Communicating About Vaccines

Mid America Immunization Coalition Annual Symposium

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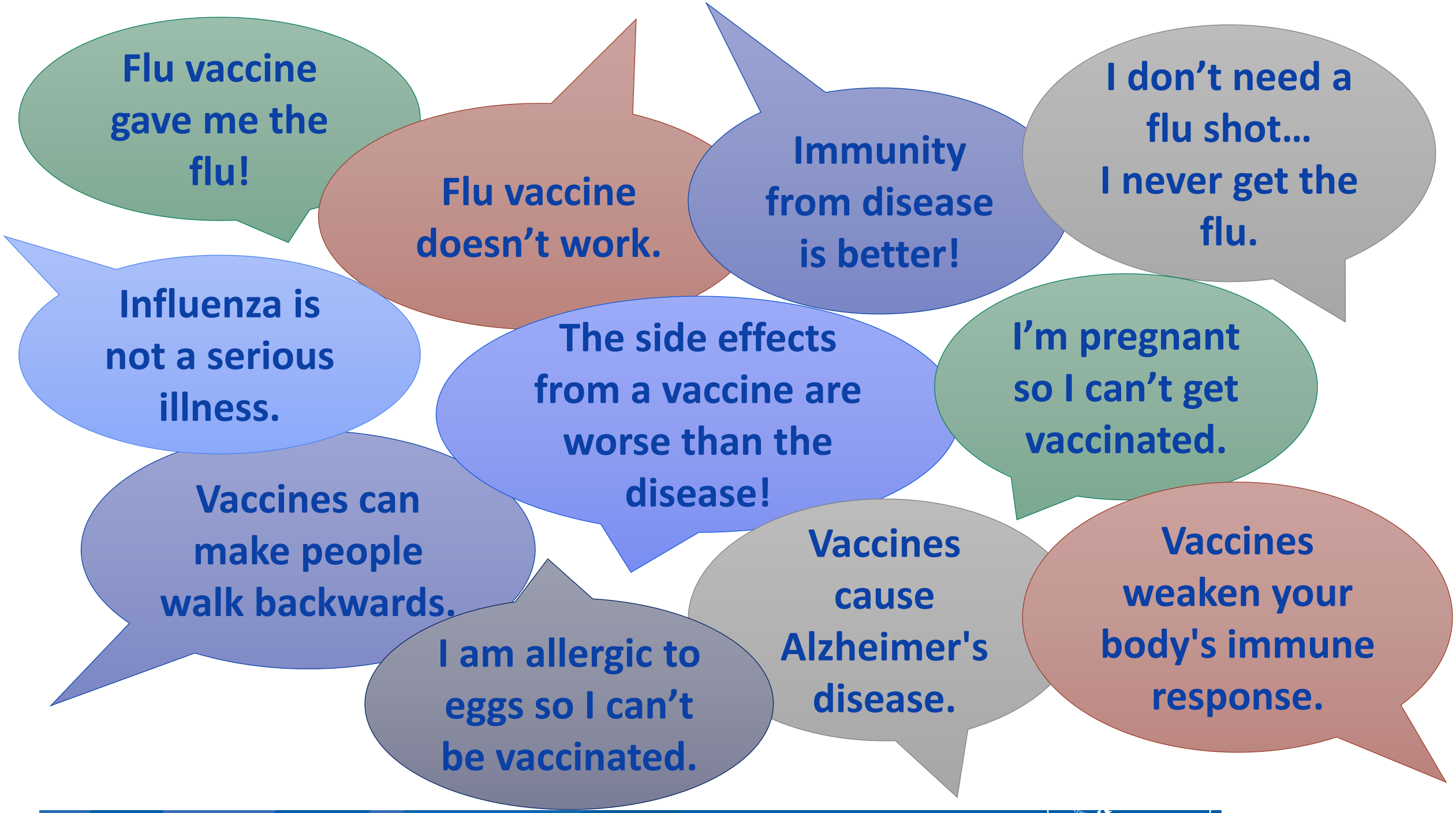
- JoEllen Wolicki is a federal government employee with no financial interest in or conflict with the manufacturer of any product named in this presentation
- The speaker will not discuss the off-label use of any vaccines
- The speaker will not discuss a vaccine not currently licensed by the FDA

Vaccines Are Good ☺ Disease is Bad ☹

- Vaccines protect children and adults from 16 serious diseases and potential complications
- There are record low rates of vaccine-preventable diseases

And Yet….


Flu vaccine gave me the flu!
Flu vaccine doesn't work.
Immunity from disease is better!
I don't need a flu shot… I never get the flu.
Influenza is not a serious illness.
The side effects from a vaccine are worse than the disease!
I'm pregnant so I can't get vaccinated.
Vaccines can make people walk backwards.
I am allergic to eggs so I can't be vaccinated.
Vaccines cause Alzheimer's disease.
Vaccines weaken your body's immune response.

Estimated Vaccination Coverage among Children Aged 19–35 Months, NIS 2016

State/Area	Combined Series* 4:3:1:3:3:1:4
United States	70.7%

*The combined (4:3:1:3:3:1:4) vaccine series includes ≥4 doses of DTaP, ≥3 doses of poliovirus vaccine, ≥1 dose of measles-containing vaccine, full series of Hib vaccine (≥3 or ≥4 doses, depending on product type), ≥3 doses of HepB, ≥1 dose of varicella vaccine, and ≥4 doses of PCV

MMWR 2016;65(39):1065–107

Estimated Vaccination Coverage among Adolescents Aged 13–17 Years, NIS-Teen, 2017

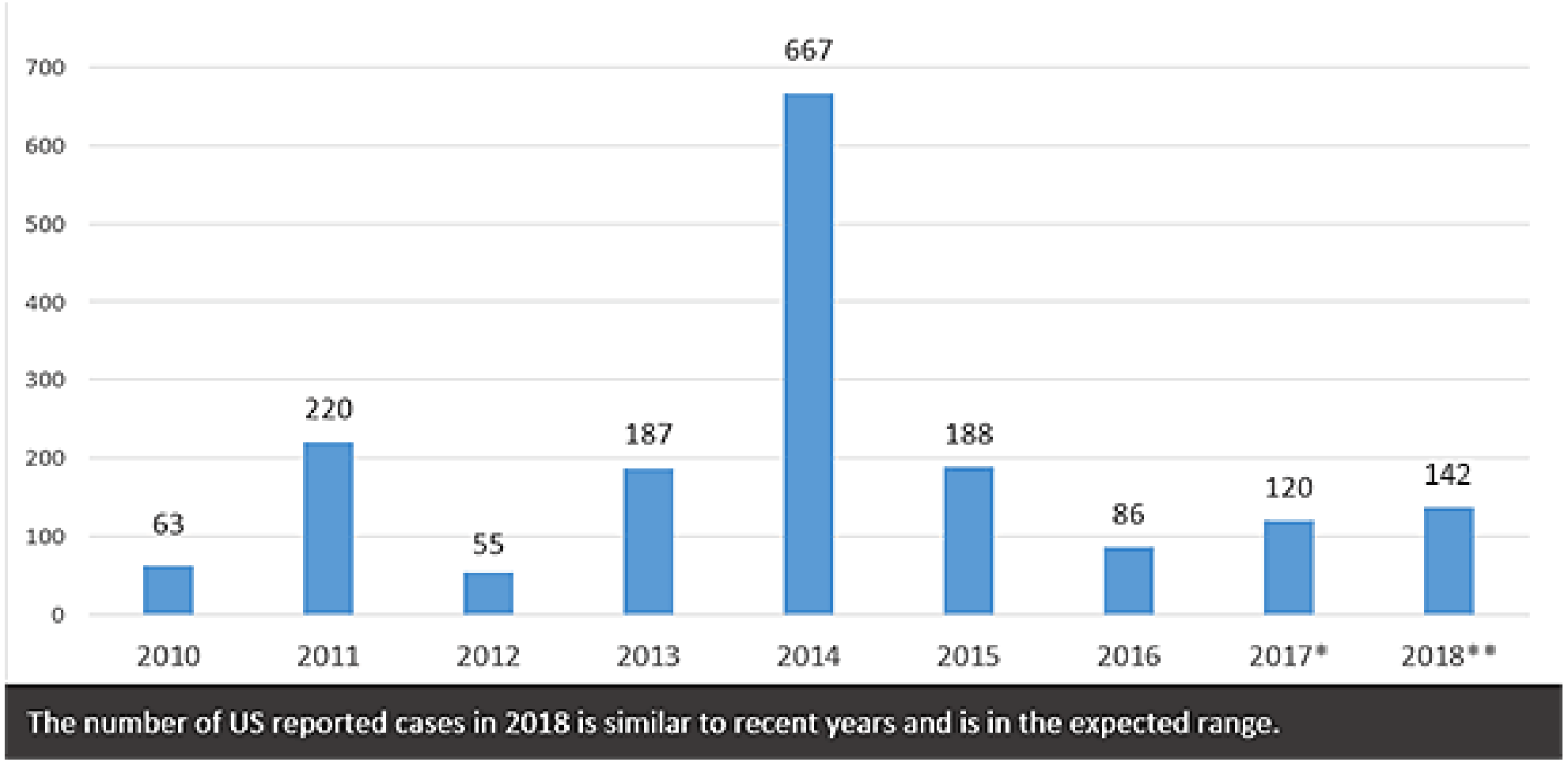
Vaccine	United States
≥ 1 Tdap or Td	88.0%
≥ 1 HPV (M and F)	60.4%
≥ 2 HPV (M and F)	49.2%
≥ 3 HPV (M and F)	37.1%
≥ 1 MenACWY	82.2%

MMWR 65(33):850–858

“Costs” of Under-Vaccination

- **Under-vaccinated tend to remain under-vaccinated**
  - Outbreaks of vaccine preventable diseases
    - Pertussis
    - Varicella
    - Mumps
    - Measles

Number of Measles Cases Reported By Year 2000–2018*



*Cases as of December 30, 2017. Case count is preliminary and subject to change.

