



## Editorial

## Toward a Deeper Understanding of the Spectrum of Parental Human Papillomavirus Vaccine Hesitancy



Too often, when evaluating vaccine uptake, we classify people into a simple dichotomy of “vaccinated” or “unvaccinated,” from which we infer low hesitancy and high hesitancy, respectively. This approach makes research simpler, but discards valuable nuances that can give us important insights into increasing vaccine uptake. In this issue of the *Journal of Adolescent Health*, Rositch et al. [1] take a more nuanced look into parental human papillomavirus (HPV) vaccine hesitancy, using National Immunization Survey-Teen data on intention to vaccinate unvaccinated adolescents to classify parents by hesitancy level. Notably, 30.7% of 13- to 17-year-old adolescents assessed in 2019 received 0 doses of HPV vaccine (corresponding to 6,263,203 adolescents) [2]. A majority (63%) of parents of these adolescents were hesitant to have them vaccinated. Most concerning is that of these hesitant parents, the majority were “somewhat hesitant” (29%; 1,144,287 adolescents) [2] or “very hesitant” (63%; 2,485,865 adolescents) [2].

Although we have seen increases in adolescent HPV vaccine uptake in the decade and a half since these vaccines were first recommended for use, HPV vaccine uptake continues to trail behind that of adolescent Tdap and quadrivalent meningococcal conjugate vaccine. This highlights an important consideration—adolescents ARE visiting healthcare providers for routine immunizations. This makes it very clear that the vaccine hesitancy documented by Rositch et al. [1] is specific to HPV vaccination.

Historically, efforts to improve vaccine uptake have focused on groups of fence-sitters [3] or (as has been widely discussed with regard to COVID-19 vaccines) the “moveable middle” [4]—those who have not made up their minds to refuse vaccines, but can be impacted positively by appropriate recommendations and information. Existing work has focused on clinical provider recommendations as a main way to reach hesitant individuals. Rositch et al. indeed found that 34% of “unsure” parents cited a lack of provider recommendation as a reason for hesitancy, but this accounted for only 7% of “very hesitant” and 16% of “somewhat hesitant” parents. Additionally, more parents who had already received a provider recommendation were “very hesitant” (70%) compared to those who had not received a

recommendation (58%) [1]. As this study shows, those parents who may respond well to strong provider recommendations and HPV vaccine education are the minority of parents of HPV-unvaccinated adolescents.

Another key factor is the source of information or recommendation about HPV vaccination. The authors cite a 2021 study by Nguyen et al. [5] which showed that one in eight hesitant parents did not feel that their child’s doctor was the most trusted source for vaccine information. This raises an important “chicken or egg” question—does the lack of trust in a given doctor lead to development of hesitancy because of these perceptions, or are hesitant parents less likely to trust a doctor, opting to get vaccine information from other sources? The directionality of this question directly impacts with the interpretation of the findings of Rositch et al. [1]. Will systemic improvements in consistent adolescent healthcare provision lead to reduced vaccine hesitancy, or do we need to address HPV vaccine hesitancy further upstream, sensitizing parents to the importance, effectiveness, and safety of HPV vaccination so they may better receive a provider’s recommendation when it is given?

Regardless of the answer to this question, we must expand our way of thinking about HPV vaccine hesitancy. Even within parents of HPV-unvaccinated adolescents, there is tremendous variability in attitudes and hesitancy levels. We cannot rely on one-size-fits-all interventions—but conducting vaccine education and outreach solely for the unsure may leave hesitant parents feeling left out when they may be able to be reached. Rositch et al. [1] point out that tailored interventions are needed; prior work has shown that motivational interviewing shows promise for addressing HPV vaccine hesitancy [6], but time and cost limitations impact the widespread application of this modality. So far, we have seen no widespread, concentrated effort to combat this constraint.

