

INCREASING VACCINE CONFIDENCE IN PRIMARY CARE

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Learning Objectives:

Describe a brief history of vaccine hesitancy, including definitions of terms.

Explain reasons patients and parents may lack confidence in vaccines, and as such, refuse vaccination.

Review evidence-based techniques healthcare providers can employ when communicating with patients and parents to increase vaccine confidence and vaccine acceptance.

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Speaker & Faculty Disclosures

Anne Schneider, DO, disclosed that she has an AAFP Vaccine Science fellowship. The AAFP Vaccine Science Fellowship is supported by an unrestricted grant from Merck Sharp & Dohme Corp. Sharon Smaga, MD, (Reviewer) & IAFP staff members Kate Valentine and Sara Ortega disclosed no relevant financial relationship or interest with a proprietary entity producing, marketing, reselling, or distributing health care goods or services.

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Vaccines are one of the greatest public health achievements. It has been demonstrated that vaccines directly prevented 2.5 million deaths in children under the age of 5 in the US every year from 2001-2010.¹ While there is room for improvement of adult vaccination rates, rates of routine childhood vaccination in the US have historically been high.² However, there continues to be a proportion of the US population that refuses vaccination for various reasons. Thus, there are ongoing issues with reemergence of vaccine-preventable diseases in the US, including measles (most notably the outbreak of 2019 where the US nearly lost its elimination status), hepatitis A, mumps, and pertussis.³ Due to the onset of the COVID-19 pandemic, there has been a decline in routine vaccination.⁴ As a result, it is an extremely important time to focus on increasing vaccine confidence in the US.

Despite declining trust in healthcare, research continues to show that patients view the most important source of vaccine information to be their healthcare providers.⁵ As health care providers, we have both a responsibility and a unique opportunity to positively affect vaccination rates by improving our patient's and parents of patient's confidence in vaccines.

From mistrust of the science behind vaccines, a lack of concern for disease susceptibility, and misinformation read on the internet, patients and parents of patients have many reasons why they refuse vaccines. Knowledge of reasoning behind a patient's hesitancy regarding vaccines is important in order to know how to best address concerns. Equally important is how we, as healthcare providers, communicate with patients and parents when attempting to increase vaccine confidence.

This article will discuss a brief history of vaccine hesitancy, including definitions of terms used on this topic. It will lay out reasons patients and parents may lack confidence in vaccines and as such, refuse vaccination. Finally, the article will review some evidence-based techniques healthcare providers can employ when communicating with patients and parents to increase vaccine confidence and vaccine acceptance.

Vaccine hesitancy is a term that was originally created to acknowledge there exists a spectrum of indecision regarding vaccines rather than assume an overly simplistic, pro-vaccine and anti-vaccine dichotomy.⁶ The Strategic Advisory Group of Experts on Immunization (SAGE) advises the World Health Organization (WHO) on global policies involving aspects related to vaccines. In 2011, the SAGE working group on vaccine hesitancy proposed the “3 Cs” model to help define vaccine hesitancy as a complex concept. The “3 Cs” are complacency, convenience, and confidence. In the “3Cs” model, confidence is defined as trust in vaccine safety; the system that provides vaccinations, including healthcare providers; and the policymakers who make decisions on vaccines.⁷



Created in 2013, the National Vaccine Advisory Committee’s Vaccine Confidence Work Group (NVAC VCWG) was instructed by the Assistant Secretary of Health to assess how vaccine confidence affects childhood immunization rates in the US. The VCWG defines vaccine confidence similarly to the SAGE Working Group but added trust in immunizations recommended by the Advisory Committee on Immunization Practices (ACIP) to the definition to reflect their work in the US.⁸ When it comes to use of terminology, increasing “vaccine confidence” instead of reducing hesitancy can assist healthcare providers to present vaccines in a positive light. On the other hand, labeling a parent, for example, as vaccine hesitant may lead to less respectful and open interactions and communication between the parent and healthcare provider.

