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The Anti-Vax Movement and What Allergists Can Do

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Abstract

Vaccines represent some of the most stunning successes in improving health around the world. However, vaccine skepticism, whether voiced privately in the offices of healthcare providers or amplified through social and traditional media, threatens to erode these hard-won gains. Vaccine refusal is not, unfortunately, a new problem, but providers need new tools to address it given the ease with which misinformation spreads in the digital age. Presented here are several practical strategies that allergists can use to turn frustration around vaccine hesitancy into empowered advocacy and protect the patients you work so hard to serve.

Keywords

vaccine; immunization; recommendation; vaccine skepticism; vaccine hesitancy; vaccine refusal; anti-vax; strategies; resources; vaccine safety; vaccine acceptance

Engage patients and their families about the benefits of vaccines

In your busy practice, and despite your understanding of the immunology behind how vaccines work, answers to questions about vaccine hesitancy may not roll off your tongue as smoothly as you would like. Fortunately, many resources are available to help (eTable 1). Even if you are a seasoned advocate, you may find at least one of these suggestions useful. Specifically included are resources regarding vaccine ingredients and potential allergens, anticipating that some patient questions directed toward allergists will focus on these.

Recognizing that all important information about vaccines cannot be conveyed in one clinic visit, you can provide your patients with high-quality resources they can access themselves (eTable 1). One strategy is to write a "Prescription for Information" (available for free from the Vaccine Education Center at the Children's Hospital of Philadelphia [CHOP], as described in eTable 1). While this perspective is focused on vaccines in the United States, to better serve diverse patient populations, resources are included in multiple languages, where

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available, to make such information as accessible as possible. Beyond the resources included in this perspective, one way to make sure the vaccine information your patients consume is reliable is to recommend member sites of the World Health Organization's Vaccine Safety Net.^{1,2}

As subspecialists, you likely have an ongoing relationship with a subset of your patients that affords repeated opportunities to guide them toward vaccine acceptance. Encourage patients to return to clinic with questions based on what they have learned. If they will not be returning to your clinic, emphasize the expertise of their primary care provider.

Share your specialized knowledge about how critical vaccines are to protect the vulnerable patients you serve

In caring for patients with variances in immune function, including chronic illnesses like asthma, you have a unique perspective among healthcare providers. You also care for patients and their families who have never heard of immunodeficiencies and do not understand the risks vaccine refusal poses to others. Your patients deserve to hear about these dangers in specific, personal recollections from an expert like you. To help draw your own stories into focus, try reading the personal testimonials from patient families and physicians found in the resources included in eTable 1.

Make strong recommendations for vaccines

Mounting evidence has shown that a strong recommendation from a healthcare provider improves vaccine uptake.^{3,4,5} E-Table 1 includes links to videos from the Centers for Disease Control and Prevention (CDC) on how best to make these recommendations. Even if your clinic does not provide vaccines on-site, you can provide a strong recommendation and help your patients connect with vaccine providers. If you need a place to start, [Vaccines.gov](https://www.vaccines.gov), from the US Department of Health and Human Services, has resources in both English and Spanish to help adult patients find vaccine providers (eTable 1). This resource may even help patients who accept vaccines readily, for example, by helping them find those relatively rare clinics that provide the yellow fever vaccine prior to travel. For eligible children, the Vaccines for Children (VFC) program makes routine vaccinations available at no cost; the link in eTable 1 provides methods to find VFC providers.

Reflect a pro-vaccine message at every stage of your patients' interaction with your clinic

Provide a consistent message about the importance of vaccines throughout your patients' clinic experience by involving all staff. Some excellent resources are provided in eTable 1, including the American Medical Association's STEPS Forward module on a team-based approach to adult vaccination and a course from the CDC specifically aimed at nurses and medical assistants. A number of free printed resources beyond the aforementioned Prescription for Information tear pad can also be ordered from CHOP's Vaccine Education Center.

Another way for your clinic to promote reliable information about vaccines is through your website and social media. E-Table 1 lists resources (including individual professionals) with example posts as well as ready-made graphics to help you harness the power of social media for good. Even if the social media environment does not feel natural to you at first, the American Academy of Pediatrics' Immunizations social media toolkit (eTable 1) offers advice to help ease you in.

Advocate for vaccines at the local level and beyond

Recognizing that this could take a significant investment of time and energy, contact your local, state, and federal officials to let them know how passionately you feel about protecting your patients through vaccination. The Infectious Diseases Society of America (IDSA), the professional organization for those focusing on infectious diseases, makes toolkits publicly available (without a requirement for IDSA membership) to make this important advocacy easier (eTable 1). The Immunization Action Coalition also compiles information at the state level about immunization exemptions and requirements (eTable 1). While all healthcare providers have a stake in advocating for vaccines, allergists are an important voice that our elected officials, like patients, need to hear.