**Cases as of October 6, 2018. Case count is preliminary and subject to change. Data are updated monthly.

Measles Cases and Outbreaks www.cdc.gov/measles/cases-outbreaks.html

“Costs” of Vaccine Hesitancy

- **Increased pain/trauma for children from multiple visits**
  - 84% of pediatricians think it is more painful for children to administer vaccines over multiple visits than to give them simultaneously
- **Less time to spend on other preventive health issues**
  - Average visit = 18 minutes
- **Reports of physician burnout**

O’Leary, S. Strategies for talking to Vaccine-Hesitant Parents. Mar 2017

Vaccine Hesitancy and Health Care Personnel

- **Survey among pediatricians nationally**
  - Almost all providers encounter requests to spread out vaccines and, despite concerns, increasing numbers of providers are agreeing to do so
  - 60% reported spending more than 10 minutes discussing vaccines in visits with vaccine-hesitant parents
  - 46% agreed that their job was less satisfying because of the need to discuss vaccines with vaccine-hesitant parents

Kempe A, et al. Physician Response to Parental Requests to Spread Out the Recommended Vaccine Schedule. *Pediatrics* 2015;135(4)

Vaccine Conversations

- **Answering questions can be challenging**
  - Staff is not always prepared for questions
  - Real-life time constraints
  - Frustrating! Correcting misconceptions can successfully reduce misperceptions, but does not always result in vaccination

2007 National Survey of Children's Health. Factors associated with human papillomavirus vaccine-series initiation and health care provider recommendation in U.S. adolescent females. *Vaccine* 2012;30(20):3112-3118

What Usually Happens When There Are Vaccine Questions?

- **The provider might ask why the patient does not want the vaccine**
- **Often patients will state all the reasons they do not want to be vaccinated**
  - In the process, the patient strengthen their resolve against the vaccination
- **The provider is vulnerable to falling into conversation traps**

Communication Traps

Persuasion trap

Data dump trap

Q and A trap

O'Leary, S. Strategies for Talking to Vaccine-Hesitant Parents. *NFID Clinical Vaccinology Course* Mar 2017

Persuasion Trap

- When the provider becomes the champion for the vaccine and tries to convince the hesitant or resistant patient of the benefits
- This usually ends up in an argumentative type of “yes, but” cycle

The Lecture (Data Dump) Trap

- The tendency here is to provide the full story about some aspect of the vaccine
- This often ends up putting people off and raising resistance because it implies that they don't know the full story and you're going to give it to them
- Also, it can be counterproductive because you end up raising concerns that the patient had not previously considered

The Question and Answer Trap

- When the provider begins asking a series of closed questions that require a yes or no answer and does not invite any additional information or thoughts

What Do We Know?
Vaccine Communication Research

Communicating About Vaccines

- There is much research on parents' knowledge, attitudes, and beliefs about vaccines
- Little research on what communication techniques actually *change parents' behavior*
- Research in this area is complicated
- We've been focused on the "what" more than the "how"

Conventional Wisdom

- Improve parents' knowledge and they will make the right decision
- This educational approach assumes human decision-making is rational
- Behavioral economics: human behavior is influenced by deep-seated cognitive biases resistant to rational influence

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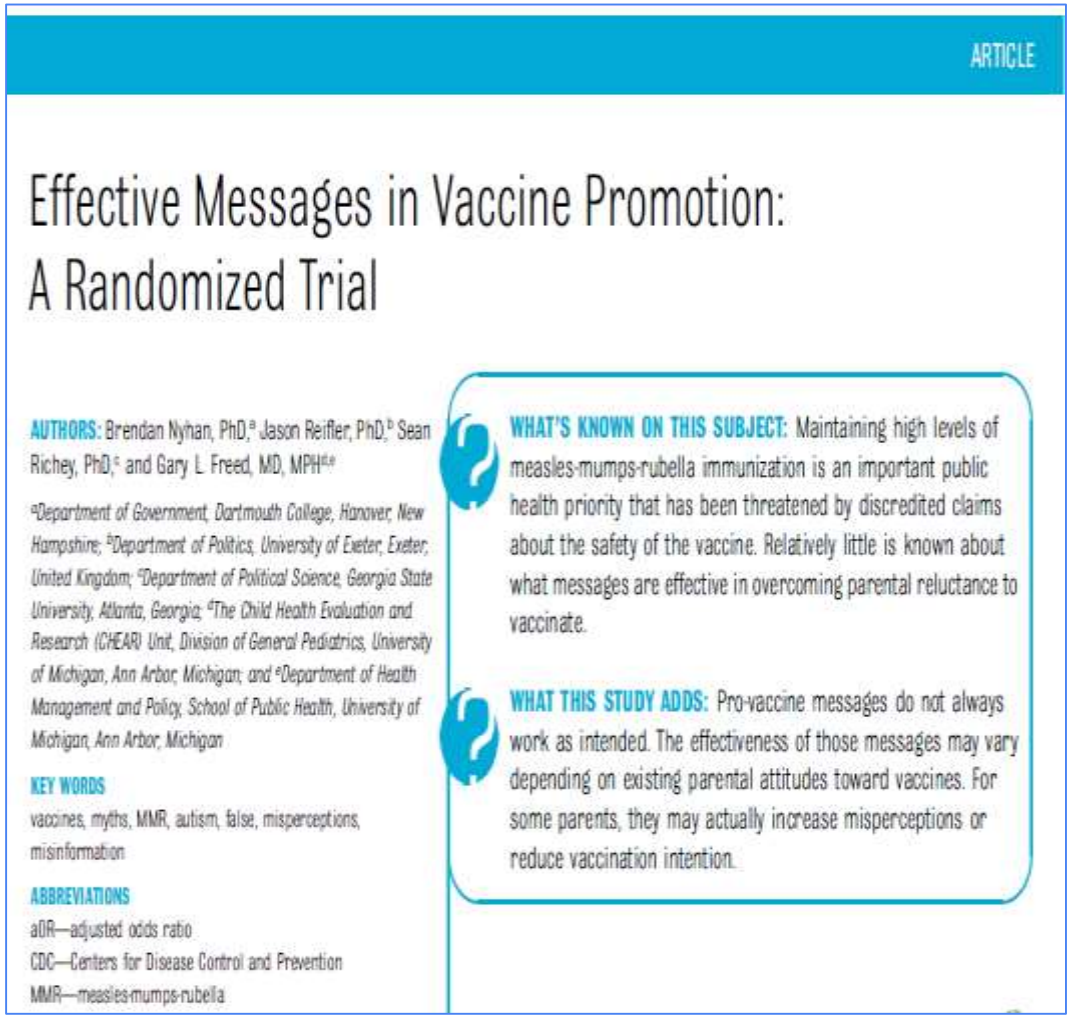
Vaccine Messages Research

- Pro-vaccine messages do not always work as intended
- The effectiveness of those messages may vary depending on existing parental attitudes toward vaccines
- For some parents, they may actually increase misperceptions or reduce vaccination intention



ARTICLE

Effective Messages in Vaccine Promotion: A Randomized Trial

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KEY WORDS

vaccines, myths, MMR, autism, false, misperceptions, misinformation

ABBREVIATIONS

aOR—adjusted odds ratio
CDC—Centers for Disease Control and Prevention
MMR—measles-mumps-rubella

WHAT'S KNOWN ON THIS SUBJECT: Maintaining high levels of measles-mumps-rubella immunization is an important public health priority that has been threatened by discredited claims about the safety of the vaccine. Relatively little is known about what messages are effective in overcoming parental reluctance to vaccinate.

WHAT THIS STUDY ADDS: Pro-vaccine messages do not always work as intended. The effectiveness of those messages may vary depending on existing parental attitudes toward vaccines. For some parents, they may actually increase misperceptions or reduce vaccination intention.

Effective Messages in Vaccine Promotion: A randomized Trail Nylan, B, et al *Pediatrics* April 2014, Vol 124

Vaccine Messages Research

- **Parents were randomly assigned to receive 1 of 4 interventions**
  - Info from CDC explaining lack of evidence that MMR vaccine causes autism
  - Info on measles, mumps and rubella from VIS
  - Images of children with measles, mumps, and rubella
  - Dramatic narrative about severe case of measles; or to a control group

Effective Messages in Vaccine Promotion: A randomized Trail Nylan, B, et al *Pediatrics* April 2014, Vol 124

Vaccine Messages Research

- None of the interventions increased parental intent to vaccinate
- Refuting claims of MMR/autism link decreased intent to vaccinate among parents who were least favorable toward vaccination
- Images of sick children increased expressed belief in vaccine/autism link
- Dramatic narrative increased self-reported belief in serious vaccine side effects

Effective Messages in Vaccine Promotion: A randomized Trail Nylan, B, et al *Pediatrics* April 2014, Vol 124

What Does This Mean?

