3) the plaintiff has legally cognizable injuries; and (4) the defendant's breach was the "but for," and also proximate, cause of those injuries. At least three of these four traditional elements of negligence might be problematic for the plaintiff in an action alleging injuries associated with a defendant parent's failure to vaccinate his or her child. Where the defendant has relied on a legislatively established philosophical exemption from vaccination, it would be difficult to argue that he or she owes the plaintiff a "duty" to be vaccinated that has been breached. In addition, establishing that an illness suffered by plaintiff's child was caused by the defendant's failure to vaccinate his or her child could be challenging.

However, these obstacles are certainly not insurmountable. For example, a state could amend its law to specifically allow for liability as a condition of claiming the philosophical exemption. The state could even require persons invoking the exemption to acknowledge, in writing, that their actions might place others at risk—with resulting potential for liability. And if the defendant's unvaccinated child were the plaintiff's only known exposure to the illness (for example, in a classroom), the finder of fact could easily enough conclude that causation has been established by a preponderance of the evidence. Even if the plaintiff had been exposed to several others with the disease, genetic sequencing of the pathogen might still allow a finder of fact to determine whether the defendant is the most likely source.

As public health professionals, our primary goal is to reduce morbidity and mortality associated with childhood illnesses. Some may argue that tort law is a blunt instrument for accomplishing that objective. As with any intervention, the availability of tort litigation carries some risk of unintended consequences—such as increasing political opposition to mandatory vaccination associated with school attendance. Others may be concerned about potential risks to the reputation or integrity of the judicial system itself. In our view, however, the potential benefits of increasing vaccination rates outweigh these concerns. The judicial system is not likely to see a substantial increase in litigation, nor will it be unable to navigate a new tort far less

complex than many it currently handles. We also note that our argument in favor of tort liability is limited to the case of a parent invoking a philosophical exemption that, unlike a religious exemption, does not directly implicate First Amendment protections.

We certainly do not argue that tort liability is the only, or even the most important, way to improve vaccination rates. However, it seems appropriate for society to discourage one parent from engaging in a behavior that places another parent's child at a foreseeable—and preventable—risk. Tort liability can do just that.

THE PROBLEM OF VACCINATION NONCOMPLIANCE: PUBLIC HEALTH GOALS AND THE LIMITATIONS OF TORT LAW

Daniel B. Rubin & Sophie Kasimow* †

“Any successful immunization program will inevitably create a situation, as the disease becomes rare, where the individual parent’s choice is at odds with society’s needs.”

—Roy Anderson and Robert May,
“The Logic of Vaccination.” *New Scientist*

INTRODUCTION

Imposing tort liability on parents who fail to vaccinate their children would not serve the public health and public policy interests that drive childhood immunization efforts. The public policy goals of vaccination are to slow the spread of disease and to reduce mortality and morbidity. Our country’s public health laws already play a substantial role in furthering these goals. Although application of tort law may be an appropriate response to some of the problems that result from vaccination noncompliance, there also is a need to cultivate public understanding of the connection between individual actions and collective wellbeing. It is doubtful that the imposition of individual tort liability will achieve this goal.

I. THE PROBLEM OF VACCINATION NONCOMPLIANCE

The goal of public health law is to protect the wellbeing and safety of the entire population, balanced against the interests of specific individuals. Immunization is a collective good that requires shared responsibility. Public health laws requiring vaccination compliance demand that each of us take a small risk to protect the community at large. Immunizing a sufficient proportion of the population creates a “herd immunity”—a collective benefit derived from immunization of the majority of the population, which imparts protection to those who remain unvaccinated by impeding the spread of

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contagions. Whether motivated by misplaced conviction or reasoned calculation, some parents may shield their children from the discomfort and risks associated with vaccination, yet enjoy the protection that widespread vaccination provides for the community. At a certain point, however, once enough children go unvaccinated, both these children and the rest of the community become vulnerable to disease.

Failing to vaccinate is a failure to protect the interests of those who are most vulnerable. Children, whether they are immunized or not, are particularly vulnerable members of society, dependent on their parents to make decisions about their health. Hence children are most likely to be injured by an increase in vaccination noncompliance. Also at great risk are those who cannot be vaccinated for medical reasons (e.g., persons with HIV, cancer, pregnancy, or allergies). Thus, the harm that freeloading causes is not equitably distributed.

When parents fail to immunize their children, they not only expose their own children to a greater risk of disease, but they also place others in the community at heightened risk. As more people freeload, fewer remain in the vaccinated “herd,” thus increasing the risk of contracting an illness among those who are unvaccinated. Additionally, because vaccinations do not always impart complete immunity, even those who are vaccinated will encounter greater risks due to diminished herd immunity if enough people are unvaccinated.