While these various definitions and terminology may have only recently been more deeply explored and delineated, the concept of vaccine hesitancy, or lack of vaccine confidence, has been around since the invention of vaccines to prevent disease. Some of the earliest resistance began in England in response to the creation of the smallpox vaccine. As the smallpox vaccine became more readily available to people in England, opposition to the vaccine increased as well. At the time, people cited religion, distrust in the medical field, and personal liberty as reasons they were not accepting of the smallpox vaccine.⁹ As more smallpox outbreaks occurred and pushes to vaccinate in the US increased, so too did vaccine hesitancy. The Anti-Vaccination Society of America was founded in 1879 after a visit to the US by a well-known anti-vaccinationist. Various other anti-vaccination groups were created, and they began to bring arguments against state laws mandating vaccination to the courts.¹⁰ As is evident in the US today with the COVID-19 pandemic and vaccine headlining most news reports, there has been, and continues to be, a proportion of people who are resistant to vaccines and vaccination for many of the same reasons.

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While the above reasons for vaccine refusal of the smallpox vaccine are eerily similar to many people’s reasons to decline COVID-19 vaccines, there are many other reasons that are important for healthcare providers to be aware of to better be able to address concerns regarding all vaccines. In an article published in Pediatrics, the authors list a great number of factors that influence parents’ concerns about vaccines. This list includes fears over vaccine safety, including the continued belief that vaccines can cause autism. Parents listed a fear that giving so many vaccines may overload the immune system.

Amongst parents' fears were also concerns that the vaccine may cause long-term adverse events, pain, or may make their child sick.¹¹ As was noted in the SAGE Working Group, "complacency" is an important term when considering how vaccine hesitancy is defined. Similarly, the article in Pediatrics also noted parent's questioning of the necessity of vaccines. This included a belief that having their child get the disease is more "natural" than the vaccine. With the now relative infrequency of vaccine preventable disease occurrence, there is also a belief that the disease itself has disappeared or is not serious. Freedom of choice was also listed as a common reason cited by parents who are vaccine hesitant. Parents cited mistrust in the medical field as another reason for vaccine hesitancy.¹¹ In fact, research has shown that parents trust what their children's healthcare providers communicate regarding nutrition, the physical exam, and childhood development far more than they trust their healthcare provider when speaking to them about vaccines. Parents specifically feel their healthcare providers overstate the benefits while not spending enough time on the potential risks of vaccination.¹²



Use by parents of the Internet as a source of knowledge regarding vaccines has increased over the years. Many anti-vaccine groups have taken advantage of this and employ persuasive techniques to lower vaccine confidence. Common approaches include citing freedom and individual choice as a priority vs public health, providing misinformation that vaccines are dangerous (including that they cause autism), and promoting natural, organic, and homeopathic treatments as viable alternatives to vaccination.¹³ Parents that use the Internet as a source for their vaccine information have been found to have decreased belief in the safety of vaccines, as well as disease susceptibility.¹⁴

The Association of State and Territorial Health Officials (ASTHO) implemented a survey of US parents and guardians to gain knowledge on the effectiveness of specific messages in order to decrease vaccine-related concerns and increase vaccination rates. One area the project focused on was parents, specifically mothers, who had some concerns about vaccines but were not outright refusing them. The information ASTHO gained through this

project is helpful for healthcare providers to be aware to assist in shaping how to approach this group when discussing vaccines. ASTHO found that mothers surveyed felt that positive messages about vaccines were more believable than negative messages.¹⁵ Only 2/3 of mothers felt their health-care provider spent enough time explaining risks and benefits of vaccines.¹⁵ Those surveyed also noted media reports, blogs, websites, and spouses all influenced their decisions regarding vaccines. The study found the message that resonated most was, "Vaccination is one of the most important ways I can protect my child from life-threatening illness and it's the best-known protection against a number of infectious diseases".¹⁵

When it comes to adults making decisions regarding vaccines for themselves, reasons for refusal also include lack of trust in vaccines, a belief that the disease itself is not serious, and cost concerns.¹⁶ Influenza vaccination is a commonly refused vaccine by adults for often misinformed reasons. Adults who refuse influenza vaccination often cite the idea that the influenza vaccine itself can give them the flu or that they never get influenza so what is the point of vaccination.¹⁷ Despite the fact that during the 2019-2020 influenza season, vaccination prevented an approximately 7.5 million influenza illnesses, 3.7 million influenza-associated medical visits, 105,000 hospitalizations from influenza, and 6300 deaths related to influenza, the idea that the flu shot "never works" is a commonly cited reason for refusal by adults.^{17,18}

Keeping in mind the numerous reasons patients and parents refuse vaccination, healthcare providers should also acknowledge that individuals' beliefs and attitudes regarding vaccines fall somewhere on a continuum. The NVAC VCWG found it most effective, and therefore recommends, healthcare providers focus their efforts to increase vaccine confidence on patients and parents who fall in the middle of that continuum. These are patients and parents who have concerns but do not completely refuse vaccines either for themselves or their children.