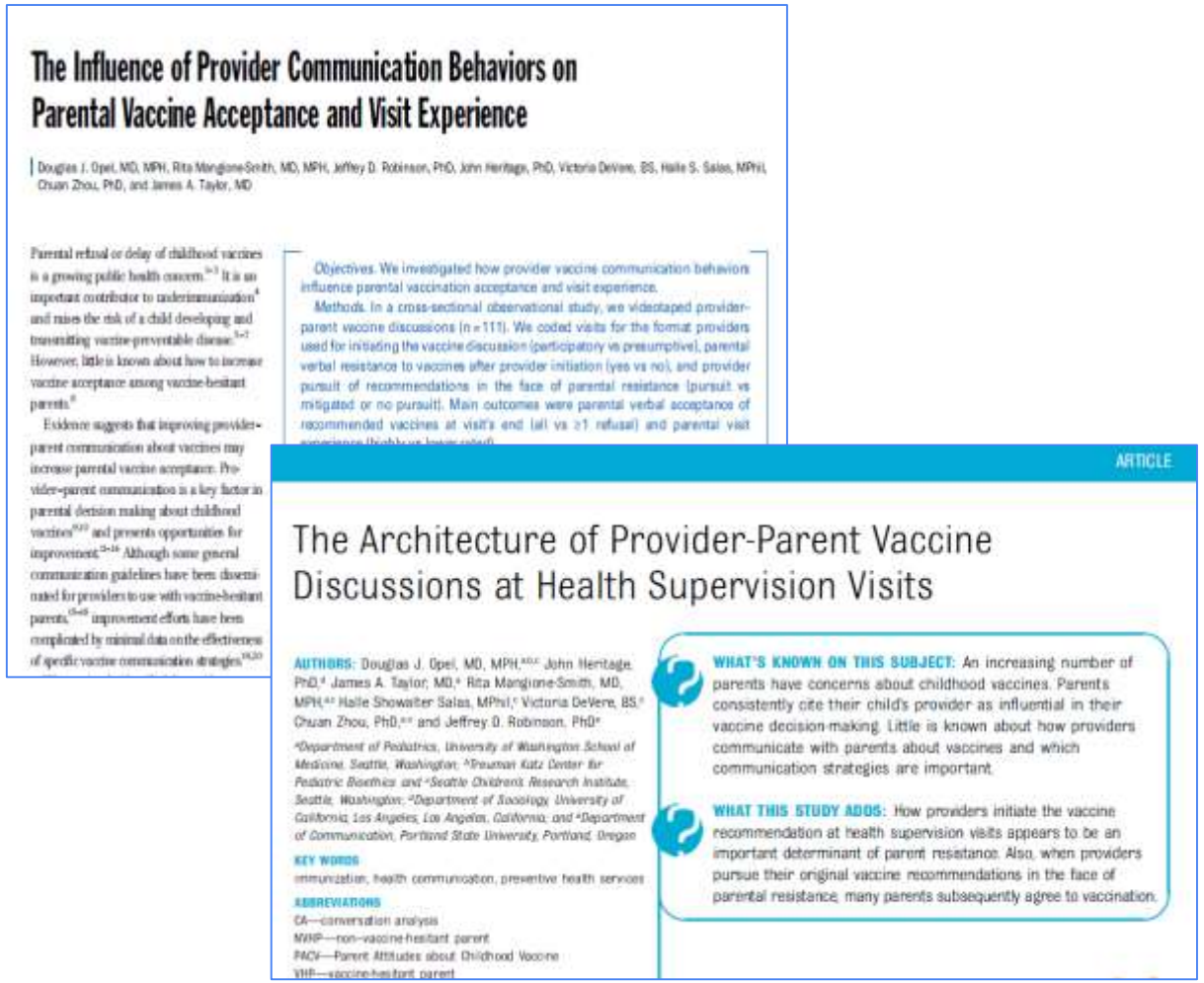
- **Becoming increasingly clear that simply correcting knowledge gaps–whether through informational brochures, community campaigns, or direct provider conversations–is often not enough to address parents' concerns about vaccines**

- **Investigators are now focusing on developing interventions to improve vaccination uptake focused on how people actually think rather than how they ought to think**
  - Remember–correcting misconceptions, can successfully reduce misperceptions but does not always result in vaccination

O'Leary, S. Strategies for Talking to Vaccine-Hesitant Parents. *NFID Clinical Vaccinology Course* Mar 2017

Beginning the Conversation

- Studies have looked at how provider vaccine communication behaviors influence parental vaccination acceptance and visit experience
- Investigators looked at presumptive versus participatory approaches



The Influence of Provider Communication Behaviors on Parental Vaccine Acceptance and Visit Experience

Douglas J. Opel, MD, MPH, Rita Mangione-Smith, MD, MPH, Jeffrey D. Robinson, PhD, John Heritage, PhD, Victoria DeVere, BS, Halle S. Salas, MPhil, Chuan Zhou, PhD, and James A. Taylor, MD

Parental refusal or delay of childhood vaccines is a growing public health concern.[1–3] It is an important contributor to undervaccination[4] and raises the risk of a child developing and transmitting vaccine-preventable disease.[5–7] However, little is known about how to increase vaccine acceptance among vaccine-hesitant parents.[8]

Evidence suggests that improving provider-parent communication about vaccines may increase parental vaccine acceptance. Provider-parent communication is a key factor in parental decision making about childhood vaccines[9,10] and presents opportunities for improvement.[9–16] Although some general communication guidelines have been disseminated for providers to use with vaccine-hesitant parents,[15,16] improvement efforts have been complicated by minimal data on the effectiveness of specific vaccine communication strategies.[9,10]

Objectives. We investigated how provider vaccine communication behaviors influence parental vaccination acceptance and visit experience.

Methods. In a cross-sectional observational study, we videotaped provider-parent vaccine discussions (n = 111). We coded visits for the format providers used for initiating the vaccine discussion (participatory vs presumptive), parental verbal resistance to vaccines after provider initiation (yes vs no), and provider pursuit of recommendations in the face of parental resistance (pursuit vs mitigated or no pursuit). Main outcomes were parental verbal acceptance of recommended vaccines at visit's end (all vs ≥1 refusal) and parental visit

ARTICLE

The Architecture of Provider-Parent Vaccine Discussions at Health Supervision Visits

AUTHORS: Douglas J. Opel, MD, MPH,[a,b,c] John Heritage, PhD,[d] James A. Taylor, MD,[a] Rita Mangione-Smith, MD, MPH,[a,c] Halle Showalter Salas, MPhil,[a] Victoria DeVere, BS,[a] Chuan Zhou, PhD,[a,c] and Jeffrey D. Robinson, PhD[e]

[a]Department of Pediatrics, University of Washington School of Medicine, Seattle, Washington; [b]Treuman Katz Center for Pediatric Bioethics and [c]Seattle Children's Research Institute, Seattle, Washington; [d]Department of Sociology, University of California, Los Angeles, Los Angeles, California; and [e]Department of Communication, Portland State University, Portland, Oregon

KEY WORDS
immunization, health communication, preventive health services

ABBREVIATIONS
CA—conversation analysis
NVHP—non–vaccine-hesitant parent
PACV—Parent Attitudes about Childhood Vaccine
VHP—vaccine-hesitant parent

WHAT'S KNOWN ON THIS SUBJECT: An increasing number of parents have concerns about childhood vaccines. Parents consistently cite their child's provider as influential in their vaccine decision-making. Little is known about how providers communicate with parents about vaccines and which communication strategies are important.

WHAT THIS STUDY ADDS: How providers initiate the vaccine recommendation at health supervision visits appears to be an important determinant of parent resistance. Also, when providers pursue their original vaccine recommendations in the face of parental resistance, many parents subsequently agree to vaccination.

The Influenza of Provider Communication Behaviors on Parental Vaccine Acceptance and Visit Experience

How You Start the Conversation Matters

- **The best predictor of vaccination was how the provider started the conversation**
  - For both vaccine hesitant and non-hesitant patients

Opel DJ, Smith R, et al. The Influence of Provider Communication Behaviors on Parental Vaccine Acceptance and Visit Experience. *American Journal of Public Health* Oct 2015

Participatory versus Presumptive Approach

- **Participatory: provides more decision-making latitude**
  - Example: “Have you thought about what shots you’d like today?”

- **Presumptive: presupposes that parents would get the child vaccinated**
  - Example: “We have some vaccines due today.”

