



Addressing Vaccine Hesitancy in the Age of COVID-19

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AS THE WORLD follows the progress of vaccine uptake in the fight against COVID-19, we are once again reminded of how vaccines can impact our personal health and the health of our communities. But even as we look to safe and effective vaccines as the best way forward, vaccine hesitancy already threatens our ability to effectively protect communities from vaccine-preventable diseases.¹ Vaccine hesitancy is nothing new; however, the speed of information sharing in our global community has accelerated the spread of both accurate vaccine information and vaccine misinformation. Recent measles outbreaks in the United States have demonstrated how the spread of misinformation has a real-world impact, particularly in close-knit communities.² Persistent underimmunization—associated with factors like vaccine hesitancy and health care access—challenge us to make sure that vaccine-preventable infections like measles, pertussis, and human papillomavirus do not continue to cause preventable illness and death.

Fortunately, most parents are supportive of vaccination and intend to vaccinate their children. The National Immunization Survey-Child³ tells us that coverage with routinely recommended pediatric vaccines is consistently high and that only around 1% of children nationally have not received any vaccines. Furthermore, by kindergarten entry only 2.5% of students nationally have received a vaccine exemption.⁴ But high vaccination coverage does not mean parents do not have questions or concerns about vaccination.⁵ Many parents are concerned about potential short- or long-term side effects, vaccine ingredients, the number of vaccines given early in life, as well as whether vaccines are effective or even necessary when they rarely see the diseases vaccines prevent. Questions about vaccines and autism spectrum disorders persist despite studies continuing to show no link between autism and vaccines,⁶ and a recent study⁷ indicated a high level of skepticism among parents about the effectiveness of influenza vaccines for children.

Many vaccination decisions are made early, even during pregnancy,⁸ emphasizing the importance of understanding how expectant parents make decisions and where they go for information before they've had the opportunity to build a trusting relationship with their child's health care provider. Health care professionals remain the most trusted source of vaccine information for parents, even with the ability of information to circulate rapidly online and within communities. Provider recommendations matter, especially to parents who are considering putting off recommended vaccines. Research has demonstrated that the type and consistency of a provider's vaccine recommendation can make a difference when parents are hesitant to accept vaccine recommendations, and reassurance from a trusted provider can help build parents' confidence in their decision to accept vaccines.⁹

National-level data help us understand general issues and trends, but high vaccination coverage nationally does not reflect variation at the local level, where pockets of underimmunization may put individual children and communities at risk. Reasons for vaccine hesitancy are complex and personal, and parents and clinicians need to work together with support from public health professionals to protect their communities and build confidence in vaccines. However, national-level data can also help us to understand and share evidence on effective communication efforts, coordinate among partners to understand and address misinformation, and identify areas where vaccine hesitancy may be putting communities at risk.

Recent outbreaks of vaccine-preventable diseases, along with the accelerated development of vaccines against COVID-19, highlight the need for a national strategy to address vaccine hesitancy and ensure confidence in the vaccination program. To this end, the Centers for Disease Control and Prevention along with its partners launched *Vaccinate with Confidence*,¹⁰ a framework for building confidence in vaccines and preventing outbreaks of

vaccine-preventable diseases in the United States. Key features include emphasizing how we can use data to better understand local perspectives and identify undervaccinated communities, supporting parents, patients, and health care professionals in their vaccine communication, and engaging local messengers and partners to address myths and misinformation, particularly online. This framework is intended to be flexible in adapting to the everchanging dynamics of vaccine hesitancy across the lifespan—from addressing measles outbreaks due to vaccine refusal in close-knit communities to identifying and responding to hesitancy toward COVID-19 vaccines among adults.

In this issue, authors explore different ways to measure, understand, and address vaccine hesitancy. At every level—from individual parents making decisions for their families, to community conversations about the value of vaccines—evidence-based solutions can help us maintain the protection from diseases that we sometimes take for granted. While vaccine hesitancy, and the potential for vaccine delay and refusal that may follow, can lead to disease outbreaks and preventable illness, we continue to learn more about both the complex decisions surrounding vaccine hesitancy and effective ways to build vaccine confidence. The COVID-19 pandemic has highlighted the need to build strong, resilient systems for strengthening vaccine confidence, both to address the current threat and prepare for the next one.

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REFERENCES

1. World Health Organization. Ten Threats to Global Health in 2019. Available at: <https://www.who.int/news-room/spotlight/ten-threats-to-global-health-in-2019>. Accessed February 12, 2021.
2. Patel M, Lee AD, Redd SB, et al. Increase in measles cases—United States, January 1–April 26, 2019. *MMWR*. 2019;68:402–404.
3. Hill HA, Yankey D, Elam-Evans LD, et al. Vaccination coverage by age 24 months among children born in 2016 and 2017—National Immunization Survey-Child, United States, 2017–2019. *MMWR*. 2020;69:1505–1511.
4. Seither R, McGill MT, Kriss JL, et al. Vaccination coverage with selected vaccines and exemption rates among children in kindergarten—United States, 2019–20 school year. *MMWR*. 2021;70:75–82.
5. Salmon DA, Dudley MZ, Glanz JM, et al. Vaccine hesitancy: causes, consequences, and a call to action. *Vaccine*. 2015;33(S4):D66–D71.
6. DeStefano F, Price CF, Weintraub ES. Increasing exposure to antibody-stimulating proteins and polysaccharides in vaccines is not associated with risk of autism. *J Pediatr*. 2013;163:561–567.
7. Kempe A, Saville AW, Albertin C, et al. Parental hesitancy about routine childhood and influenza vaccinations: a national survey. *Pediatrics*. 2020;146:e20193852.
8. Weiner JL, Fisher AM, Nowak GJ, et al. Childhood immunizations: first-time expectant mothers' knowledge, beliefs, intentions, and behaviors. *Am J Prev Med*. 2015;49(6 suppl 4):S426–S434.
9. Opel DJ, Heritage J, Taylor JA, et al. The architecture of provider-parent vaccine discussions at health supervision visits. *Pediatrics*. 2013;132:1037–1046.
10. Centers for Disease Control and Prevention. Vaccinate with Confidence. Available at: <https://www.cdc.gov/vaccines/partners/vaccinate-with-confidence.html>. Accessed February 9, 2021.