While legislatures and advocates have cast vaccination exemptions as matters of individual rights, there are other policy consequences to these rules. Such rules pose a problem of aggregation. Although it may be both rational and within a parent’s right to choose not to immunize his or her child, when this seemingly individual decision is replicated by many parents across the country, it leads to diminished herd immunity and diminished protection for all against disease. This aggregation problem might serve as a justification for the use of tort law in some cases. If an individual’s rights infringe on the rights of another, tort law provides a way to redress the harm caused. On the other hand, even if tort law is successful in awarding damages and thereby doing justice to the people who are immediately harmed, tort law still may not compel the behavior that will further the public’s health.

Although only a small percentage of parents in the United States currently seek out a personal belief exemption, these numbers are rising rapidly, as bioethicist Nancy Berlinger describes in a [report](#), “Conscience Clauses, Health Care Providers, and Parents,” from the 2008 *Hastings Center Bioethics Briefing Book*. As a result, clusters of families who are not vaccinating their children are inadvertently creating communities with weaker herd immunities, further increasing the likelihood of an infectious outbreak. As people lose sight of how their own welfare is connected to that of society, they may fail to adequately respect the importance of a collective herd immunity. While some groups of like-minded parents have formed tightly knit communities in solidarity with each other, they may not see themselves in solidarity with a family two zip codes away.

Being vaccinated, like paying taxes or serving on a jury, can be considered a responsibility of citizenship. If vaccination compliance is indeed a responsibility of citizenship, then the case for enforcement through tort law might be strengthened. Those who do not take precaution via vaccination have failed to fulfill a duty, albeit a civic one. Allowing a few people to freeload using herd immunity at the expense of the wider community imposes a social injustice. But this injustice is not amenable to remedy via tort law.

II. CONCERNS REGARDING THE USE OF TORT LAW FOR CASES OF VACCINATION NONCOMPLIANCE

While the imposition of tort liability on noncompliant parents might add an additional level of defense to public health and safety, this effect is likely to be marginal and is unlikely to serve the goals that motivate vaccination programs. Tort claims are unlikely to deter additional parents from forgoing vaccination. Education is more likely to be effective. Parents must be informed of the risks of vaccination relative to the risk of contracting the illness that the vaccine prevents. Although parents who choose not to vaccinate their children may be acting out of love and a desire to protect their children from the putative risks and discomfort of vaccination, this desire is often misguided. For example, the Centers for Disease Control and Prevention [website page](#), *Vaccine Safety: Mercury and Vaccines (Thimerosal)*, notes that even though there is no scientific proof that any vaccine or vaccine preservative causes autism, some parents still believe they do. These parents are failing to properly balance the risk of infection with the risk of vaccine side effects. Despite the risks it imposes on their children, some parents remain adamant in their decision to forego vaccination of their child. If such people are not deterred by either the legal obstacles to getting an exemption or the health risks that vaccination noncompliance places on their child, it is unlikely that they will be swayed by a remote threat of potential civil litigation.

In addition to failing to recognize the health risk they are imposing on their own children, noncompliant parents are also failing to consider the harm they are doing to society. These parents should be reminded that disease control is a social responsibility that one must bear as a member of a modern society.

However, tort law is unlikely to ameliorate the problems caused by either informed or uninformed decisions not to vaccinate. Moreover, tort law would be unlikely to encourage parents who adamantly refuse to immunize their children to consider the public's wellbeing. In addition to failing to encourage informed parents to vaccinate, tort law also fails to help those uninformed or underinformed parents who need access to a regular physician and accurate information, not ex post legal consequences. Tort is good at resolving individual injuries. The remote threat of being sued is unlikely

to alter a noncompliant parent's determination to protect his or her children from perceived harm.

Even if, in some cases, tort liability may be able to successfully compensate an injured party (and one could advance a normative justification for a tort suit), there is still a pragmatic argument against these types of suits: they are disruptive of community cohesion and may hinder the broader public policy goal of encouraging compliance with vaccination. Supporting tort suits as the solution for vaccination noncompliance is supporting an adversarial remedy that will only compound the problem of parental alienation and further impair the ability of these parents to factor community welfare into their decision-making process. While individuals are understandably most interested in redressing their own private grievances, and tort law continues to primarily serve as a system for individual compensation, tort law is also often employed to further public policy (e.g., deterrence, efficient loss spreading, etc.).

