

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.

* Researcher, Center for Bioethics; PhD candidate, Department of History and Sociology of Science, University of Pennsylvania (expected May 2011).

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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.