Despite your best counseling, some of your patients may not budge from vaccine refusal. It can be tempting to dwell on this and become discouraged. However, you will likely reach other patients with the strategies described here, and through other methods you may have found that work for you. Your patients need you to keep at it, so please, don't give up.

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Abbreviations

CDC	Centers for Disease Control and Prevention
CHOP	Children's Hospital of Philadelphia
IDSA	Infectious Diseases Society of America
VFC	Vaccines for Children

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eTable 1.

Selected vaccine resources, with a focus on the United States.

For patients and families		
Resource	Format	Highlights
Where to Go from Vaccines.gov , the United States Department of Health and Human Services (HHS)	Website (https://www.vaccines.gov/getting/where) Also available in Spanish (https://www.vaccines.gov/es/recibir/d%C3%B3nde)	Tools to find out where to get vaccines, including more common (flu) and harder-to-find vaccines (yellow fever, for travelers)
Vaccines for Children (VFC), program overview for parents	Website (https://www.cdc.gov/features/vfcprogram/) Also available in Spanish (https://www.cdc.gov/spanish/especialesCDC/ProgramaVacunas/)	Informs parents about children's eligibility for VFC and provides contact information for help finding a VFC provider
Vaccines & Immunizations, from the Centers for Disease Control and Prevention (CDC)	Website (https://www.cdc.gov/vaccines/index.html)	Vaccine schedules, and information for specific groups, such as parents, pregnant women, and travelers
Immunization Action Coalition (IAC)	Website (https://vaccineinformation.org/)	Personal testimonies, video library, and links to many other reputable sites for vaccine information
Immunizations, from Healthychildren.org , the parenting website of the American Academy of Pediatrics (AAP)	Website (https://www.healthychildren.org/english/safety-prevention/immunizations/Pages/default.aspx) Also available in Spanish (https://www.healthychildren.org/Spanish/safety-prevention/immunizations/Paginas/default.aspx)	Personal testimonies from families and physicians, also provides "Tear-free Vaccination Tips" and suggestions for addressing fear of needles
Your Child's Vaccine Visit, CDC	Website (https://www.cdc.gov/vaccines/parents/visit/index.html)	More about reducing the stress of receiving vaccines on children and parents
IAC Vaccine Information Statements, in multiple languages	Website (https://www.immunize.org/vis/)	Click on "Language Index" to find vaccine information statements in your patients' preferred languages to distribute along with English translations
Vaccination Materials in Spanish, CDC	Aggregate of websites, including links to podcasts (https://www.cdc.gov/vaccines/spanish/materials.html)	Resources addressing vaccines for children, teens, and adults in Spanish
International materials from the Children's Hospital of Philadelphia's Vaccine Education Center (VEC)	Website (https://www.chop.edu/pages/international-vaccine-and-vaccine-safety-related-informational-materials)	Another resource for materials in languages other than English. Note that materials in Spanish are available in other locations on the VEC website.
Common Ingredients in U.S. Licensed Vaccines, United States Food & Drug Administration (FDA)	Website (https://www.fda.gov/vaccines-blood-biologics/safety-availability-biologics/common-ingredients-us-licensed-vaccines)	Discusses why certain ingredients such as formaldehyde are used in some vaccines in a question/answer format
Vaccine Ingredients, VEC	Website (https://www.chop.edu/centers-programs/vaccine-education-center/vaccine-ingredients)	Explains vaccine ingredients such as aluminum salts, gelatin, and thimerosal, and addresses concerns about safety
History of Vaccines, an educational resource by the College of Physicians of Philadelphia	Website (https://www.historyofvaccines.org/)	Interactive timeline of milestones in the understanding of infectious diseases and vaccine development
Vaccines on the Go: What You Should Know, VEC	Mobile app (available for Apple and Android; see https://www.chop.edu/centers-programs/parents-pack/vaccines-go-what-you-should-know)	Vaccine information, opportunities to ask questions, and more in app format
Vax Pack Hero, VEC	Online video game (http://vaxpackhero.com/)	Video game for children (and adults!)
Just the VAX, VEC	Online trivia game (https://media.chop.edu/data/files/vaccine-trivia-game/index.html)	Interactive, multiple choice game
Parents' Guide to Childhood Immunizations, CDC	Downloadable pdf (https://www.cdc.gov/vaccines/parents/tools/parents-guide/downloads/parents-guide-508.pdf)	Booklet format for parents
For healthcare providers		

