Vaccine Communication Strategies for Healthcare Providers

Anil Mangla, PhD, MPH, FRSPH
State Epidemiologist
District of Columbia
Collaborators
Course Overview

• This module reviews the population health impact of vaccinations on the community. This includes the vaccine campaigns, health benefits, risk-factors, vaccine hesitancy and impact of misinformation so that health professionals can effectively communicate with patients about vaccinations.

• This module will be a lecture style format with integrated questions throughout.

• This module will be approximately 1 hour in length for viewing and completion of the evaluation.

• This module is approved for 1 hour of CME.
Learning Objectives

The learning objectives for the course were developed based on learner input and are designed to enable learners to:

• Communicate key points of vaccine methods and impact on infectious diseases in ways to improve patient understanding

• Convey concepts of scientifically based information about the mechanisms of action of vaccines

• Demonstrate how to execute effective vaccine communication campaigns for patients

• Guide the learner in understanding the basis of vaccine hesitancy and impact of misinformation

• Provide the evidence base in the form of peer reviewed research or professional guidelines in understandable ways to patients
Presenters

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  Associate Director for Research
  Immunize.org

• **Jody Gan, MPH, CHES**
  Department of Health Studies
  American University

• **Nicole Mitchell, CRNP**
  Community-based clinical provider
Advisors

• Anil Mangla, PhD, MPH, FRSPH
  State Epidemiologist

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  Director, State and Local Public Health, Amazon Web Services; and
  Adjunct Professor
  Massachusetts College of Pharmacy and Health Sciences
Conflict of Interest

- Dr. Humiston has participated in educational forums sponsored by Sanofi-Pasteur.
- The remaining instructors and advisors have no interests to declare.

Anti-discrimination Policy

- The speakers have agreed to our anti-discrimination policy that prohibits the inclusion of discriminatory language, graphics, or references on the basis of race, gender identity, age, color, national origin, physical or mental disability, or religion.
Important Information

The video will progress at its own pace.

Do not attempt to speed up the video.

The video can be paused and resumed later.
Communicating about Vaccines

S G Humiston, MD, MPH, FAAP | Associate Director for Research, Immunize.org
Outline

► Why vaccine communication is important
► What is the problem?
► Clinical conversations – a 5 step approach
► 3 more notes
► Resources (the fishing pole)
► 4 cases to check your knowledge
► References
Why vaccine communication is important

1. Vaccination is important
14 Diseases
YOU ALMOST FORGOT ABOUT
(THANKS TO VACCINES)

https://www.cdc.gov/vaccines/parents/diseases/forgot-14-diseases.html
Measles
Measles symptoms

- high fever
- red, blotchy rash first appearing on the forehead
- inflamed red eyes
- rash appears behind the ears, then spreads over the head and face, and then to the trunk and extremities.
- Koplik's spots inside the mouth
- sore throat and hacking cough

Complications of Measles

- Pneumonia
- Severe diarrhea
- Encephalitis
- Blindness
- Ear infection

Website: http://www.nhp.gov.in/
Infant being treated for severe pertussis infection.

