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## Caring for the Vaccine-Hesitant Family: Evidence-Based Alternatives to Dismissal

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Vaccine hesitancy is a growing public health threat. Recent data suggest that only one-half of children in the US are up-to-date for all recommended vaccines by 19-35 months, and more than one-third of children are on alternative or shot-limiting vaccine schedules.<sup>1</sup> Measles infected 1282 Americans in 2019—the most cases since 1992—and the US nearly lost its measles elimination status.<sup>2</sup> One in 40 kindergartners attends school with a nonmedical vaccine exemption, and many more kindergartners attend school underimmunized without plans to catch up.<sup>3</sup> Antivaccination groups spread doubt about vaccines through film and social media outlets.<sup>4</sup> From 2011 to 2017, elected officials introduced antivaccination bills into state legislatures more often than provaccination bills.<sup>5</sup> Even a few physicians promote nonrecommended vaccination schedules and exempt children from vaccines without medical cause.<sup>6</sup>

In response, provaccination advocates and policy makers are rebutting antivaccination bills and working to tighten or eliminate vaccine exemptions. Since 2003, no US state has added or broadened nonmedical exemptions, and 12 states have since repealed or restricted nonmedical exemptions.<sup>7</sup> In 2019 alone, Maine and New York eliminated nonmedical exemptions; Washington repealed personal belief exemptions for the measles, mumps, and rubella vaccine; and 7 more state legislatures introduced bills to eliminate nonmedical vaccine exemptions.<sup>7</sup> Simultaneously, public health officials have proposed novel communication slogans—such as “Safe Vaccinations for a Healthy Nation”—to educate Americans about vaccines,<sup>8</sup> with researchers suggesting novel public health partnerships with diverse stakeholders, such as clergy.<sup>9</sup> Unfortunately, legislative actions meant to raise vaccination rates have been slowed or even doomed by coordinated antivaccine opposition and skepticism about institutional intrusion into family life.<sup>10</sup> Public health interventions are well-intended, but they may fail to boost vaccination rates among the vaccine-hesitant and even decrease vaccination intentions.<sup>11</sup> Even a global pandemic that has overwhelmingly sickened and killed frail, vulnerable, and disadvantaged people may not be transforming hesitancy into trust among vaccination skeptics.

Physicians are uniquely positioned to restore American confidence in vaccines because our clinical work depends on personal encounters that engender trust. However, clinicians who care for children are adversely impacted by vaccine

hesitancy, too. A 2011 survey of US primary care providers found that 1 in 10 providers reported that  $\geq 10\%$  of parents in their practice had refused a vaccine, whereas 1 in 5 said  $\geq 10\%$  of parents asked to spread out vaccines in a typical month.<sup>12</sup> When talking with parents with substantial concerns, 53% of respondents spent 10-19 minutes, of a typical 15-minute visit, doing so.<sup>12</sup> These conversations bring burnout instead of booster shots; 46% of pediatricians found their work less satisfying as a result of needing to discuss vaccines at length, as did 21% of family medicine physicians.<sup>12</sup> The hard work is likely to continue: a 2014 survey of 374 pediatricians found that 58% of respondents reported frequent requests for alternative vaccination schedules.<sup>13</sup>

How should physicians proceed?

There is no clear consensus, but a concerning trend may be emerging. Some providers, understandably frustrated and tired of parental pushback, are refusing to care for families who forgo vaccines. In national surveys of pediatricians in 2012 and 2013, 12%-21% of pediatricians reported always or often dismissing families who refused vaccines from their practice, with rates rising over time.<sup>14,15</sup> This is occurring even though many have argued strongly against the widespread adoption of this practice on ethical, legal, and public health grounds in the US and Canada.<sup>16-19</sup> In 2016, the American Academy of Pediatrics' (AAP) Report “Countering Vaccine Hesitancy” characterized dismissal as acceptable only after careful consideration of the situation, transparency with parents about the risks to their child, and openness about practice policies.<sup>20</sup>

Although we are unaware of any recent studies measuring practice dismissal, pediatricians' willingness to embrace dismissal may be increasing after the 2019 measles epidemic. Recently, 1 pediatrician in a high-refusal setting encouraged colleagues to engage vaccine-hesitant families through multiple strategies of nonviolent resistance, including dismissal. “So far,” he said, “punishing kids by practice exclusion for their parents' folly has been limited nationally, but may need to be more formally included in the strategy of all physicians.”<sup>21</sup>

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AAP American Academy of Pediatrics  
HPV Human papillomavirus

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Dismissal policies likely will create more problems than they solve. First, it is unclear where children go after dismissal, especially given the shortage of primary care providers in North America.<sup>19,20</sup> Second, practice dismissal may paradoxically increase the risk of outbreaks. As increasing numbers of unvaccinated patients cluster in practices tolerant of vaccine delay or refusal, the risks of vaccine-preventable diseases in those practices and communities only increase.<sup>16,22</sup> Third, antivaccination groups are targeting the practices. In February 2020, antivaccination proponents introduced a bill in Colorado's House of Representatives entitled the "Vaccine Consumer Protection Act." The bill mandated that healthcare providers or facilities "shall not limit or deny health care services or benefits to a patient [...] because the patient or the patient's parent or guardian delayed or declined a vaccination."<sup>23</sup> The bill mandated that providers pay fines of "up to one thousand dollars for the first violation and up to five thousand dollars for each subsequent violation."<sup>23</sup> We are unaware of any such bills being enacted, but such legislation raises the potential of financial and legal difficulties for providers who continue to dismiss families.