The development of an ethic of solidarity and a renewed sense of investment in and connection to the welfare of others are important aspects of the solution to this problem. While an ethic of solidarity is not something that can be legislated or regulated into existence, it is a social state that can be cultivated by human endeavor, especially through education. Whether tort liability for failure to vaccinate will promote or erode this ethic of solidarity is a critical question.

To the extent that noncompliance with childhood vaccination programs may do harm to third parties, such as through exposure to disease, tort may provide an appropriate remedy and victims may be entitled to compensation. However, the greatest harm imposed by vaccination noncompliance will most likely be an unrealized one—an increase in the risk of exposure to contagions in the event of an outbreak.

Tort liability is often ineffective at redressing unrealized harms. While there have been attempts at redressing unrealized harm through tort, such as, for example, *Potter v. Firestone Tire & Rubber Co.*, where plaintiffs sued for medical monitoring following a suspected toxic exposure, such cases pose difficult jurisprudential problems that may be compounded when applied to the problem of infectious disease. In the absence of a disease outbreak, for what remedy would potential litigants sue? Perhaps those who choose to not vaccinate their children should be responsible for the cost of disease monitoring or other prophylactic measures to counter the risk that they have imposed. Tort could serve as a mechanism for shifting the costs of disease monitoring from those who bear the risk to those who imposed the risk. But even this would be better achieved through regulation.

Finally, lawsuits for failure to vaccinate may raise thorny evidentiary and procedural problems. Following an outbreak prompted by vaccination noncompliance, plaintiffs may have trouble identifying the wrongdoer. It is difficult to trace contagions through both place and time. Even if this type of tracking were available and the relevant actors could be identified, would we penalize the last freeloader, the individual who directly infected the plaintiff, or every unvaccinated person who passed on the contagion? While one an-

swer to an administratively difficult claim is to bar suit, another is to let people fail to state a claim. In some instances, it is conceivable that causation might be possible to trace. It is arguable that such suits should not be barred simply because most would fail.

But a better answer, rather than focusing on an ex post distribution of blame, would be to take steps to prevent harm in the first place. The advancement of public health remedies, such as syndromic surveillance projects in coordination with local health departments and hospitals, may be able to identify and prevent the rapid spread of a disease outbreak.

III. ALTERNATIVES TO TORT LITIGATION

Vaccines are often called victims of their own success. A new generation of parents across the country has not witnessed the tragic effects of diseases like polio, smallpox, measles, and whooping cough. A generation ago, the risk of contracting a deadly disease far outweighed the risk of the vaccination. As vaccinations became ubiquitous and herd immunity grew, society collectively forgot about the shared experience of communicable disease that once impressed the importance of prophylaxis upon the public imagination.

In effectuating public health goals, there is an important place for statutes and regulations, which have been successful in guiding behavior through requirements such as vaccination laws. Vaccinations should be made more available and affordable; all people living in the United States should be provided with vaccines regardless of their ability to pay for them. There is also a place for education about vaccination and a place for cultivating a sense of shared responsibility for public health. There are practical steps the government can take to help people appreciate the value of the community, and the relevance of the collective wellbeing both to their individual welfare and also to the shared wellbeing of their community. The United States already has an excellent foundation; there are effective public health laws that grant the necessary powers to handle individuals who are a threat to the public's health (e.g., through quarantine). We could make public health law better by reforming the vaccine exemption process. For example, we could refuse to allow further legislation that whittles down laws requiring vaccination. One way to do this might be to limit the scope for vaccination exemptions. A further helpful measure would be to implement an informed refusal process. Under such a policy, a doctor would first be obliged to explain the risks of not receiving the vaccination. Parents who refuse such treatment could be required to sign informed refusal documents that acknowledge that they understand the risks they are inflicting on their children and the community. From the perspective of policy and protecting herd immunity, the reason for the exemption is irrelevant. Regardless of whether the parents object to vaccination on religious or philosophical grounds, the law should insist on a robust system of informed refusal.

CONCLUSION

Tort liability addresses civil trespasses that one commits against another. Through redress of private wrongs, tort liability may serve public purposes. While tort law may be able to redress the private wrongs that stem from vaccine noncompliance, it is likely that tort will not do justice to the public harm that is done, nor further the public health goals of vaccination. For these reasons, tort law is not the right public policy tool to bring to bear on the problem. Using tort law to impose liability on parents who fail to vaccinate their children will only aggravate the problem of alienation from a larger sense of community and make it harder for parents to get past their own immediate, individual interests. Although using the law is an appropriate response to the increasing problem of vaccination noncompliance, the law employed should be public health law and not tort law. Even if plaintiffs could prevail in court, redressing the immediate damage done to these individuals would not ameliorate the real social harm, nor would it likely encourage the desired behavior that will further public health goals.