Andy Marso, survivor of bacterial meningitis lost parts of both his feet and hands to the painful disease.
<table>
<thead>
<tr>
<th>DISEASE</th>
<th>PRE-VACCINE ERA ESTIMATED ANNUAL MORBIDITY¹</th>
<th>MOST RECENT REPORTS OR ESTIMATES OF U.S. CASES</th>
<th>PERCENT DECREASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphtheria</td>
<td>21,053</td>
<td>2²</td>
<td>&gt;99%</td>
</tr>
<tr>
<td><em>H. influenzae</em> (invasive, &lt;5 years of age)</td>
<td>20,000</td>
<td>14²,³</td>
<td>&gt;99%</td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>117,333</td>
<td>(est) 24,900⁴</td>
<td>79%</td>
</tr>
<tr>
<td>Hepatitis B (acute)</td>
<td>66,232</td>
<td>(est) 21,600⁴</td>
<td>67%</td>
</tr>
<tr>
<td>Measles</td>
<td>530,217</td>
<td>1,287²</td>
<td>&gt;99%</td>
</tr>
<tr>
<td>Meningococcal disease (all serotypes)</td>
<td>2,886³</td>
<td>329²</td>
<td>89%</td>
</tr>
<tr>
<td>Mumps</td>
<td>162,344</td>
<td>3,509²</td>
<td>98%</td>
</tr>
<tr>
<td>Pertussis</td>
<td>200,752</td>
<td>15,662²</td>
<td>92%</td>
</tr>
<tr>
<td>Pneumococcal disease (invasive, &lt;5 years of age)</td>
<td>16,069</td>
<td>1,700⁷</td>
<td>93%</td>
</tr>
<tr>
<td>Polio (paralytic)</td>
<td>16,316</td>
<td>0²</td>
<td>100%</td>
</tr>
<tr>
<td>Rotavirus (hospitalizations, &lt;3 years of age)</td>
<td>62,500⁸</td>
<td>30,625⁹</td>
<td>51%</td>
</tr>
<tr>
<td>Rubella</td>
<td>47,745</td>
<td>4²</td>
<td>&gt;99%</td>
</tr>
<tr>
<td>Congenital Rubella Syndrome</td>
<td>152</td>
<td>0²</td>
<td>100%</td>
</tr>
<tr>
<td>Smallpox</td>
<td>29,005</td>
<td>0²</td>
<td>100%</td>
</tr>
<tr>
<td>Tetanus</td>
<td>580</td>
<td>19²</td>
<td>96%</td>
</tr>
<tr>
<td>Varicella</td>
<td>4,085,120</td>
<td>102,128¹⁰</td>
<td>&gt;98%</td>
</tr>
</tbody>
</table>
Without the US COVID-19 vaccination program...

• In the U.S. by November 2021, there would have been
  – 1.1 million additional COVID-19 deaths
  – >10.3 million additional COVID-19 hospitalizations

• During 2021
  – COVID-19 deaths would have been ~3.2 times higher
  – COVID-19 hospitalizations would have been ~4.9 times higher

## 4 Main Categories of Vaccines

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Live</td>
<td>Oral adenovirus vaccine</td>
</tr>
<tr>
<td>Live-attenuated</td>
<td>Measles-mumps-rubella, Varicella</td>
</tr>
<tr>
<td>Non-live</td>
<td>COVID mRNA vaccines, Tdap, HPV, MenACWY, flu shot, etc.</td>
</tr>
<tr>
<td>Non-replicating</td>
<td>COVID-19 vaccine (Janssen) Jynneos, Smallpox/monkeypox vaccine</td>
</tr>
</tbody>
</table>

[https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/timing.pdf](https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/timing.pdf)
https://immunizebc.ca/how-do-vaccines-work
On YouTube go to https://youtu.be/pMSSu7QLAlw
How vaccines work videos (more technical)

Videos from the Vaccine Makers Project

• How COVID-19 mRNA Vaccines Work
  https://vimeo.com/579667076

• How COVID-19 Viral Vector Vaccines Work
  https://vimeo.com/618385339
Why vaccine communication is important

1. Vaccination is important
2. What clinical personnel say & do is important to patients & parents
Provider-patient/parent communication is important

• Provider-parent communication is often cited as a key factor in parental vaccine decision-making.

• Many vaccine-hesitant parents cite reassurance and vaccine information from their child’s provider as the reason they changed their minds to ultimately accept vaccines.
Why vaccine communication is important

1. Vaccination is important
2. What clinical personnel say & do is important to patients & parents
3. Training all office personnel in vaccine issues is important
Why vaccine communication is important

1. Vaccination is important
2. What clinical personnel say & do is important to patients & parents
3. Training all office personnel in vaccine issues is important
4. Going beyond clinical conversations – vaccine advocacy
Make a local impact

• Advocate for stronger vaccine policies in your state
  – Reach out to your state legislators to express your support for vaccines.
  – Write a letter to the editor or an opinion-editorial (op-ed) to your local paper explaining your support for vaccinations.
  – Attend a town hall, legislative meeting or candidate forum to ask your elected leaders or candidates about their stances on vaccines.
  – Host a house party or a town hall meeting to educate your community members.
  – Vote for pro-science/pro-vaccination candidates.