As an alternative to practice dismissal, there are several evidence-based tools in the provider–parent communication literature that can increase parental vaccine acceptance while keeping children of vaccine-hesitant parents in our practices. These tools—A Presumptive Approach, Motivational Interviewing, and Persistence—may even restore physician morale. As policymakers and public health experts work to address vaccine hesitancy, we believe pediatricians also can play a role in increasing vaccine confidence.

What would it look like to increase vaccine confidence, one visit at a time? First, physicians could increase vaccine acceptance with a presumptive approach to vaccine discussions. In 2013, researchers in Seattle videotaped more than 100 encounters between physicians and parents, of which 50% were vaccine-hesitant, to determine what predicted vaccine uptake at the end of the visit.<sup>24</sup> They found that how we begin the conversation matters. Some physicians began the conversation with what the authors called a participatory approach, offering parents latitude over vaccination decisions with opening lines such as: "What do you think about doing some shots today?" Others presumed that parents intended to vaccinate their children, using phrases such as "Johnnie is due for his 2-month vaccines today." When physicians used a presumptive approach, 74% of parents accepted vaccines; conversely, when physicians used a participatory approach, 83% of parents resisted vaccines.<sup>24</sup> By emphasizing vaccination as the social norm, a presumptive approach helps parents draw confidence from provider confidence as they face the decision of vaccination. Its benefits accrue with use. A longitudinal study of 73 parent–child dyads found child immunization status at 8 months was associated with the number of presumptive discussions parents had with providers at 2, 4, and 6 month well-child visits.<sup>25</sup> A presumptive approach also may increase adolescent vaccination uptake. A multiarm randomized trial in 30 pediatric and

family medicine clinics across North Carolina found a 5.4% increase (95% CI 1.1%-9.7%) in human papillomavirus (HPV) vaccination coverage for patients in clinics whose providers received presumptive training, compared with conversation training or usual care.<sup>26</sup> One can imagine similar successes in alternative contexts (eg, hospital care units, emergency departments, or subspecialty clinics) and with different vaccines. For example, a Seattle hospital-based intervention demonstrated that a presumptive approach with parents increases child seasonal influenza vaccination.<sup>27</sup> To help pediatricians adopt a presumptive approach, the AAP has communication tools that generalize to diverse settings and can be built into electronic medical record systems.<sup>28</sup> To build confidence in clinical settings, we should begin vaccination discussions presumptively.

Second, if patients or parents resist a presumptive approach, we should engage them with motivational interviewing. Instead of a paternalistic approach, which compels parents to vaccinate because "the doctor said so," motivational interviewing guides conversations in a noncondescending manner so that parents gradually develop their own commitment to follow vaccine recommendations. The spirit of motivational interviewing has 4 components, easily remembered with the acronym PACE: Partnership, Acceptance, Compassion, and Evocation.<sup>29</sup> The **Table** provides conceptual understandings of each component, applied to vaccination, and gives examples of clinician questions or comments that illustrate each component. When clinicians find themselves in difficult conversations, they can partner with parents to understand their earnest questions about vaccines, affirm them as fellow humans worthy of dignity, and bolster their values that align with vaccination. Clinicians who use motivational interviewing also may increase vaccine uptake. A recent randomized trial in 16 practices with 125 providers demonstrated that a presumptive approach with motivational interviewing increased HPV vaccine initiation for adolescents 13-17 years old by 9%, compared with a 3% decrease in controls.<sup>30</sup> Providers believed that motivational interviewing was useful; 86% of providers reported using the technique frequently, much more so than Web sites, decision-aids, or disease images.<sup>31</sup> A multisite clinical trial to train providers on how to Presumptively Initiate Vaccines and Optimize Talk with Motivational Interviewing (PIVOT with MI) is ongoing.<sup>32</sup> Given its perceived utility and effectiveness, motivational interviewing may even counter clinician burnout. In a pilot study of the impact of motivational interviewing on obesity-related patient encounters, clinicians who received training had notable improvements in their burnout scores, compared with controls.<sup>33</sup> In sum, both parental confidence and physician well-being may improve as we work with vaccine hesitant parents via motivational interviewing.