One of the most troubling findings from Rositch et al. [1] was that the main concern for hesitant parents is HPV vaccine safety. As pointed out in this manuscript, we have 15 years of post-licensure data on HPV vaccine safety in addition to the findings from HPV vaccine clinical trials. The data overwhelmingly show

---

See Related Articles on p.39

**Conflicts of interest:** Neither author has any conflict of interest to declare. RAB is supported by a grant from the National Cancer Institute (1 R37 CA234119).

that HPV vaccination is safe, but this message is not effectively being communicated to parents. This raises another important question—how do we communicate vaccine safety findings effectively, particularly to parents who may have already staked out a position of hesitance to HPV vaccination? This is a more complicated question in light of the statistic above that only one in eight hesitant parents trust their child's doctor, potentially opening the door for new forms of vaccine outreach. Our prior work has shown that churches may be an avenue to consider, given the level of trust that is placed in church leadership [7]. Additionally, community-engaged outreach efforts that have arisen during the COVID-19 pandemic, such as the National Institutes of Health (NIH) Community Engagement Alliance (CEAL) Against COVID-19 Disparities [8], can have long-lasting impacts on community outreach and engagement related to vaccination issues. It is critical that programs like Community Engagement Alliance do not end when we decide that the COVID-19 pandemic is over. Maintaining this incredible investment into vaccine outreach is an invaluable component to public health infrastructure and maintaining high routine immunization levels—and it will serve us well in the next pandemic.

The work by Rositch et al. serves to further refine our understanding of HPV vaccine hesitance. Although the gains made in this area are slow, findings such as these offer a solid framework to continue building new interventions and outreach programs to improve HPV vaccine uptake and address HPV vaccine hesitance.

Maria E. Sundaram, Ph.D., M.S.P.H.  
Marshfield Clinic Research Institute  
Marshfield, Wisconsin

Robert A. Bednarczyk, Ph.D.  
Hubert Department of Global Health  
Rollins School of Public Health  
Emory University  
Atlanta, Georgia

Department of Epidemiology  
Rollins School of Public Health  
Emory University  
Atlanta, Georgia

Cancer Prevention and Control Program  
Winship Cancer Institute  
Atlanta, Georgia

Emory Vaccine Center  
Emory University  
Atlanta, Georgia

---

## References

- [1] Rositch A, Liu T, Chao C, et al. Levels of parental HPV vaccine hesitancy and their reasons for not intending to vaccinate: Insights from the 2019 National Immunization Survey-Teen. *J Adolesc Health* 2022; 71:39–46.
- [2] US Census Bureau. Annual Estimates of the Resident Population by Single Year of Age and Sex: April 1, 2010 to July 1, 2019 [cited 2022 April 7]; Available at: <https://www2.census.gov/programs-surveys/popest/tables/2010-2019/national/asrh/nc-est2019-syasexn.xlsx>.
- [3] Gust D, Brown C, Sheedy K, et al. Immunization attitudes and beliefs among parents: Beyond a dichotomous perspective. *Am J Health Behav* 2005;29: 81–92.
- [4] Center, N.P.H.I. The Moveable Middle. How can public health Sway this Illusive Population to Get the COVID-19 vaccination? 2021 November 9, 2021 [cited 2022 April 7]; Available at: <https://nphic.org/news/featured-topics/459-the-moveable-middle-how-can-public-health-sway-this-illusive-population-to-get-the-covid-19-vaccination>.
- [5] Nguyen KH, Santibanez TA, Stokley S, et al. Parental vaccine hesitancy and its association with adolescent HPV vaccination. *Vaccine* 2021;39:2416–23.
- [6] Reno JE, O'Leary S, Garrett K, et al. Improving provider communication about HPV vaccines for vaccine-hesitant parents through the Use of motivational interviewing. *J Health Commun* 2018;23:313–20.
- [7] Lahijani AY, King AR, Gullatte MM, et al. HPV Vaccine Promotion: The church as an agent of change. *Soc Sci Med* 2021;268:113375.
- [8] National Institutes of Health. NIH community engagement Alliance (CEAL) [cited 2022 April 7]; Available at: <https://covid19community.nih.gov/>.