Participatory versus Presumptive Approach

- Among ALL parents, a larger proportion resisted vaccine recommendations when providers used a participatory rather than presumptive initiation format (83% vs 26%; P < .001)

- This finding remained true among vaccine-hesitant parents (89% vs 30%; P < .001)

Opel DJ, et al. The Architecture of Provider-Parent Vaccine Discussion at Health Supervision Visits. *Pediatrics* 2013;132:1037

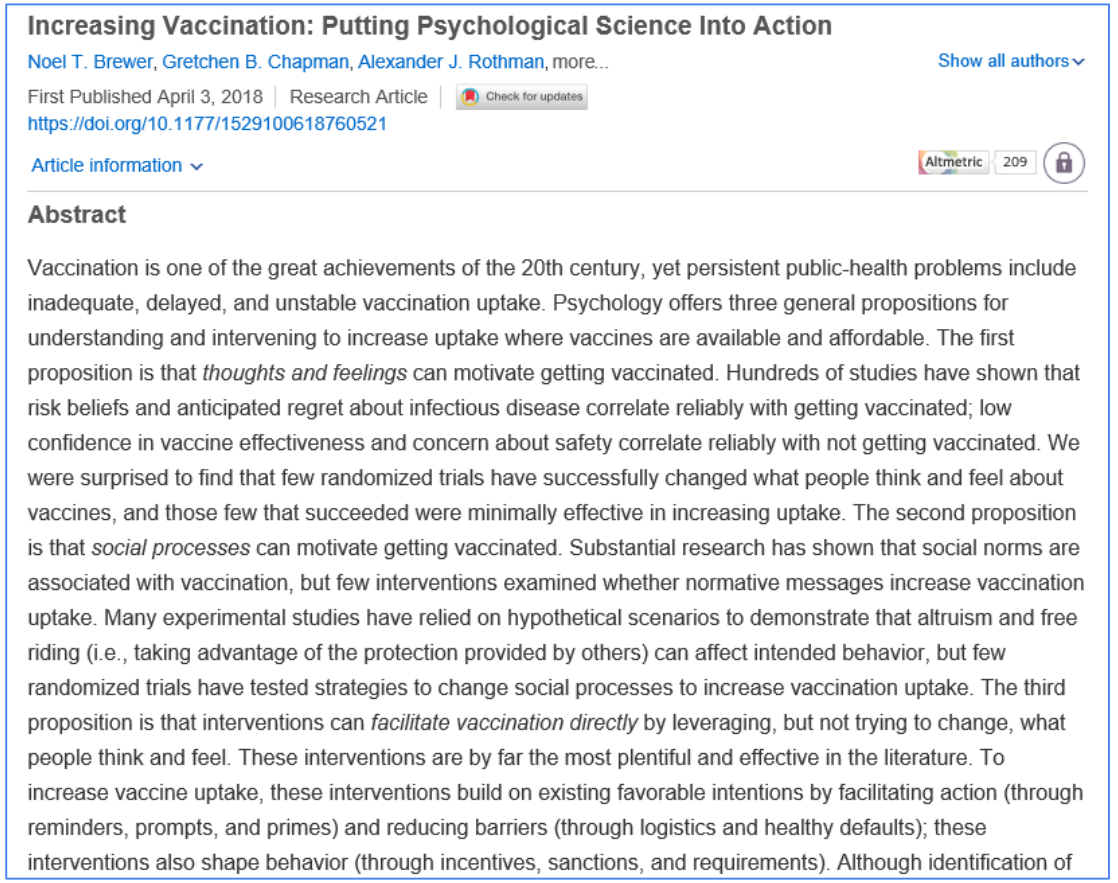
Why Presumptive Style Might Be Better

- Most patients perceive decisions about vaccination to be complicated
- As humans, when we make decisions we perceive to be complicated, we tend to have a status quo bias (also called a default bias), meaning we go with what is expected or “normal”
- Using a presumptive approach, patients are made to feel that vaccination is what most people do, and it is the socially acceptable “norm”

O’Leary, S. Strategies for Talking to Vaccine-Hesitant Parents. *NFID Clinical Vaccinology Course* Mar 2017

Social Norms

- **Social norms can have a powerful influence on health behaviors**
- **There is some evidence that suggests this can extend to vaccination**
  - 1990's study suggested university students were more likely to receive influenza vaccine is they were told most students opted for flu vaccination



Increasing Vaccination: Putting Psychological Science Into Action

Noel T. Brewer, Gretchen B. Chapman, Alexander J. Rothman, more...

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Article information

Altmetric 209

Abstract

Vaccination is one of the great achievements of the 20th century, yet persistent public-health problems include inadequate, delayed, and unstable vaccination uptake. Psychology offers three general propositions for understanding and intervening to increase uptake where vaccines are available and affordable. The first proposition is that *thoughts and feelings* can motivate getting vaccinated. Hundreds of studies have shown that risk beliefs and anticipated regret about infectious disease correlate reliably with getting vaccinated; low confidence in vaccine effectiveness and concern about safety correlate reliably with not getting vaccinated. We were surprised to find that few randomized trials have successfully changed what people think and feel about vaccines, and those few that succeeded were minimally effective in increasing uptake. The second proposition is that *social processes* can motivate getting vaccinated. Substantial research has shown that social norms are associated with vaccination, but few interventions examined whether normative messages increase vaccination uptake. Many experimental studies have relied on hypothetical scenarios to demonstrate that altruism and free riding (i.e., taking advantage of the protection provided by others) can affect intended behavior, but few randomized trials have tested strategies to change social processes to increase vaccination uptake. The third proposition is that interventions can *facilitate vaccination directly* by leveraging, but not trying to change, what people think and feel. These interventions are by far the most plentiful and effective in the literature. To increase vaccine uptake, these interventions build on existing favorable intentions by facilitating action (through reminders, prompts, and primes) and reducing barriers (through logistics and healthy defaults); these interventions also shape behavior (through incentives, sanctions, and requirements). Although identification of

Increasing Vaccination: Putting Psychological Science Into Action Brewer T, Chapman G, et al *Psychol Sci Public Interest*. 2017 Dec;18(3):149-207.

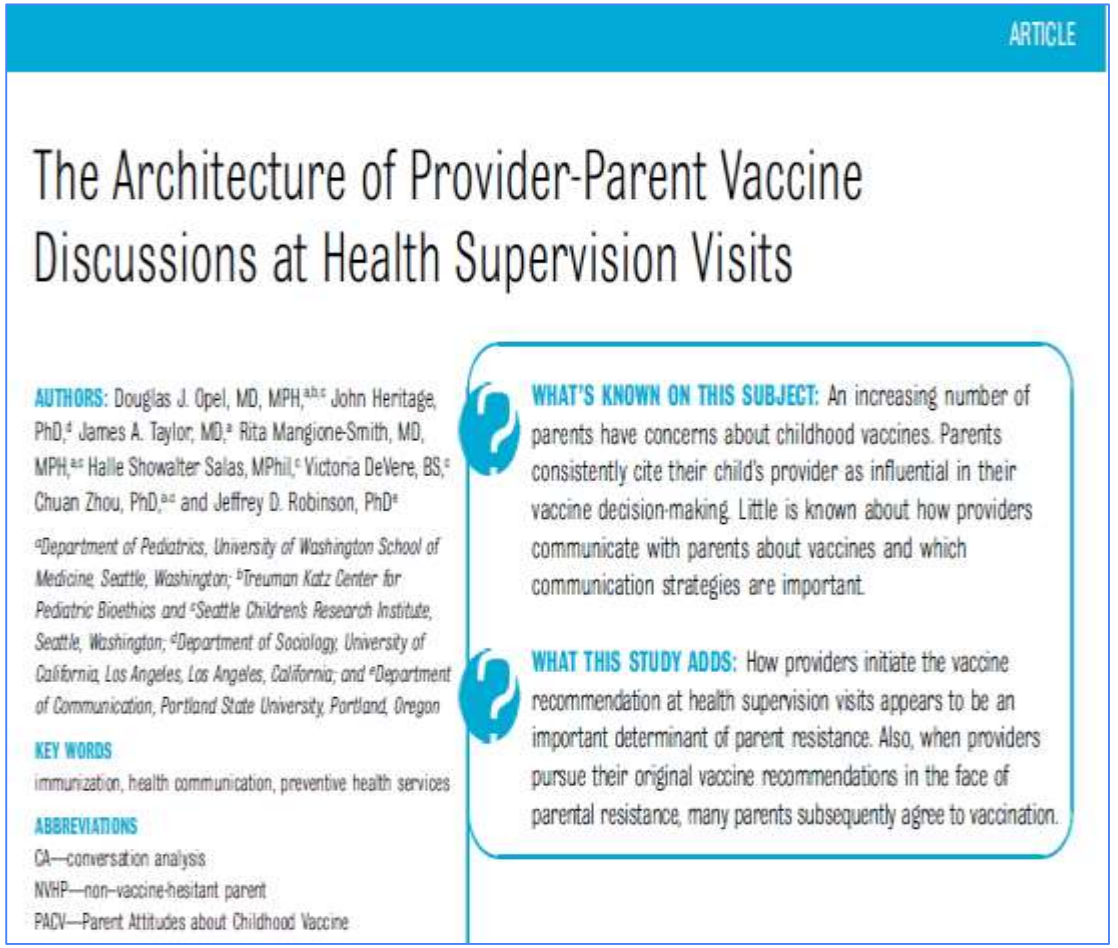
What YOU Say Matters

- Providers are a patient's most trusted source of information on vaccines
- Research shows a patient who receives a strong recommendation from a provider is 4–5 times more likely to be vaccinated*
- "Bundle" all needed vaccines into the same recommendation

*2007 National Survey of Children's Health. Factors associated with human papillomavirus vaccine-series initiation and health care provider recommendation in U.S. adolescent females. *Vaccine* 2012;30(20):3112-3118

What YOU Say Matters Part 2

- When providers maintain their original vaccine recommendations in the face of parental resistance, many parents subsequently agree to vaccination



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The Architecture of Provider-Parent Vaccine Discussions at Health Supervision Visits Opel, DJ, et al *PEDIATRICS* Volume 132, Number 6, December 2013

What You Say Matters AND How You Say It Matters

- **Good recommendation = simple, strong, bundled, and personalized**
  - "Now that Danny is 11, he is due for vaccinations to help protect against meningitis, HPV cancers, and whooping cough. We'll give those shots during today's visit."

