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Contents lists available at ScienceDirect

Pediatric Neurology

journal homepage: www.elsevier.com/locate/pnu

Editorial

Withholding Childhood Immunizations: A Parent's Right or a Child's Neglect?



In this issue of *Pediatric Neurology*, Roach¹ and Salter and Friedman Ross² penned dueling arguments addressing an enduring question: is parental refusal of the administration of the recommended childhood immunizations a form of child neglect? The authors' opinions are not components of a “zero-sum game.” Both essays support a proven notion—childhood immunizations prevent morbidity and mortality.³ On the one hand, Roach's opinion, tethered to a personal experience, is that by denying a child a means to avoid contracting a series of preventable illnesses, parental responsibility has been abdicated.¹ On the other hand, Salter and Friedman Ross' opinion is that although vaccine hesitancy is regretful, it does not rise to the level where the State should act as *parens patriae* and have the child vaccinated.²

These essays could not be more timely. In the northern hemisphere we are about to enter the “flu season,”⁴ a time when many are recommended and some are required to receive the “flu shot.” In addition, there is an ongoing development of several vaccines against the severe acute respiratory syndrome-coronavirus-2 or coronavirus disease 19 (COVID-19). Although it is yet to be determined if the timing of the COVID-19 vaccine's arrival is factual or rhetorical, 41% of American parents of children younger than 18 years have already decided that they will not personally get the vaccine.⁵ It would be difficult to conceive that they would choose otherwise for their children.

As noted by Greenwood,⁶ “vaccination has made the greatest contribution to global health of any human intervention apart from the introduction of clean water and sanitation.” An oft-cited aphorism states that “Vaccines are victims of their own success,”^{7,8} to wit: thanks to vaccination, most vaccine-preventable diseases are rare and almost forgotten.⁹ Indeed, childhood immunizations are credited with the eradication of smallpox, and the near eradication of diphtheria, *Haemophilus influenzae* type B meningitis, measles, mumps, poliomyelitis, rubella, and tetanus.^{7,9} Also the benefits go beyond forestalling morbidity and mortality. According to research conducted at the National Center for Immunization and Respiratory Diseases, immunization of children born in the United States between 1994 and 2013 will prevent 322 million illnesses, 21 million hospitalizations, and 732,000 deaths over the course of their lifetimes. An estimate that is predicted to have a net savings of \$295 billion in direct costs and \$1.38 trillion in total societal costs.¹⁰

Conflict of interest and source of funding statement: The authors declare no conflict of interest or financial disclosures concerning the materials or methods used in this study or the findings specified in this article.

<https://doi.org/10.1016/j.pediatrneurol.2020.09.010>
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Vaccine denial is as old as vaccines themselves.⁷ Following Jenner's observation that infection with cowpox protected against subsequent infection with smallpox, and that pursuing scientific investigation into *variolation* was warranted, individuals and groups have opposed immunizations.^{7,11} In addition, the passage of time has not changed the script—safety, political views, religious stances, individual rights, and mistrust of science were as alive in the latter part of the eighteenth century as they are now.⁷

The vaccine hesitancy continuum ranges from vaccine skeptics, to vaccine refusers, to vaccine deniers or antivaxxers.¹² A vaccine skeptic is a person who does not take the information from experts or leading health organizations—e.g., Centers for Disease Control and Prevention, Food and Drug Administration—at face value. Instead, skeptics see something that they do not comprehend and will do what is needed to understand it. In that sense, vaccine skeptics take a systematic approach to the evaluation of the merits of immunizations. A vaccine refuser is one who declines all vaccinations without considering the potential consequences of such a decision. Vaccine refusers, however, are still willing to engage in a rational conversation with vaccine supporters. Finally, vaccine deniers or antivaxxers have a fanatical or near-fanatical attitude against vaccination. As militants, they are neither willing to hear the opinion of those who advocate for immunizations nor consider the scientific basis on which the use of immunizations stands.¹²

According to Betsch,⁹

Vaccine deniers use techniques that are common in the area of science denial: for example, assuming conspiracies, calling on fake experts, selectively and exclusively citing scientific papers that challenge consensus, or having impossible expectations, such as demanding 100% certain results or 0% side-effects.

To counter the arguments against vaccination, Betsch⁹ suggests using the following techniques:

- (1) Talk about vaccination as active protection for the individual and society.
- (2) Respect potential doubts and offer insights to refute them.
- (3) Ask for explanations of the mechanism behind the proposed misinformation.
- (4) Emphasize scientific consensus where appropriate.
- (5) Unmask techniques of the deniers.

In addition to Betsch's strategies, the aptly named *Inoculation Theory* can be used to prevent individuals from being recruited to

the vaccine hesitancy faction. As conceived by McGuire,¹³ *Inoculation Theory* uses weak but legitimate arguments against an established yet unsubstantiated notion to *inoculate* against a future equally unproven but more persuasive attack.¹⁴ Just as immunizations use live-attenuated or inactivated pathogens to generate an immune reaction, the *Inoculation Theory* presents tempered refutations to fend off a future strongly persuasive attack. In the case of vaccine-preventable diseases, *Inoculation Theory* could be put in place by sharing with parents-to-be information about immunizations and warning them of possible pressure by vaccine deniers to delay, modify, or dismiss recommended childhood immunization schedules. If such a threat were to materialize, the informed parents would be expected to counter antivaccine arguments using a nonconfrontational and composed approach, rooted in evidence-based reasoning.

Although most readers of *Pediatric Neurology* are not on the front lines of primary care, routinely counseling parents about immunizing their children, child neurologists certainly are familiar with neurological complications of vaccine-preventable diseases. Indeed, in recent years, child neurologists along with other subspecialists and general pediatricians have collaborated in the care of children with tetanus, pertussis encephalopathy, and varicella-associated cerebrovascular disease, among others, and have needed to discuss the importance of “catching their children up on missed vaccines” with parents. These clinical experiences will no doubt continue. The essays by Dr. Roach and Drs. Salter and Friedman Ross provide us with a framework to understand better the ethics of vaccine refusal and to inform our future discussions with parents and our colleagues.

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Available online 28 September 2020