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Measles, Mandates, and Making Vaccination the Default Option

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The tension between individual choice and public health is both long established and enduring. It also appears to be at a breaking point. With Ebola still crisp in our collective consciousness, health care professionals, public health practitioners, and the public have been captivated by a domestic measles outbreak and confounded by the variation on this timeless tension that it embodies: more parents are exercising their choice to refuse or delay vaccination for their child, yet continued widespread acceptance of vaccination is critical to maintain herd immunity and protect the community from diseases that still circulate.

Protecting individual choice and promoting public health are seeminglyat odds. However, an impasseis not inevitable. Achieving a balance between these two competing values is a dynamic process that requires dynamic policy. With the current measles outbreak accentuating the need to find this balance, we review the current state of policy and practice and reflect on the out-look ahead.

Vaccination Policy

State-based school immunization laws are a key component of current US vaccination policy. These laws originated in the 19th century but evolved in the 1970s in response to difficulties in controlling measles outbreaks. In 1969, only 17 states had school laws that included measles; by 1980, all 50 states had them. These laws require every child entering public school kindergarten to be vaccinated, effectively establishing vaccination as the default option. As such, school immunization laws have played a major role in reducing the incidence of vaccine-preventable disease and increasing vaccination coverage. They represent "a system of immunization" that works year in and year out, regardless of political interest, media coverage, changing budget situations, and the absence of vaccine-preventable disease outbreaks to spur interest."[1]

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Opt-outs from these school-entry vaccination requirements do exist, though. All 50 states allow children to be exempted for medical contraindications to vaccines, 48 states (all but West Virginia and Mississippi) allow religious exemptions, and 19 states allow personal belief or philosophical exemptions. These philosophical exemptions primarily exist to reduce infringement on individual choice and enhance the sustainability and acceptability of compulsory vaccination. However, a variety of state-specific administrative requirements need to be fulfilled before philosophical exemptions can be obtained. These range from checking off a few boxes on a printable online form to needing a health care professional's signature certifying that, among other things, the parent has been counseled regarding the risks of remaining unimmunized. Exemptions and the ease with which they can be claimed are known to be associated with an increased risk of disease in the exempted child and the child's community.[2] Moreover, exemptors tend to cluster.[3] These clusters provide the critical mass of susceptible individuals, which can further propagate disease. As such, the appropriateness of philosophical exemptions is the subject of an ongoing debate.[4,5]

State legislatures constantly reevaluate vaccination policy and are often the setting for this debate. Already this year, law makers in Mississippi and Colorado have considered or are considering bills that expand the ability of parents to opt their children out of required school-entry vaccinations, while legislation to eliminate philosophical exemptions was introduced in California and Washington on February 4,2015. Between 2009 and 2012, 36 billsrelated to philosophical exemptions were introduced in 18 states.[6] Of these, 31 sought to expand exemptions and 5 sought to restrict them. Three of the 5 bills restricting exemptions passed (Washington, California, and Vermont) and all of the bills attempting to expandex emptions failed. Professional pediatri corganizations have been—and continueto be—at the forefront of advocacy efforts to restrict exemptions.

Evidence-Based Vaccination Practice

Vaccination practice may well be at a crossroads. Parents value choice and often request to follow a vaccination schedule that deviates from that recommended by the American Academy of Pediatrics and the Centers for Dis-ease Control and Prevention.[7] Physicians consequently must decide how far to stray from the standard of care: do they for go a fundamental feature of health promotion and disease prevention by respecting a parent's refusal? Do they seek a compromise by requesting continued dialogue about vaccines at future visits or encouraging some vaccines over others? Or, do they take a strongstance and advocate for the child's and community's health? There islittle consensus on the right approach.

Unlike vaccination policy, vaccination practice has been more immune to revision. This is in part owing to the sanctity of the physician-parent relationship and perhaps the difficulty in changing physician behavior. Another prominent factor has been the paucity of data regarding the effectiveness of different approaches with vaccine-hesitant parents during the vaccine encounter.

Data are emerging, however, that support a physician communication strategy with parents that is aligned with current vaccination policy: presentation of vaccination as the default.[8]

While more research is needed, beginning the vaccination discussion during health supervision visits with a statement regarding which vaccines the child will be getting or are due for—rather than a question soliciting parental vaccine preferences—issubstantiated by evidence in the fields of behavioral economics and social psychology that suggests that choice architecture can be a powerful means to achieving a desired goal.[9] Choice architecture leverages the propensity humans have to stick with a decision that is already made, especially among decisions perceived to be complex. Vaccination constitutes such a decision for many parents; not only is it complicated by an overwhelm-ing amount of information, it is also fraught with emotion. It is often easier in these situations to simply accept what is recommended, especially when that recommendation is made by someone as influential and trusted as their child's pediatrician or family practitioner. Therefore, structuring the vaccination discussion as an opt-out, not anopt-in, may be one strategy that can help optimize the tension between individual choice and public health by better accommodating physician obligations to promote the child's and the public's health while minimally intruding on parental autonomy.

Outlook

Vaccination policy and practice must evolve to embrace contemporary factors that are actively shaping an age-old tension. The shift in societal values that emphasizes risk over benefit, the rise in consumerism centered on patients being well informed and achieving informed preferences, and declining risks to individuals and the public amidst a generally low incidence of vaccine-preventable disease in the United States today all present challenges to the promotion of public health in the context of vaccination. To achieve balance between individual choice and public health, we must not only continue to invest in research and programs that improve vaccine safety but also be prepared to engage in broad debate about what constitutes acceptable risks, costs, and outcomes. It is no longer sufficient to rely on historical conceptions of risk to the public and the individual or a conventional understanding of choice. This is the leading edge of vaccination practice and policy. As the measles epidemic reminds us, it is time we get to work.

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