VERSUS

  - "Research suggests that persons vaccinated with HPV vaccine have a decreased chance of contracting HPV diseases such as penile and anogenital cancers or genital warts. Would you like Danny vaccinated today?"

Social Norms and Vaccination Conversations

- **Provider recommendation can create and communicate social norm for vaccination by:**
  - Presumptive style
  - Strong recommendation
  - Indicating most patients do vaccinate
- **Communicates the expectation is TO vaccinate**

Communication Best Practices

Real Life and Talking About Vaccines

- **Consistent messages to patients from all staff is difficult to manage, time consuming**
- **Time for vaccine questions and answers during clinical encounters is limited**
- **Staff can have differing responses to vaccine conversations:**
  - Defeated if, after answering questions, the child or patient goes unvaccinated
  - Inadequate; not up to the task
- **Vaccine conversations need to be effective AND efficient**

Framing the Conversation

- Several different communication approaches or frameworks are taught during medical and nursing programs
- No evidence has established a single, best practice to address parents concerns

Increasing Vaccination: Putting Psychological Science Into Action

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Motivational Interviewing

- **Motivational interviewing has not been tested and proven effective for convincing those who are hesitant about vaccination**

- **HOWEVER, it has been shown to be effective in other health interventions, including:**
  - Diabetes self care
  - Smoking cessation
  - Cognitive behavioral therapy

O'Leary, S. Strategies for Talking to Vaccine-Hesitant Parents. *NFID Clinical Vaccinology Course* Mar 2017

Motivational Interviewing

- **Motivational interviewing (MI) is a patient-centered, guiding communication style for enhancing a person's own motivation for change or behavioral activation**
- **Engages the patient respectfully and fully in the discussion**
- **The 4 elements include:**
  - Empathy
  - Collaboration
  - Evocation
  - Support for autonomy

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Using Motivational Interviewing for Vaccine Discussions

- **Motivational interviewing includes:**
  - Open-ended questions
  - Affirmations
  - Reflection
  - Summary
- **Remember to:**
  - Include a presumptive approach
  - Strong, simple and personalized recommendation
  - Social norms

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MI Case Study: Vaccine Conversations

- **11 year old girl comes to your facility for adolescent vaccines**
- **You start the conversation using the presumptive style**
  - “Great, you’re here for vaccines. We can do her tetanus/diphtheria/pertussis vaccine, her HPV vaccine, her meningitis vaccine and flu vaccine today.”

MI Case Study: Vaccine Conversations

- Her mother says, “We are okay with the tetanus, meningitis and flu shot, but I think we’re going to hold off on HPV vaccine.”

MI Case Study: Vaccine Conversations

- HCP then asks in a non-threatening way to share the patient's concerns

"It sounds like you have concerns about HPV vaccine. I've has a number of parents with questions about this vaccine. Would you mind sharing your concern?"

"Well, I've heard that HPV is sexually transmitted and she is a long way from having sex, so I don't think she needs it."

MI Case Study: Vaccine Conversations

- **HCP reflects back what the patient is saying to be sure he/she understands (empathy) and summarizes what has been heard before proceeding, again with permission, to make a recommendation**

"If I understand you correctly, you are concerned that she is too young for HPV vaccine because it's a sexually transmitted disease. I had this same concern with the vaccine was first licensed. I've researched this. Can I share what I learned?"

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MI Case Study: Vaccine Conversations Strong Recommendation

- It is true that HPV is a sexually transmitted but the vaccine is really about preventing disease. And HPV causes cancer. HPV vaccine prevents cancer. Almost everyone is exposed to this virus, so the vaccine is an important cancer prevention tool for everyone."

- AND If possible, put the concern into a perspective the family can relate to

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Additional Strategy

- Use examples the parent/patient can relate to

“Just like we use a seat belt every time we drive a car–not just in the winter when it snows. We give HPV vaccine now, BEFORE there is any chance she can be exposed to HPV.”

MI Case Study: Vaccine Conversations
Personal Recommendation and Social Norm

- Now, its time for a simple, strong, and personalized recommendation
- End the conversation with an open-ended question

“I did not hesitate to vaccinate my children and most of my patients are getting the vaccine. And I recommend HPV vaccine for her – to prevent cancer and help her stay healthy. Now that we have talked about it, what do you think?”

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Motivational Interviewing Summary

- **Engage the patient respectfully and fully in the discussion**
- **The four elements of the MI spirit—empathy, collaboration, evocation, and support for autonomy**
- **Core MI skills like open-ended questions and reflections**
- **Include other strategies:**
  - Presumptive style
  - Strong, bundled, and personalized recommendation
  - Social norms and focusing on the disease that is prevented

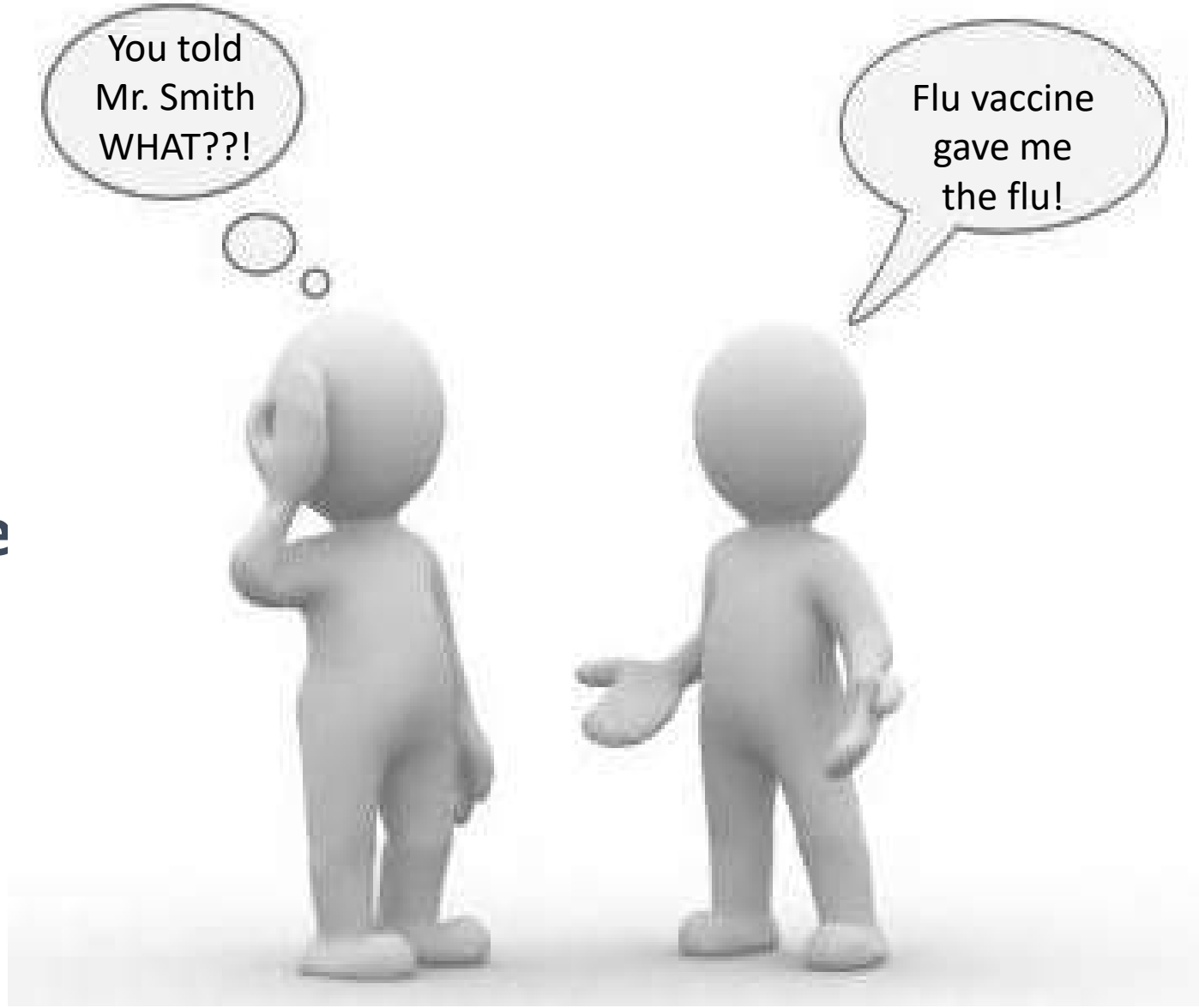
Additional Supporting Strategies

Create a Positive Vaccine Culture

- **All staff have a role creating and maintaining a positive vaccine culture**
- **Standardize training protocols for ALL staff–**
  - During orientation for new staff
  - When new vaccines or vaccine products are added to your inventory
  - When recommendations are updated