The CDC lays out evidence-based recommendations for healthcare providers to utilize when attempting to increase vaccine confidence and hence, uptake. In *Immunization Strategies for Healthcare Practices and Providers*, the CDC encourages healthcare providers to provide strong recommendations for vaccination when discussing the topic with patients.¹⁹ Strength of recommendation was also found to be an important component of vaccine uptake in research done by Peng-Jun Lu, et al.²⁰ The *Immunization Strategies for Healthcare Practices and Providers* also outlines the importance of using a presumptive approach particularly when discussing childhood vaccinations with parents of patients. This approach presumes vaccine acceptance by parents, whereas in a participatory approach the healthcare provider presents parents with a decision to make. For example, "Your child needs these vaccines today" uses presumptive wording vs "Have you thought about vaccines for your child today?" which is an example of participatory wording.¹⁹

As has been stressed in other articles related to increasing vaccine confidence, the *Immunization Strategies for Healthcare Practices and Providers* also recommends allowing enough time with patients to discuss vaccines and answer patients' questions. In order to maximize time available for patients to ask questions, the CDC suggests training and empowering office staff to be able to answer some basic questions regarding vaccines. The article recommends using the SHARE technique when discussing vaccines. In this method, health-care providers **S**hare reasons why the vaccine is recommended; **H**ighlight positive personal experiences with vaccines; **A**ddress patient questions and concerns; **R**emind patients that vaccines protect people from potentially severe illnesses; and **E**xplain the potential costs of getting the disease itself if not vaccinated.¹⁹

There is also evidence that Motivational Interviewing is an effective approach to improving vaccine confidence. A Canadian study demonstrated a 40% decrease in vaccine hesitancy in mothers after a motivational interview.²¹ Another study showed improvement in Human Papilloma Virus (HPV) vaccine uptake after motivational interviewing was performed with parents who were hesitant to have their child receive the HPV vaccine.²² In motivational interviewing, the healthcare provider uses patient-centered techniques to examine the patient's reasons for resistance to change and works within that framework in an open and caring environment to elicit change. Motivational interviewing is based on three main components. These components are, the desire to develop a respectful partnership with the patient, to encourage patient engagement and focus on the goal of the intervention, and to understand and tailor the interview to each patient's individual needs. In motivational interviewing, healthcare providers should ask open-ended questions, use affirming words, and summarize patient statements to allow for clarifying responses.²³

SHARE Technique

Share reasons why the vaccine is recommended;

Highlight positive personal experiences with vaccines;

Address patient questions and concerns;

Remind patients that vaccines protect people from potentially severe illnesses;

Explain the potential costs of getting the disease itself if not vaccinated.¹⁹

As a result of the COVID-19 pandemic and ensuing resistance from some to COVID-19 vaccination, there are now a variety of tools and recommendations on how to increase COVID-19 vaccine confidence. The CDC's *Vaccinate with Confidence-Strategy to Reinforce Confidence in COVID-19 Vaccines* includes resources on how to talk with patients about COVID-19 vaccines, including how to tailor information to a specific audience.²⁴ It also provides statements for health-care providers to use to dispel myths surrounding COVID-19 vaccines.²⁵ The American Medical Association (AMA) has partnered with



the Ad Council to develop and launch “It’s Up to You,” which is an initiative to educate the public on the COVID-19 vaccines. It includes resources healthcare providers can share with their patients when promoting acceptance of COVID-19 vaccines.²⁶

In summary, while hesitation to vaccination is not a new concept, it is one that is ongoing and dangerous. Vaccine hesitancy and delaying or avoiding vaccines can increase the rate of vaccine-preventable diseases and therefore morbidity and mortality in the US. Patients and parents are more likely to have a reluctance towards vaccinating when they do not trust the effectiveness of vaccines, the vaccine policy makers, or the message from their healthcare provider. We, as healthcare providers, have a responsibility to be knowledgeable in the area of vaccines, including how vaccines are created and approved, appropriate timing of vaccines, and the rates and types of adverse events from vaccines. By communicating this confidently and effectively, patients and parents will be more likely to be accepting of vaccines. There are many evidence-based tools and techniques to assist healthcare providers when discussing vaccines. Utilizing these methods will assist healthcare providers in being successful in decreasing vaccine hesitancy and increasing vaccine confidence in their patients and parents of patients.