• Share your thoughts on social media & talk to your friends and family
  – If you or family members get a vaccine, post that to your social media accounts with a proud photo!
  – Read more about common questions people may have about vaccines
  – Check out Voices for Vaccines’ guide to conversations with loved ones who are vaccine hesitant.
  – Follow Vaccinate Your Family, Voices for Vaccines, etc on social media.

• Work with your child’s school/daycare program to increase vaccination rates

https://vaccinateyourfamily.org/join-us-in-support-of-vaccines/make-a-local-impact/
Make a national impact

Making a difference in national policy is easier than many of us think. Whether you have five minutes or an entire day, you can do something to support vaccines and science-based vaccination policies, and make a real difference. Below are several ideas based on the amount of time you have to spend.

1. Stay in the know on news and views on vaccines.
   - Stay up to date by following us on Twitter, Facebook, and Instagram.
   - Subscribe to our Shot of Prevention blog and YouTube channel.
   - Sign up for VVF’s innovative alerts. We will email you vaccine-related updates and provide you with opportunities to weigh in on immunization issues and policies.

2. Use our forms to email your legislators.
   We’ve made it easy to contact your Members of Congress about vaccines. Please use our form to easily email your Members of Congress today.

3. Our legislators need to hear that the people they represent support vaccines and public health. Even if you only have five minutes, you can tell your representatives that vaccines matter.
   If you have 2 to 15 minutes:
   - Find out who your state representatives are in Congress (House of Representatives and Senate).
   - Connect with them via Congress.gov and use social media to find out their views on vaccines, and to share your thoughts on immunization-related issues you care about. You can also share a link to our State of the Immanual report.
   - Call or email your Congressional representatives to discuss vaccine-related issues you care about.
   - Register to vote.
   If you have 10 to 30 minutes:
   - Send your legislators a list of questions to determine their positions on vaccine policies.
   - Send your Members of Congress an email stating your support of vaccinations and a link to VVF’s newest report of the immunization report.
   - Visit your representatives’ office to discuss vaccine-related issues you care about.
   - Vote for pro-vaccines/pro-vaccination candidates.

What’s the problem?
Omission bias: Our tendency to judge harmful actions as worse than harmful inactions, even if they result in similar consequences.

Availability bias: Our tendency to think that examples of things that come readily to mind are more representative than is actually the case.

Graphic from https://kenthendricks.com/availability-heuristic/
The influence of “social media” is not new.
Misinformation

• Vaccine hesitancy has been prevalent for centuries.

• Social media provides its worldwide users with an instantaneous means for connecting and sharing news/beliefs/hearsay – whether truthful or false.

• Global pandemics and disease outbreaks typically lead to infodemics—social media exacerbates infodemics through
  – quick connectedness and
  – unvetted echo chambers

• Healthcare providers can utilize social media tools and resources to combat vaccine misinformation.

Curr Opin Pediatr 2022, 34:156 – 162 DOI:10.1097/MOP.0000000000001111
Intentional spread of disinformation

• Research has shown that Russian bots and troll farms, in conjunction with Russia’s foreign broadcast network RT, have pushed anti-vaccination messages on a large scale on Western social media.

• These messages may be part of a broader effort to strategically undermine public health in both the developed and developing world.

• Examples:
  – In the Democratic Republic of the Congo during both the 2014 and 2019 Ebola outbreaks, campaigns argued that foreign medical workers were spreading the disease, contributing to attacks that killed or wounded dozens of medical workers.
  – Disinformation campaigns argued alternately that COVID-19 was an American-developed weapon or caused by 5G cellular networks has also been pushed by Russian bot networks.

• Serves Russian strategic interests of mitigating American influence

One size communication does not fit all

- Unquestioning acceptor
- Cautious acceptor
- Hesitant
- Late or selective vaccinator
- Refuser

Leask et al. BMC Pediatrics 2012, 12:154
Off-the-mark communication approaches

- The Conqueror
- The Teacher
- The Boss
- The Judge
A 5-step approach

To clinical conversations about vaccination
Some caveats

• Things will keep changing
• We need more research
• Some days I get in my own way
  – Tired
  – Stressed
  – Self-righteous
Our Case

• 28-year-old female
• No history of HepB vaccination
• No personal history of “high risk behaviors”
Step 1: Assume the person will accept vaccination. Use a presumptive statement.