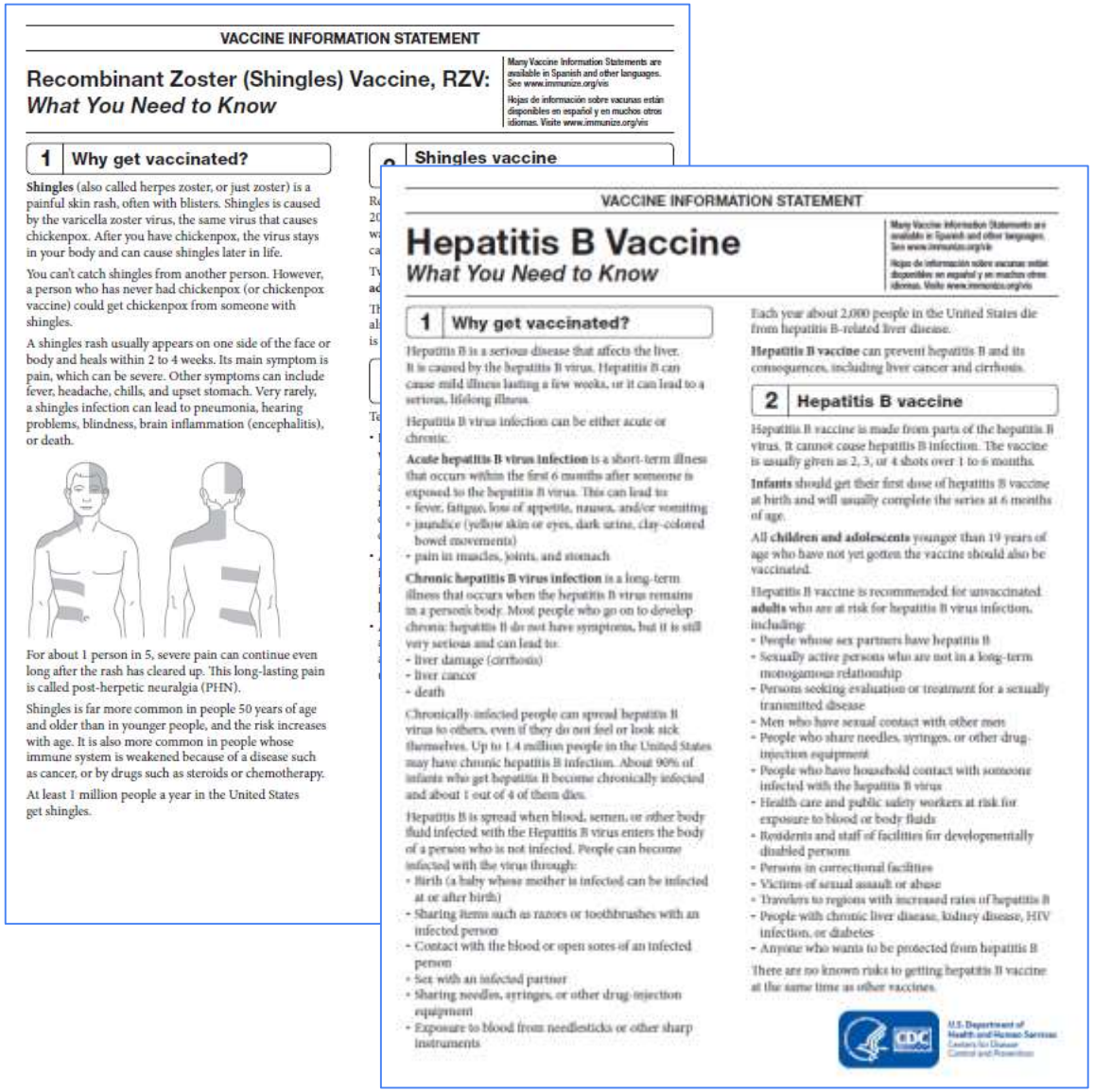
Positive Vaccine Culture

- Consistent messages from ALL staff are critical
- Use talking points to get everyone on the same page



Educate Using Vaccine Information Statements (VIS)

- **Recently updated VIS include:**
  - DTaP
  - HepB
  - MMR
  - MMRV
  - Rotavirus
  - Varicella
  - Zoster–Zostavax
  - Zoster–Shingrix



VACCINE INFORMATION STATEMENT

Recombinant Zoster (Shingles) Vaccine, RZV:
What You Need to Know

Many Vaccine Information Statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1 Why get vaccinated?

Shingles (also called herpes zoster, or just zoster) is a painful skin rash, often with blisters. Shingles is caused by the varicella zoster virus, the same virus that causes chickenpox. After you have chickenpox, the virus stays in your body and can cause shingles later in life.

You can't catch shingles from another person. However, a person who has never had chickenpox (or chickenpox vaccine) could get chickenpox from someone with shingles.

A shingles rash usually appears on one side of the face or body and heals within 2 to 4 weeks. Its main symptom is pain, which can be severe. Other symptoms can include fever, headache, chills, and upset stomach. Very rarely, a shingles infection can lead to pneumonia, hearing problems, blindness, brain inflammation (encephalitis), or death.

For about 1 person in 5, severe pain can continue even long after the rash has cleared up. This long-lasting pain is called post-herpetic neuralgia (PHN).

Shingles is far more common in people 50 years of age and older than in younger people, and the risk increases with age. It is also more common in people whose immune system is weakened because of a disease such as cancer, or by drugs such as steroids or chemotherapy.

At least 1 million people a year in the United States get shingles.

2 Shingles vaccine

VACCINE INFORMATION STATEMENT

Hepatitis B Vaccine
What You Need to Know

Many Vaccine Information Statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1 Why get vaccinated?

Hepatitis B is a serious disease that affects the liver. It is caused by the hepatitis B virus. Hepatitis B can cause mild illness lasting a few weeks, or it can lead to a serious, lifelong illness.

Hepatitis B virus infection can be either acute or chronic.

Acute hepatitis B virus infection is a short-term illness that occurs within the first 6 months after someone is exposed to the hepatitis B virus. This can lead to:
- fever, fatigue, loss of appetite, nausea, and/or vomiting
- jaundice (yellow skin or eyes, dark urine, clay-colored bowel movements)
- pain in muscles, joints, and stomach

Chronic hepatitis B virus infection is a long-term illness that occurs when the hepatitis B virus remains in a person's body. Most people who go on to develop chronic hepatitis B do not have symptoms, but it is still very serious and can lead to:
- liver damage (cirrhosis)
- liver cancer
- death

Chronically-infected people can spread hepatitis B virus to others, even if they do not feel or look sick themselves. Up to 1.4 million people in the United States may have chronic hepatitis B infection. About 90% of infants who get hepatitis B become chronically infected and about 1 out of 4 of them dies.

Hepatitis B is spread when blood, semen, or other body fluid infected with the Hepatitis B virus enters the body of a person who is not infected. People can become infected with the virus through:
- Birth (a baby whose mother is infected can be infected at or after birth)
- Sharing items such as razors or toothbrushes with an infected person
- Contact with the blood or open sores of an infected person
- Sex with an infected partner
- Sharing needles, syringes, or other drug injection equipment
- Exposure to blood from needlesticks or other sharp instruments

Each year about 2,000 people in the United States die from hepatitis B-related liver disease.

Hepatitis B vaccine can prevent hepatitis B and its consequences, including liver cancer and cirrhosis.

2 Hepatitis B vaccine

Hepatitis B vaccine is made from parts of the hepatitis B virus. It cannot cause hepatitis B infection. The vaccine is usually given as 2, 3, or 4 shots over 1 to 6 months.

Infants should get their first dose of hepatitis B vaccine at birth and will usually complete the series at 6 months of age.

All **children and adolescents** younger than 19 years of age who have not yet gotten the vaccine should also be vaccinated.

Hepatitis B vaccine is recommended for unvaccinated **adults** who are at risk for hepatitis B virus infection, including:
- People whose sex partners have hepatitis B
- Sexually active persons who are not in a long-term monogamous relationship
- Persons seeking evaluation or treatment for a sexually transmitted disease
- Men who have sexual contact with other men
- People who share needles, syringes, or other drug injection equipment
- People who have household contact with someone infected with the hepatitis B virus
- Health care and public safety workers at risk for exposure to blood or body fluids
- Residents and staff of facilities for developmentally disabled persons
- Persons in correctional facilities
- Victims of sexual assault or abuse
- Travelers to regions with increased rates of hepatitis B
- People with chronic liver disease, kidney disease, HIV infection, or diabetes
- Anyone who wants to be protected from hepatitis B

There are no known risks to getting hepatitis B vaccine at the same time as other vaccines.