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Citations

1. Centers for Disease Control and Prevention (CDC). [Ten great public health achievements -- United States, 1900-1999](#). *MMWR*. Atlanta, GA: Centers for Disease Control and Prevention (CDC); 1999;48 (12):241-243. Accessed 10/17/2021.
2. Vaccination rates in the US. Carla L. Black, PhD, David Yankey, MS, Maureen Kolasa, MPH. National, State, and Local Area Vaccination Coverage Among Children Aged 19-35 Months – United States, 2012. *MMWR*. Sept 13, 2013. / 62(36);733-740. <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6236a1.htm>. Accessed 10/16/2021.
3. Bridget Kuehn, MSJ. US Narrowly Preserves Measles Elimination Status. *JAMA*. 2019;322(20):1949. doi:10.1001/jama.2019.18901. <https://jamanetwork.com/journals/jama/fullarticle/2756192>. Accessed 10/16/2021.
4. Bhavini Patel Murthy, MD1, et al. Impact of the COVID-19 Pandemic on Administration of Selected Routine Childhood and Adolescent Vaccinations – 10 U.S. Jurisdictions, March-September 2020. *Weekly / June 11, 2021 / 70(23);840-845*. <https://www.cdc.gov/mmwr/volumes/70/wr/mm7023a2.htm>. Accessed 10/16/21.
5. A. Kennedy, J. Glasser, V. Covello, and D. Gust, "Development of vaccine risk communication messages using risk comparisons and mathematical modeling," *Journal of Health Communication*, vol. 13, no. 8, pp. 793-807, 2008. Accessed 10/16/2021.
6. Larson HJ, Jarrett C, Eckersberger E, Smith DM, Paterson P. Understanding vaccine hesitancy around vaccines and vaccination from a global perspective: a systematic review of published literature, 2007-2012. PMID: 24598724 DOI: 10.1016/j.vaccine.2014.01.081. Accessed 10/17/21.
7. The SAGE Working Group on Vaccine Hesitancy. Report of the SAGE Working Group on Vaccine Hesitancy. Oct 1, 2014. https://www.who.int/immunization/sage/meetings/2014/october/2_Summary_MacDonald_revised_final.pdf. Accessed 10/16/2021.
8. Orenstein, Walter A., et al. Assessing the State of Vaccine Confidence in the United States: Recommendations from NVAC 2015. *Public Health Reports / November-December 2015 / Volume 130*. <https://www.hhs.gov/sites/default/files/nvpo/about/vaccines/nvac-vaccine-confidence-public-health-report-2015.pdf>. Accessed 10/16/21.
9. Porter, D., Porter, R. The politics of prevention: Anti-vaccination and public health in 19th century England. (2.8 MB). *Medical History*. 1988;32:231-252. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1139881/>. Accessed 10/16/2021.
10. Wolfe, R.M., Sharpe, L.K. Anti-vaccinationists past and present. *BMJ*. 2002d;325:430-432. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1123944/>. Accessed 10/16/2021.
11. Countering Vaccine Hesitancy Kathryn M. Edwards, Jesse M. Hackell and THE COMMITTEE ON INFECTIOUS DISEASES, THE COMMITTEE ON PRACTICE AND AMBULATORY MEDICINE *Pediatrics* September 2016, 138 (3) e20162146; DOI: <https://doi.org/10.1542/peds.2016-2146>. Accessed 10/17/2021.
12. Glanz, Jason M, PhD., et al. A Mixed Methods Study of Parental Vaccine Decision Making and Parent-Provider Trust. *Academic Pediatrics*. VOLUME 13, ISSUE 5, P481-488, SEPTEMBER 01, 2013. [https://www.academicpediatricsjournal.net/article/S1876-2859\(13\)00156-3/pdf](https://www.academicpediatricsjournal.net/article/S1876-2859(13)00156-3/pdf). Accessed 10/17/2021.