Person consents with no further questions

Immunize!

Person is still hesitant?

Continue to next step
Step 2: Give your strong recommendation.

Person consents with no further questions

Immunize!

Person is still hesitant?

Continue to next step
Step 3: Explore the reason for hesitancy.

Listen to what the person says. Use motivational interviewing techniques to determine the cause of hesitancy.
Step 4: Ask permission to address concerns.

If person agrees, use the Ask-Provide-Verify approach to deliver information to address concerns.
Step 5: Ask again if you can immunize.

- Person consents with no further questions
  - Immunize!
- Person is still hesitant?
  - Leave the door open for future discussions
Another sample case: 60-year-old with no history of COVID-19 vaccine

<table>
<thead>
<tr>
<th>Establish that you have listened and understand their perspective.</th>
<th>You’re not worried about COVID disease. You feel like you’ll be fine after 2 days even if you get it.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ask permission</strong> to share your perspective</td>
<td>Would it be okay if I tell you how I see this disease and what it does to my patients?</td>
</tr>
<tr>
<td>If patient agrees…</td>
<td></td>
</tr>
<tr>
<td><strong>Ask</strong> what the patient already knows</td>
<td>Tell me first, what have you heard about what happens after the first few days or week of fever and cough?</td>
</tr>
<tr>
<td>Patient describes only insignificant problems</td>
<td></td>
</tr>
<tr>
<td><strong>Provide</strong> information on the issue</td>
<td>From what I’ve seen, a lot of my patients, even patients who just had pretty minor symptoms initially, aren’t back to themselves for months. A lot of them have foggy thinking, low energy, muscle aches…that sort of thing. It really sets them back.</td>
</tr>
<tr>
<td><strong>Verify</strong> that the information has been understood.</td>
<td>Does this sound familiar? Have you heard about “long COVID” – or maybe you know people who are having these problems?</td>
</tr>
</tbody>
</table>
Three more tips
1. Start working with your team on this within 2 weeks
2. Start the vaccination conversation early

(“Inoculation theory of communication”)
3. If you are met with delay or refusal...
Key Immunization Resources
Pediatric Infectious Disease Society (PIDS)

- **The Vaccine Handbook app**: This is a free, comprehensive yet practical guide for clinicians.

- **CoVER modules**: Use these free, interactive modules to preview or review most pediatric immunization topics for providers. They’re not too long and not too short.
Immunize.org

- Ask the Experts (>1,100 answers to common and difficult immunization questions)
  https://www.immunize.org/askexperts/
- Screening checklist about vaccine contraindications and precautions with translations
  https://www.immunize.org/handouts/screening-vaccines.asp
- Vaccine Information Statements - with translations and information about federal requirements
  https://www.immunize.org/vis/
- Materials for Healthcare Professionals and Their Patients
  https://www.immunize.org/handouts/
- State-by-state information on immunizations
  http://www.immunize.org/stateinfo
CHOP’s Vaccine Education Center

This easy-to-navigate website is packed with information on pediatric and adult vaccine. https://www.chop.edu/centers-programs/vaccine-education-center
Centers for Disease Control and Prevention (CDC)

- CDC Epidemiology and Prevention of Vaccine-Preventable Diseases Course Textbook - 14th Edition (2021)

- Immunization Schedules (read the footnotes!)
  https://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html

- Advisory Committee for Immunization Practices (ACIP) Vaccine Recommendations
  http://www.cdc.gov/vaccines/hcp/acip-recs/
4 Cases to Check Your Knowledge
As a community leader in immunizations, you are called upon to help design an immunization delivery performance improvement program that will include many kinds of primary care pediatric offices (for example, private offices, public clinics, residency programs).

As you consider key elements of the program, which of the following is/are FALSE? (Choose all that are false)

A. At this point, the only important outcome is COVID-19 immunization rates because the other vaccine-preventable diseases have been eradicated.