Current VIS web site https://www.cdc.gov/vaccines/hcp/vis/current-vis.html

Reminder/Recall and Vaccination Decisions

- **Reminder/recall builds on "favorable intentions" and serve as a cue to action–a vaccine is due now**
- **Reminders are for people who are due for vaccination**
  - The season has arrived- it's time for flu vaccine
  - Can bring to mind intention to get vaccinated
- **Recall are reminders for those who are over due for vaccination**

Increasing Vaccination: Putting Psychological Science Into Action Brewer T, Chapman G, et al *Psychol Sci Public Interest*. 2017 Dec;18(3):149-207.

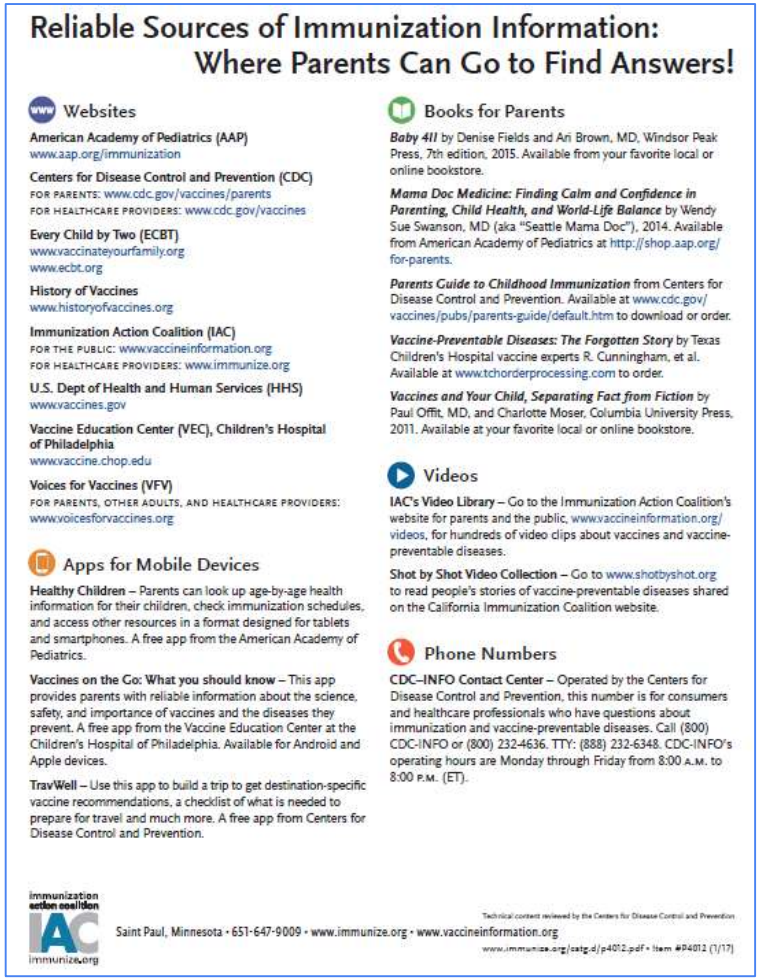
Reminder/Recall and Vaccination Decisions

- **Multiple studies have shown reminder/recall systems improve vaccination coverage:**
  - Across all populations
  - Types of vaccinations
- **Reminder/recall notices can be:**
- **Phone message**
- **Text messages**
- **E-mails**
- **Letters**

Communication Resources

Finding Reliable Resources for HCP

- CDC Immunization Information for HCP www.cdc.gov/vaccines/hcp/index.html
- National Network for Immunization Information www.immunizationinfo.org
- Nurses Who Vaccinate www.nurseswhovaccinate.org



Reliable Sources of Immunization Information: Where Parents Can Go to Find Answers!

Websites

American Academy of Pediatrics (AAP)
www.aap.org/immunization

Centers for Disease Control and Prevention (CDC)
FOR PARENTS: www.cdc.gov/vaccines/parents
FOR HEALTHCARE PROVIDERS: www.cdc.gov/vaccines

Every Child by Two (ECBT)
www.vaccinateyourfamily.org
www.ecbt.org

History of Vaccines
www.historyofvaccines.org

Immunization Action Coalition (IAC)
FOR THE PUBLIC: www.vaccineinformation.org
FOR HEALTHCARE PROVIDERS: www.immunize.org

U.S. Dept of Health and Human Services (HHS)
www.vaccines.gov

Vaccine Education Center (VEC), Children's Hospital of Philadelphia
www.vaccine.chop.edu

Voices for Vaccines (VFV)
FOR PARENTS, OTHER ADULTS, AND HEALTHCARE PROVIDERS:
www.voicesforvaccines.org

Apps for Mobile Devices

Healthy Children – Parents can look up age-by-age health information for their children, check immunization schedules, and access other resources in a format designed for tablets and smartphones. A free app from the American Academy of Pediatrics.

Vaccines on the Go: What you should know – This app provides parents with reliable information about the science, safety, and importance of vaccines and the diseases they prevent. A free app from the Vaccine Education Center at the Children's Hospital of Philadelphia. Available for Android and Apple devices.

TravWell – Use this app to build a trip to get destination-specific vaccine recommendations, a checklist of what is needed to prepare for travel and much more. A free app from Centers for Disease Control and Prevention.

Books for Parents

Baby 411 by Denise Fields and Ari Brown, MD, Windsor Peak Press, 7th edition, 2015. Available from your favorite local or online bookstore.

Mama Doc Medicine: Finding Calm and Confidence in Parenting, Child Health, and World-Life Balance by Wendy Sue Swanson, MD (aka "Seattle Mama Doc"), 2014. Available from American Academy of Pediatrics at http://shop.aap.org/for-parents.

Parents Guide to Childhood Immunization from Centers for Disease Control and Prevention. Available at www.cdc.gov/vaccines/pubs/parents-guide/default.htm to download or order.

Vaccine-Preventable Diseases: The Forgotten Story by Texas Children's Hospital vaccine experts R. Cunningham, et al. Available at www.tchorderprocessing.com to order.

Vaccines and Your Child, Separating Fact from Fiction by Paul Offit, MD, and Charlotte Moser, Columbia University Press, 2011. Available at your favorite local or online bookstore.

Videos

IAC's Video Library – Go to the Immunization Action Coalition's website for parents and the public, www.vaccineinformation.org/videos, for hundreds of video clips about vaccines and vaccine-preventable diseases.

Shot by Shot Video Collection – Go to www.shotbyshot.org to read people's stories of vaccine-preventable diseases shared on the California Immunization Coalition website.

Phone Numbers

CDC–INFO Contact Center – Operated by the Centers for Disease Control and Prevention, this number is for consumers and healthcare professionals who have questions about immunization and vaccine-preventable diseases. Call (800) CDC-INFO or (800) 232-4636. TTY: (888) 232-6348. CDC-INFO's operating hours are Monday through Friday from 8:00 A.M. to 8:00 P.M. (ET).

immunization action coalition
IAC
immunize.org

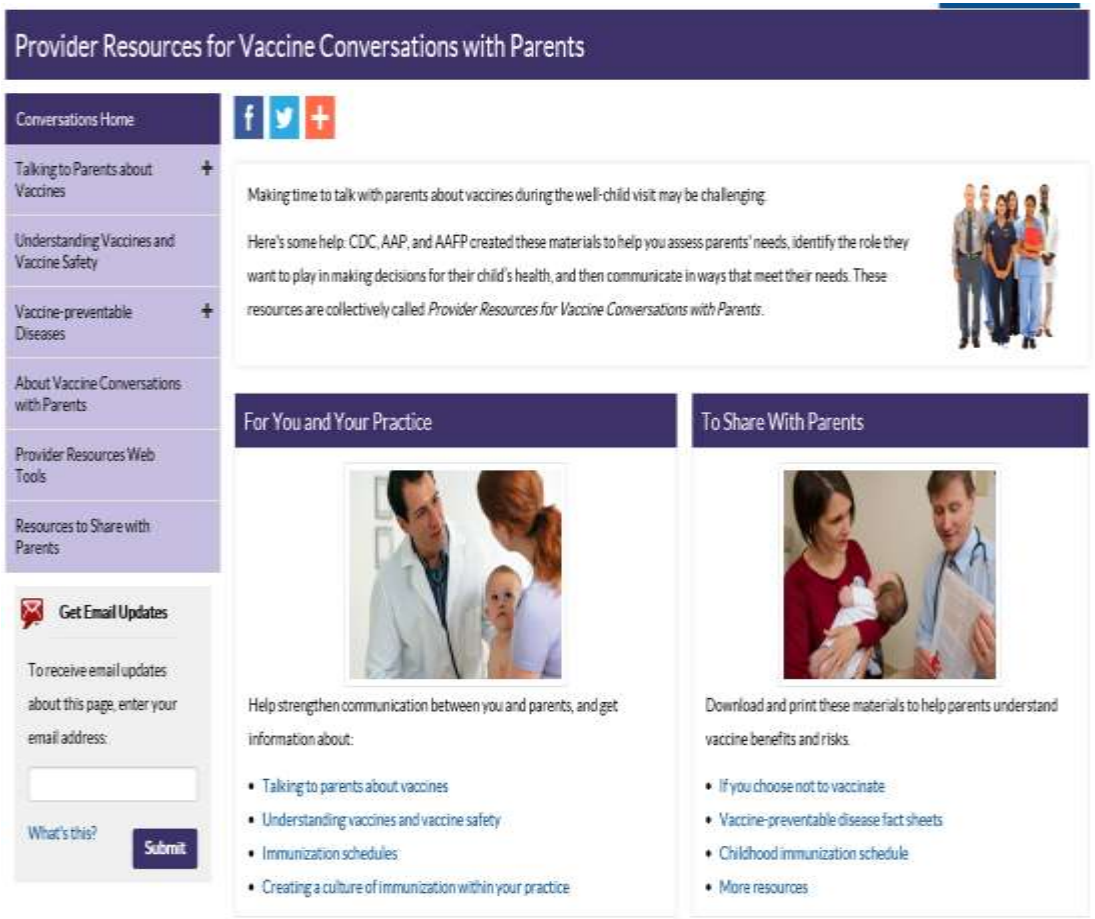
Saint Paul, Minnesota • 651-647-9009 • www.immunize.org • www.vaccineinformation.org