For patients and families		
Resource	Format	Highlights
#HowIRecommend videos by topic and clinician type, CDC	Online videos (https://www.cdc.gov/vaccines/howirecommend/by-topic.html)	Videos discussing how to make effective vaccine recommendations and involve your whole practice in doing so
Vaccines Licensed for Use in the United States, FDA	Website (https://www.fda.gov/vaccines-blood-biologics/vaccines/vaccines-licensed-use-united-states)	Package inserts for all vaccines licensed in the United States
Potential Allergens in Vaccines per 0.5 mL dose, Johns Hopkins Bloomberg School of Public Health Institute for Vaccine Safety	Table (http://www.vaccinesafety.edu/components-Allergens.htm)	Provides a summary table of potential allergens to help address patient/family questions
Vaccines & Immunizations, for healthcare providers, CDC	Aggregate of websites (https://www.cdc.gov/vaccines/hcp/index.html)	Overview of CDC resources for healthcare providers
Immunization Action Coalition	Website (https://www.immunize.org/)	IAC's website for healthcare professionals includes screening checklists for vaccination, resources for responding to concerns about vaccines, and a section on state laws and mandates, including what type of exemptions are allowed in each state
Adult Vaccinations: Team-Based Immunization, American Medical Association's STEPS Forward	Interactive website offering continuing education credit (https://edhub.ama-assn.org/steps-forward/module/2702553)	Module to help involve your whole practice in fostering a culture of immunization, with a focus on adults. Includes information for vaccine providers but could be adapted for clinics that do not provide vaccines directly.
Immunization Education and Training, CDC	Aggregate of websites, some of which offer continuing education credit (https://www.cdc.gov/vaccines/ed/index.html)	Courses on a variety of immunization topics, including one entitled "How Nurses and Medical Assistants Can Foster a Culture of Immunization in the Practice"
Communicating with Families, AAP	Aggregate of websites (https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/immunizations/Pages/Communicating-with-Families.aspx)	Case studies, sample responses, and strategies to address patient concerns, with a focus on pediatrics
Change Template on Vaccine Hesitancy, AAP	Aggregate of websites (https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/immunizations/Practice-Management/Pages/Change-Template-on-Vaccine-Hesitancy.aspx)	Pre- and post-test on vaccine hesitancy for providers, and more resources
Prescription for Information about vaccines tear pad	Website to order free materials (https://vaccineproforder.chop.edu/prescription-for-information-pads)	Order these pads for free to write your patients a prescription for accurate vaccine information
Immunization Schedules, CDC	Website (https://www.cdc.gov/vaccines/schedules/hcp/index.html)	Multiple views of the recommended immunization schedules for children and adults
Vaccine Schedules App for Health Care Providers, CDC	Mobile app (available for Apple and Android; see https://www.cdc.gov/vaccines/schedules/hcp/schedule-app.html)	Recommended immunization schedules in app format
PneumoRecs VaxAdvisor	Mobile app (available for Apple and Android; see https://www.cdc.gov/vaccines/vpd/pneumo/hcp/pneumoapp.html) Also available as a website (https://www2a.cdc.gov/vaccines/m/pneumo/pneumo.html)	Tool to provide accurate recommendations for pneumococcal vaccines for children and adults based on patient characteristics you enter
Immunizations social media toolkit, AAP	Aggregate of websites (https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/immunizations/Practice-Management/Pages/Immunization-Social-Media-Toolkit.aspx)	Includes how-to information as well as graphics and sample posts for various social media platforms
Examples of professionals using Twitter to promote sound messages about vaccines	Dr. Dave Stukus, @AllergyKidsDoc Timothy Caulfield, @CaulfieldTim Prof Peter Hotez MD PhD, @PeterHotez	Reviewing tweets by these individuals and others can help you develop your own style

For patients and families		
Resource	Format	Highlights
	Paul Offit, @DrPaulOffit Dr. Nancy Messonnier, @DrNancyM_CDC	
National Immunization Awareness Month (NIAM) graphics and sample social media posts	Graphics for social media (https://www.cdc.gov/vaccines/events/niam/graphics.html) Sample posts to communicate with parents (https://www.cdc.gov/vaccines/events/niam/parents/social-media.html) Sample posts to communicate with healthcare professionals (https://www.cdc.gov/vaccines/events/niam/hcp/social-media.html)	NIAM is in August. Add these to your social media posts; some can be used all year.
Videos and Tools from Vaccines.gov , HHS	Graphics, videos, widgets, and templates for websites and social media (https://www.vaccines.gov/resources/videos_and_tools)	Add these to your website or social media posts to spread reliable vaccine information
Vaccine advocacy toolkit, Infectious Diseases Society of America (IDSA)	Toolkit (https://www.idsociety.org/policy--advocacy/immunization-and-vaccine-policy/adult-and-adolescent-immunization/)	Strategies for connecting with lawmakers, talking points, and a primer on anti-vaccine legislation
Vaccine Websites, VEC	Aggregate of websites (https://www.chop.edu/centers-programs/vaccine-education-center/resources/vaccine-websites)	Even more resources

Abbreviations: AAP, American Academy of Pediatrics; CDC, Centers for Disease Control and Prevention; FDA, United States Food & Drug Administration; HHS, United States Department of Health and Human Services; IAC, Immunization Action Coalition; IDSA, Infectious Diseases Society of America; NIAM, National Immunization Awareness Month; VEC, Vaccine Education Center; VFC, Vaccines for Children