Physicians have a third tool to build vaccine confidence: persistence. In the presumptive vs participatory study discussed previously by Opel et al, the study team also measured the percentage of parents who ultimately vaccinated their children despite an initial reticence to do so.<sup>24</sup> Ultimately,

**Table. Motivational interviewing components with definitions and sample comments or questions that illustrate each component**

Components	Definition	Sample Question/Comment
Partnership	We avoid being the “expert,” assuming the role of a partner and validating concerns. We work “for” and “with” patients and parents; we don’t lecture “to” or “at” them. After hearing parental concerns, we ask permission to share information with them.	“It makes sense that you’re worried about vaccine safety. All parents want to keep their children safe. Could I share a few things I’ve learned about vaccine safety with you?”
Acceptance	We affirm the absolute value of our patients or parents, accepting them as fellow humans. We highlight their autonomy to make decisions, although we are free to disagree with them.	“I strongly recommend this vaccine, but the choice is yours. Thank you for continuing to have this hard conversation with me. I’m happy to continue talking with you at our next visit.”
Compassion	We seek the good and well-being of others. We recommend vaccines because we believe they help others, not out of self-interest.	“I want you to consider the measles vaccine because I care about your child’s health. I also think it’s really important in order to protect babies who are too young to get the measles vaccine.”
Evocation	Positive ideas about and reasons for vaccination come from the patient or parent, not us. We reflect on patient or parental ideas and demonstrate how they align with the benefits of vaccination.	“You’ve shared a lot of worries with me. Would you tell me more about what’s important to you? [...] I hear protecting your child is important to you. May I share how vaccines would work to protect your child?”

47% of parents agreed to follow the physician’s recommendation when physicians continued to discuss their concerns and offer them a positive recommendation for vaccination.<sup>24</sup> In a separate study of 43 audio-recorded visits with unvaccinated adolescents and their parents, researchers found that 37 parents expressed hesitancy about the HPV vaccine at least once during the visit.<sup>34</sup> Some providers responded with only persistence, some responded with a mix of acquiescence and persistence, and some simply acquiesced to parents’ concerns. Of the 18 encounters in which providers used persistence only, 17 adolescents received the HPV vaccine; conversely, no adolescent received the vaccine when providers simply acquiesced.<sup>34</sup> Furthermore, whether discussing childhood vaccines or HPV, physicians can persist over the short-term horizon of a visit through motivational interviewing, as described previously.

We must also persist over the long-term horizon of the physician–patient relationship. In the longitudinal study cited previously, persistent use of the presumptive approach at 2-, 4-, and 6-month well child visits was associated with a ~35% decrease in a child’s percentage of days underimmunized at 8 months.<sup>25</sup> In another longitudinal study of nearly 500 parents who had ever declined HPV vaccination for their 11- to 17-year-old child, researchers found that secondary acceptance of the HPV vaccine—within 12 months of an initial refusal—was associated with receiving follow-up counseling (OR 2.16; 95% CI 1.42-3.28).<sup>35</sup> When asked why they ultimately accepted the HPV vaccine for their child, one-third of parents cited receiving a second recommendation.<sup>35</sup> We believe persistence will pay off with other vaccines as clinicians form long-term relationships with parents and children, understand their concerns, and recommend vaccines anew. Providers also could ask parents to sign a vaccine declination form, such as the one created by the AAP.<sup>36</sup> As of 2011, nearly one-half of pediatricians and one-third of family medicine physicians used such forms when parents refused

vaccines.<sup>12</sup> Although the use of a declination form has not been tested in a randomized trial, the use of such a form offers the opportunity to clearly delineate the risks of vaccine-preventable diseases, the importance of vaccines, and the responsibility parents have for the consequences of vaccine delay. Of course, we must discern the best time and context in which to introduce a declination form, but doing so may motivate parents on the fence to accept recommendations from their persistent providers.

Dealing with parental vaccine hesitancy has become a frustrating yet essential part of being a physician. Practice dismissal may be a tempting option for burnt-out physicians to avoid hesitant parents and the public health risks their children pose to other patients. Yet, as severe acute respiratory syndrome coronavirus 2 circles the globe and researchers race to develop a vaccine, we can develop, in parallel, our ability to talk about vaccines with concerned parents. Evidence-based alternatives to dismissal exist, increase parental acceptance of vaccines, will keep undervaccinated and unvaccinated children with pediatricians, and improve population health. As policymakers and public health experts work at system levels, we should consider what we as pediatricians might do to increase vaccine confidence. Who else is better positioned to do so than the pediatricians who form long-term relationships with parents and their children? Contentious conversations require care, but we believe evidence-based tools that teach a Presumptive Approach, Motivational Interviewing, and Persistence can help. As we work as pediatricians to improve the state of vaccine confidence, let us consider caring for vaccine-hesitant families, one visit at a time. ■

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