B. Immunocompromised people should be excluded from the program because vaccination is contraindicated for them.

C. Improving communication may be part of the program because what clinical personnel say and do is important to patients and parents.

D. Training all office personnel in vaccine issues is important.
Case #2

A colleague complains, “I am trying to do a good job getting my pediatric patients caught up on vaccines they missed at the beginning of the pandemic. It’s hard because I never know what to expect when I walk into the room. Some people are eager for protection, but it ranges all the way to total refusal.”

You mention that a research team (Leask et al. BMC Pediatrics 2012, 12:154) were able to distinguish parents’ approaches to vaccination into 5 main groups. Which 1 of the following does NOT describe one of these groups?

A. Unquestioning acceptor
B. Cautious acceptor
C. Hesitant
D. Know-it-all
E. Refuser
Case #3

Your new patient is a 21-year-old with HIV infection who was not vaccinated against pneumococcal disease as a child. You start by saying, “Today, the vaccine against ‘pneumonia’ is recommended for you. This helps to fight infection against a dangerous bacteria.” He seems hesitant so you ask what his concern is. After you listen, you reflect his concern to make it clear that you understand his perspective. Which of the following statements would be most likely, as your next step, to build trust and reduce his hesitancy?

A. “In three published studies there was no statistically significant evidence that your feared side effect occurred.”

B. “Would it be okay if I tell you how I see this?”

C. “Come on! I think I know a little more about medicine than you do!”

D. “What you read on the Internet is ridiculous. I’m ashamed of you for believing that!”
Case #4

One of your colleagues has a difficult question about the use of pneumococcal vaccine. As you try to help find an answer, which of the following resources is likely to be useful? (Check all that apply)

A. The Vaccine Handbook app, a free, comprehensive, yet practical guide for clinicians

B. CDC’s *Epidemiology and Prevention of Vaccine-Preventable Diseases* course textbook, now available in its 14th Edition (2021)

C. Immunize.org’s Ask the Experts webpage on pneumococcal vaccines

D. CHOP’s Vaccine Education Center, an easy-to-navigate website packed with information on pediatric and adult vaccine
Provider Outreach Strategies to Combat Vaccine Hesitancy

Jody Gan, MPH, CHES Department of Health Studies American University
Learning Objectives

• Guide the learner in understanding the basis of vaccine hesitancy and impact of misinformation.

• Demonstrate how to execute effective vaccine communication campaigns for patients.

• Provide a case study of a health care provider who overcame her hesitancy about the COVID vaccine and serves as a champion for the COVID and other vaccines.
CDC’s List of Ten Great Public Health Achievements – U.S., 1900-1999

- Vaccination
- Motor-vehicle safety
- Safer workplaces
- Control of infectious diseases
- Decline in deaths from coronary heart disease and stroke
- Safer and healthier foods
- Healthier mothers and babies
- Family planning
- Fluoridation of drinking water
- Recognition of tobacco use as a health hazard
Anti-Vaccination Movement & the Spread of Misinformation

THE LANCET

Retracted: B-cell lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children.

Summary

Background

The Lancet is a leading medical journal that publishes peer-reviewed research articles in the fields of medicine and public health. The Lancet is known for its high standards of peer review and editorial quality, and its articles are widely cited in academic and industry circles.

Retraction

A retraction is a correction to an earlier published article, usually due to errors or other factual inaccuracies. Retractions are an important part of the scientific process, allowing for the correction of errors and the advancement of knowledge.

Revised: B-cell lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children.

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Revised: B-cell lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children.
Anti-Vaccination Movement & the Spread of Misinformation

[Image: Map showing measles outbreaks in the US, with highlights on Disneyland and Brooklyn, New York.]

[Graph: Coughs and sneezes, measles cases in the US, emphasizing Brooklyn, New York.]

[Message: Measles is spreading in our community. It can be dangerous to anyone who is not vaccinated. Protect yourself and your family. Talk to your health care provider.]