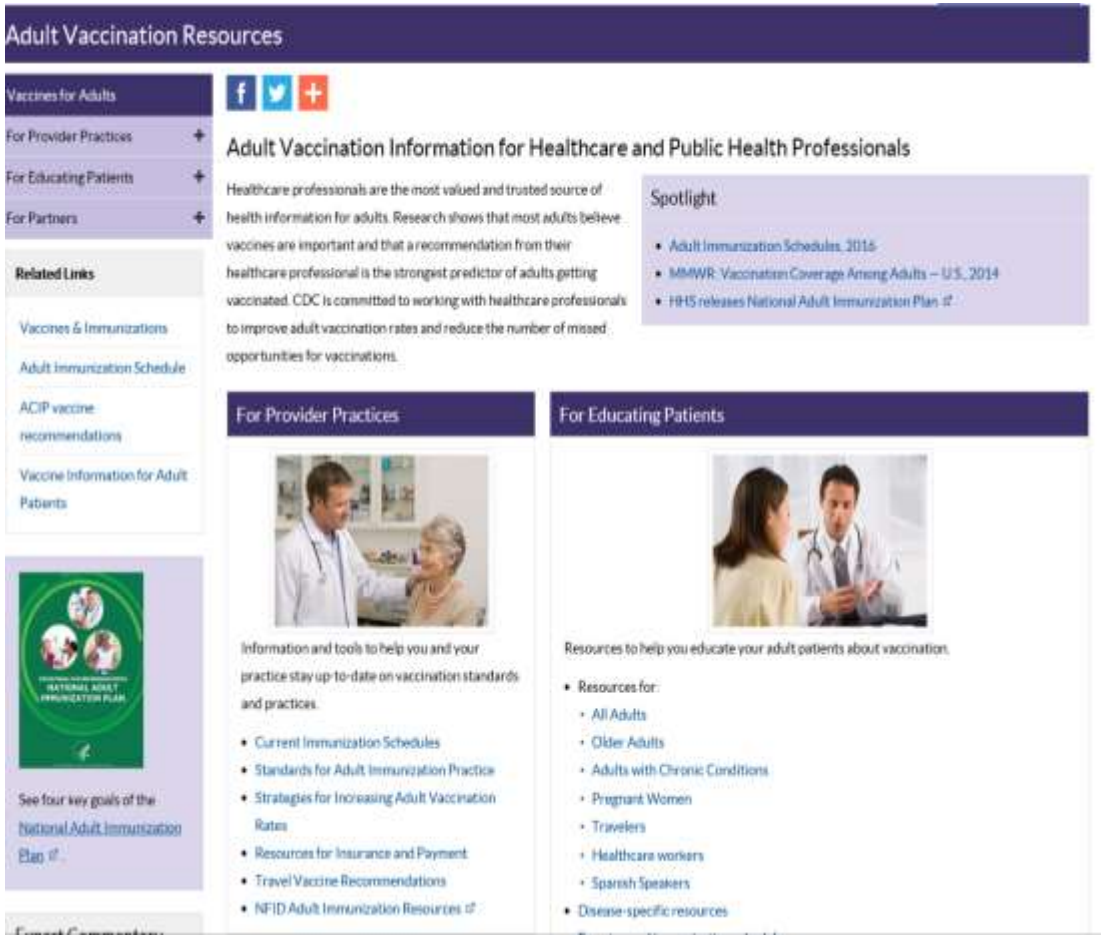
Technical content reviewed by the Centers for Disease Control and Prevention

www.immunize.org/catg.d/p4012.pdf • Item #P4012 (1/17)

Reliable Sources of Immunization Information www.immunize.org/catg.d/p4012.pdf

CDC Vaccine Communication Resources





Provider Resources for Vaccine Conversations with Parents Provider Resources for Vaccine Conversations with Adults

Provider Resources for Vaccine Conversations with Parents www.cdc.gov/vaccines/converstaions

Provider Resources for Vaccine Conversations with Adults www.cdc.gov/vaccines/hcp/adults/index.html

Other Immunization Resources for Providers

- **Immunization Action Coalition** www.immunize.org
  - Responding to Concerns section
  - Talking with Parents section
- **Vaccine Education Center** www.vaccine.chop.edu
- **National Foundation for Infectious Diseases** www.nfid.org
- **American Academy of Pediatrics** www.aap.org/immunizations

Finding Reliable Resources for Patients and Parents

- **Immunization Action Coalition**
  www.vaccineinformation.org

- **Voices for Vaccines**
  www.voicesforvaccines.org

- **Families Fighting Flu**
  www.familiesfightingflu.org

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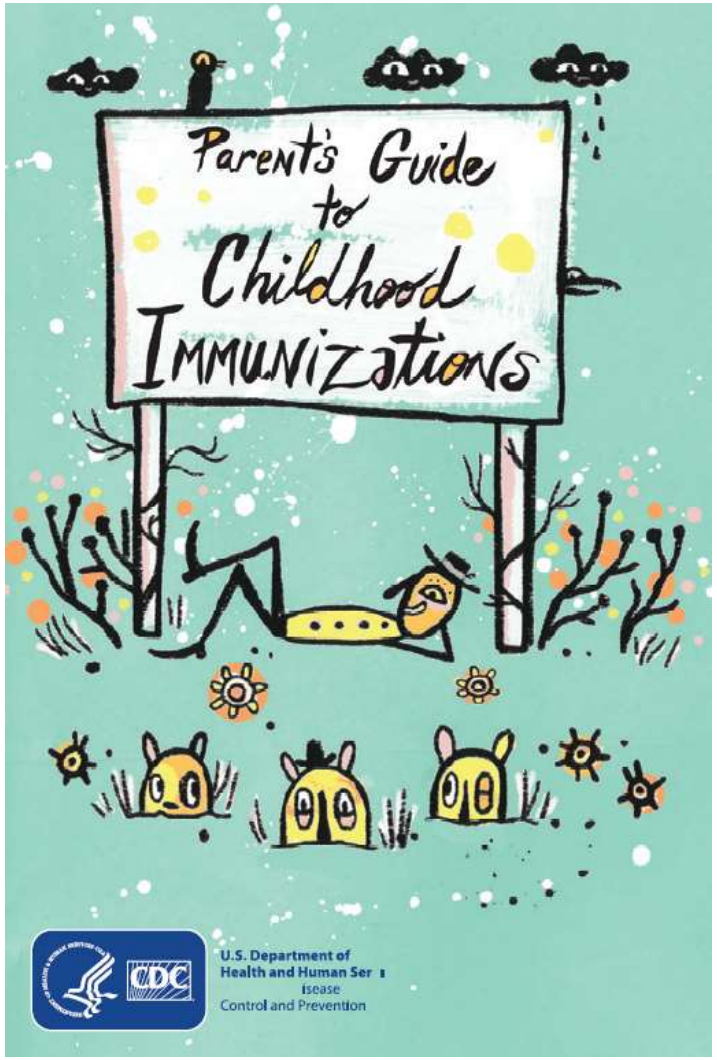
Reliable Sources of Immunization Information www.immunize.org/catg.d/p4012.pdf

Immunization Resources for Parents

- CDC's Parents Guide to Childhood Immunization

www.cdc.gov/pubs/parents-guide

- Every Child By Two
  www.ecbt.org and
  www.vaccinateyourbaby.org



Additional CDC Immunization Resources

- **Questions? E-mail CDC**
  nipinfo@cdc.gov or www.cdc.gov/cdcinfo
- **Vaccines and Immunizations website** www.cdc.gov/vaccines
- **Influenza** www.cdc.gov/flu
- **Vaccine Safety** www.cdc.gov/vaccinesafety

Remember…

- **Create and maintain a vaccine positive culture**
- **Be mindful of the structure of the conversation**
  - Avoid conversational “traps”
- **Start conversations using a presumptive style**
- **Give a strong, bundled recommendation**
- **Cite social norms**
- **Implement a reminder/recall system**

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