13. Moran, Meghan Bridgid, et al. What makes anti-vaccine websites persuasive? A content analysis of techniques used by anti-vaccine websites to engender anti-vaccine sentiment. *Journal of Communication in Healthcare*. Volume 9, 2016- Issue 3. 151-163. <https://www.tandfonline.com/doi/full/10.1080/17538068.2016.1235531>. Accessed 10/17/2021.
14. [Abbey M. Jones, Saad B. Omer, Robert A. Bednarczyk, Neal A. Halsey, Lawrence H. Moulton, Daniel A. Salmon, "Parents' Source of Vaccine Information and Impact on Vaccine Attitudes, Beliefs, and Nonmedical Exemptions", *Advances in Preventive Medicine*, vol. 2012, Article ID 932741, 8 pages, 2012. <https://doi.org/10.1155/2012/932741>. Accessed 10/17/21.](#)
15. Association of State and Territorial Health Officials Communicating Effectively About Vaccines: New Communication Resources for Health Officials November 2010 PUB-1011001 Copyright © 2010 ASTHO. <https://www.astho.org/Programs/Immunization/Communicating-Effectively-About-Vaccines-New-Communication-Resources-for-Health-Officials/>. Accessed 10/17/2021.
16. Span, Paula. Older Adults Are Still Skipping Vaccinations. *New York Times*. <https://www.nytimes.com/2016/12/02/health/shingles-vaccine.html>. Accessed 10/17/2021.
17. Fankhauser, Sarah C. The Other Reasons People Don't Get Vaccines. *Scientific American*. Mar 27, 2019. <https://blogs.scientificamerican.com/observations/the-other-reasons-people-dont-get-vaccines/>. Accessed 10/17/2021.
18. Key Facts About Seasonal Flu Vaccine. CDC. <https://www.cdc.gov/flu/prevent/keyfacts.htm>. Accessed 10/21/2021.
19. Adam Bjork, PhD and Valerie Morelli, BA. Immunization Strategies for Healthcare Practices and Providers. CDC. <https://www.cdc.gov/vaccines/pubs/pinkbook/downloads/strat.pdf>. 10/17/2021.
20. Lu PJ, Srivastav A, Amaya A, et al. Association of provider recommendation and offer and influenza vaccination among adults aged ≥18 years – United States. *Vaccine* 2018;36:890-8. <https://doi.org/10.1016/j.vaccine.2017.12.016>external icon PMID:29329685external icon. Accessed 10/21/2021.
21. Gagneur, Arnaud, et al. Promoting vaccination in maternity wards – motivational interview technique reduces hesitancy and enhances intention to vaccinate, results from a multicentre non-controlled pre- and post-intervention RCT-nested study, Quebec, March 2014 to February 2015. *Euro Surveill*. 2019 Sep 5; 24(36): 1800641. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6737828/>. Accessed 10/21/2021.
22. Dempsey, Amanda F., MD, PhD, MPH, et al. Effect of a Health Care Professional Communication Training Intervention on Adolescent Human Papillomavirus Vaccination. *JAMA Pediatr*. 2018 May; 172(5): e180016. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5875329/>. Accessed 10/21/2021.
23. Gagneur, Arnaud. Motivational interviewing: A powerful tool to address vaccine hesitancy. *CANVax. CCCR • April 2, 2020 • Vol. 46 No. 4. 93-97*. <https://www.canada.ca/content/dam/phac-aspc/documents/services/reports-publications/canada-communicable-disease-report-ccdr/monthly-issue/2020-46/issue-4-april-2-2020/ccdrv46i04a06-eng.pdf>. Accessed 10/21/2021.
24. Building Confidence in COVID-19 Vaccines. CDC. <https://www.cdc.gov/vaccines/covid-19/vaccinate-with-confidence.html>. Accessed 10/21/2021.
25. Myths and Facts About COVID-19 Vaccines. CDC. Updated Oct 4, 2021. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/facts.html>. Accessed 10/21/2021.
26. AMA, Ad Council COVID-19 resources to boost vaccine confidence. <https://www.ama-assn.org/delivering-care/public-health/ama-ad-council-covid-19-resources-boost-vaccine-confidence>. Accessed 10/21/2021.