Claiming Non-Medical Exemption from Childhood Immunization: a Pediatric Paradox

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Fear of harm is the most common reason given by parents who choose not to have their children vaccinated against preventable diseases, according to an article in the May issue of the Archives of Pediatrics and Adolescent Medicine.

Over the last decade, the number of parents taking advantage of "non-medical exemption" from pediatric vaccination requirements has been steadily on the rise in several states. Such a trend greatly increases these children’s risk of contracting potentially deadly but vaccine-preventable illnesses that they can then pass on to younger children who are too young to be vaccinated, as well as individuals who cannot be vaccinated for medical reasons. Further, these susceptible children tend to be geographically clustered, which greatly increases the likelihood of disease outbreaks due to a loss of "community" or "herd" immunity, a crucial factor in the overall success of immunization programs.

A survey designed to determine the motivations of parents claiming non-medical exemptions for their children showed that 69% of the parents of 277 unvaccinated children in four states claimed exemption over concern that vaccines cause harm, presumably more harm than good. Compared to the parents of vaccinated children, these parents were also found to have a low perception of their children’s susceptibility to vaccine preventable illnesses and a poor understanding of the danger posed by these diseases.
The overwhelming effectiveness of the immunization program, a health intervention that has been credited with a substantial portion of the increase in life expectancy over the past century, makes skepticism about vaccine safety and effectiveness seem misplaced. Successes of immunization include the worldwide eradication of smallpox, the elimination of polio in the Western hemisphere, the recent domestic eradication of rubella, and substantial decreases in cases of measles, mumps, tetanus, diphtheria, and Haemophilus Influenza type b (Hib) worldwide. The paradox of this tremendous public health success -- as explained by Dr. Bruce Gellin and colleagues in the journal Pediatrics [1] -- is that, because vaccines have curtailed so many diseases, "the diseases that vaccines prevent no longer serve as a reminder of the need for vaccination." In other words, how many people born today understand the crippling effects of polio? The congenital deformities caused by rubella? The slow suffocation that can result from diphtheria? As Dr. David Salisbury, Principal Medical Officer for the UK Health Department states [1], "If parents have fear of disease but no fear of vaccines, the argument in favor of vaccines is clearcut. If they have no fear of disease but also no fear of vaccines, there may be inertia. When they have no fear of disease, but fear of vaccines, parents are likely to refuse immunization." Indeed, there is an easily recognized and ironic pattern here: as disease incidence goes down, vaccine skepticism goes up.

Currently, concerns about vaccines, even those without scientific merit, carry tremendous weight in the eyes of a public fearful of government conspiracy and big-business dishonesty. This is particularly true in light of recent drug recalls, daily health scares, and increasingly antagonistic debates over healthcare and scientific research. Lost amidst the pervasive paranoia is the irrefutable scientific fact that vaccines have saved millions of lives worldwide.

Are vaccines entirely risk-free? Nothing is. Failure to take action based on the existence of some risk is to rely on the dubious precautionary principle [2]. The crucial question is whether the benefits of vaccines vastly outweigh the risks associated with a failure to use vaccines. Indeed they do. Already, we are seeing a resurgence of pertussis in the U.S., due in part to waning adult immunity and the transmission of the disease from infected adults to unvaccinated children [3]. This is the message that must find its way back into headlines -- before vaccine-preventable diseases make a devastating comeback.

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