Review

Vaccine Hesitancy: Where We Are and Where We Are Going

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ABSTRACT

Purpose: Vaccines represent one of the most important aspects of pediatric preventive care. However, parents are increasingly questioning the safety of and need for vaccines, and as a result, vaccination rates have fallen to dangerously low levels in certain communities. The effects of vaccine hesitancy are widespread. Community pediatricians who interact regularly with vaccine-hesitant parents report higher levels of burnout and lower levels of job satisfaction. Not surprisingly, vaccine hesitancy has also had direct influence on vaccination rates, which in turn are linked to increased emergency department use, morbidity, and mortality.

Methods: Literature from 1999 to 2017 regarding vaccines and vaccine hesitancy was reviewed.

Findings: Few evidence-based strategies exist to guide providers in their discussions with vaccines-hesitant parents. Recent research has shown a presumptive approach (ie, the provider uses language that presumes the caregiver will vaccinate his or her child) is associated with higher vaccination uptake. Motivational interviewing is a promising technique for more hesitant parents.

Implications: At the community level, evidence-based communication strategies to address vaccine hesitancy are needed. The practice of dismissing families from pediatric practices who refuse to vaccinate is common, although widely criticized. Other controversial and rapidly evolving topics include statewide vaccination mandates and school exemption policies. Electronic interventions, such as text-messaging services and social media, have recently emerged as effective methods of communication and may become more important in coming years. (*Clin Ther.* 2017;39:1550–1562) © 2017 Published by Elsevier HS Journals, Inc.

Key words: Vaccine Refusal, Vaccine Hesitancy, Motivational Interviewing.

INTRODUCTION

Vaccines have long been lauded as one of the most important public health achievements of the past century.[1,2] In the past decade, however, parents questioning the need for and safety of vaccines has become increasingly common, challenging the medical community's ability to maintain high vaccination rates in certain communities.[3,4] This review will focus on vaccine hesitancy and refusal in the childhood vaccine schedule in the United States, although many of the

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Table 1. Tips for communicating with parents about vaccines.

Presumptive recommendations
• Start with a presumptive statement about the vaccines for which a child is due
• Establish that vaccination is the normative choice, which keeps the conversation brief for most families
Motivational interviewing approach
• For hesitant parents, transition to a supportive discussion with open-ended questions to elicit parental concerns
• Ask permission to share information
• Keep it conversational—avoid launching into a lecture full of facts about vaccines
Beware when debunking myths
• Too much time talking about a vaccine myth can actually strengthen the myth in the listener's mind
• Identify the myth as a myth and state that it is false
• Focus on the facts
• State the core facts simply. If the truth seems more complicated the myth, it remains easier to accept the simple information in the myth
Disconfirmation bias
• When presented with evidence for and against an existing belief, people more easily accept evidence that supports the existing belief and are critical of evidence that refutes the belief
• Rather than refuting incorrect elements of existing beliefs, try to provide new information to replace those elements
• Pivot the conversation to focus on the diseases that vaccines prevent
Story-telling
• Personal anecdotes and stories are powerful communication tools
• Talk about the decision to vaccinate your own children
• Try to avoid scare tactics

concepts discussed are applicable in other countries and for adult vaccination Table 1.

Vaccine hesitancy is a term coined in an attempt to depolarize the antivaccine rhetoric,[3] and is defined by the World Health Organization most simply as "a delay in acceptance or refusal of vaccines despite availability of vaccinations services."[5] Vaccine hesitancy, therefore, must be understood not as black and white, but as a spectrum of parental beliefs and concerns (Figure 1). From the perspective of medical providers, vaccine hesitancy is demonstrated by increased requests for alternative vaccination schedules or by altogether postponing or declining vaccines.[6,7] The percentage of parents who refuse all vaccines is small in comparison to those who choose alternative schedules,[8,9] with the majority choosing to delay certain vaccines, extend the interval between vaccines, or delay vaccines until a certain age.[10–12]

Overall, childhood vaccination rates in the United States remain relatively high. However, vaccine hesitancy represents a looming public health crisis. Rates of undervaccination in children younger than age 2 years continue to rise,[13] as does the rate of exemptions based on personal beliefs.[4] In Oregon, for example, rates of alternative immunization schedules have quadrupled.[7] Parents have become increasingly preoccupied about vaccines and their perceived side effects. Not surprisingly, pediatricians themselves are reporting increasing encounters with vaccine-hesitant caregivers.[14]

These numbers beg the question: How did we get here? It is important to note that mistrust of vaccines is not a new phenomenon. Poland and Jacobson[15] point