[Contact details: Question about measles or the vaccine? Call 888-364-4837. Monday-Friday, 8 am-5 pm. health.ny.gov/measles]
Misinformation and Politicization Around the COVID Vaccine

• Influential anti-vaccine social media accounts and groups have accumulated millions of new followers since the pandemic began.
• Accusations about doctors promoting the vaccines for personal profit.
• Political partisanship and polarization plays a significant roll in distrust of public health leaders and initiatives.
Remembering Tuskegee and encouraging vaccination with kindness.....
Got questions about the COVID vaccines? **Doctors, nurses and community health workers have answers!**

**THE CONVERSATION™**
BetweenUs [AboutUs.org](https://www.AboutUs.org)

W. Kamau Bell talks with doctors about why you shouldn’t wait to get a COVID vaccine.
American Medical Association (AMA) Recommendations for Health Care Providers

- Patient education provided by health care providers is an important factor in influencing higher vaccination rates and should be open, honest and comprehensive, and include:
  - All vaccines undergo a rigorous scientific review to ensure they are effective and safe.
  - The health risks associated with declining to be vaccinated.
  - That possible side effects could occur and are an indicator that the vaccine is working to establish immunity.
- Transparency is key to trust building.
- Support efforts to eliminate non-medical exemptions from immunization.
Principles of Motivational Interviewing

• A technique used by health care professionals to harness people’s innate drive for change

• Many common persuasive styles not only don’t work but also often backfire

• Best not to talk a patient into making a change or making them feel bad about their behavior but respond with empathy and support

• Goal is to get patients to build their intrinsic motivation to make behavioral changes
Using the Motivational Interviewing Technique

• Asking open questions
• Reflexive listening (affirming and summarizing)
• Dealing with denial
• Asking for permission to provide information

It’s more the “spirit” of the approach, rather than adhering to a rigid formula.
Evidence-Based Practices: In the Doctor’s Office and Beyond...

• The Community Preventive Services Task Force (CPSTF) recommends utilizing a combination of community-based interventions to increase vaccination rates in targeted populations.

• Health care provider interventions:
  – Counseling
  – Reminders about vaccination (can include notes posted in client charts, alerts in electronic medical records, or letters sent by mail or e-mail)
  – Partnerships between community organizations, local government, and vaccination providers to offer events
Case Study: Nicole Mitchell

Nicole Mitchell, CRNP
Is Hesitancy about the COVID-19 Vaccine Likely to Weaken Compliance with Traditional Childhood Vaccines?

- Will the effects of misinformation and political polarization around the COVID-19 vaccine impact childhood immunization rates?
- The scientific evidence for the full range of vaccines recommended by public health authorities in the U.S. remains as solid as ever.
Recap: The Role of Providers in Preserving One of Public Health’s Greatest Successes

• Be a champion for vaccination.

• Ensure that vaccinated patients are “up to date” with vaccines and boosters.

• Use motivational interviewing techniques with those who are hesitant.

• Support community public health efforts by volunteering at vaccination clinics at schools, churches, and barbershops/salons.
Knowledge Check

Which childhood vaccination was incorrectly and unethically reported to be associated with autism?

a. Measles, Mumps, Rubella
b. Tetanus
c. Polio
d. COVID-19
Motivational interviewing is a technique that involves talking your patient into changing a behavior that they are not ready to change.

a. True
b. False
Knowledge Check

Health care providers can improve vaccination coverage by:

a. Encouraging their patients to get vaccinated
b. Setting up the electronic medical record to include immunization reminders
c. Countering misinformation about vaccines
d. Assisting with community vaccination outreach initiatives
e. All of the above
Reference List (in order of appearance)

• https://www.cdc.gov/mmwr/preview/mmwrhtml/00056796.htm
• https://www.youtube.com/watch?v=YBq7tNd6C_s&t=11s (Tuskegee)
• https://www.thecommunityguide.org
• https://www.cdc.gov/vaccines/parents/downloads/parent-ver-sch-0-6yrs.pdf
• https://www.cdc.gov/vaccines/schedules/downloads/teen/parent-version-schedule-7-18yrs.pdf
• https://www.cdc.gov/vaccines/schedules/hcp/imz/adult.html#vacc-adult