

Vaccine Acceptance:

How to talk so parents HCW will listen
and listen so parents HCW will talk
immunize

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Children's Mercy
KANSAS CITY

Disclosures

- CDC, NIH
- Industry
 - GSK
 - Sanofi
 - Pfizer
 - Sequirus





ID Research



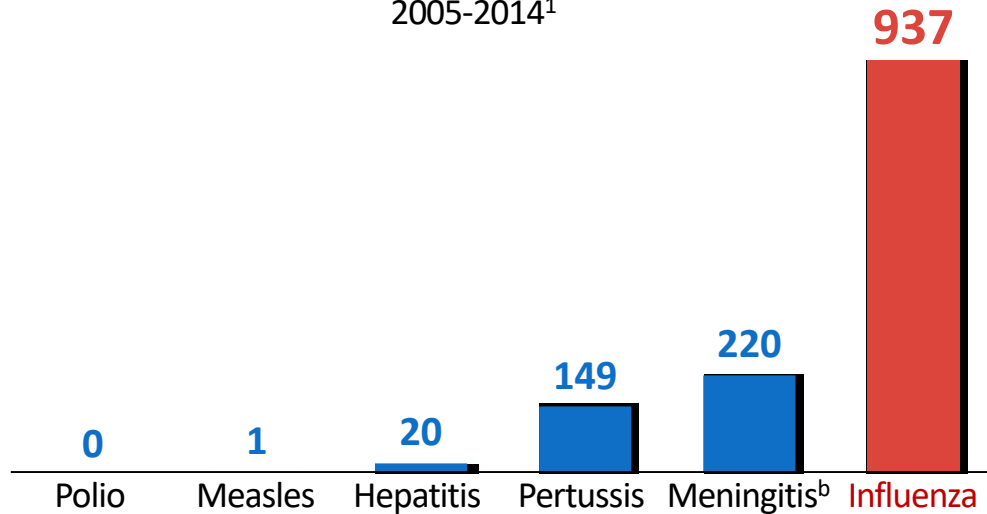
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Where We Fall Short: Children

Influenza is a Leading Cause of Vaccine-Preventable Deaths in **Children** in the US

US pediatric^a deaths from vaccine-preventable diseases, 2005-2014¹



During the past 2 influenza seasons in the United States²

60%

of children who died from the flu **WERE OTHERWISE HEALTHY**

80%

of children who died from the flu **WERE NOT VACCINATED^c**

^a ≤14 years of age.

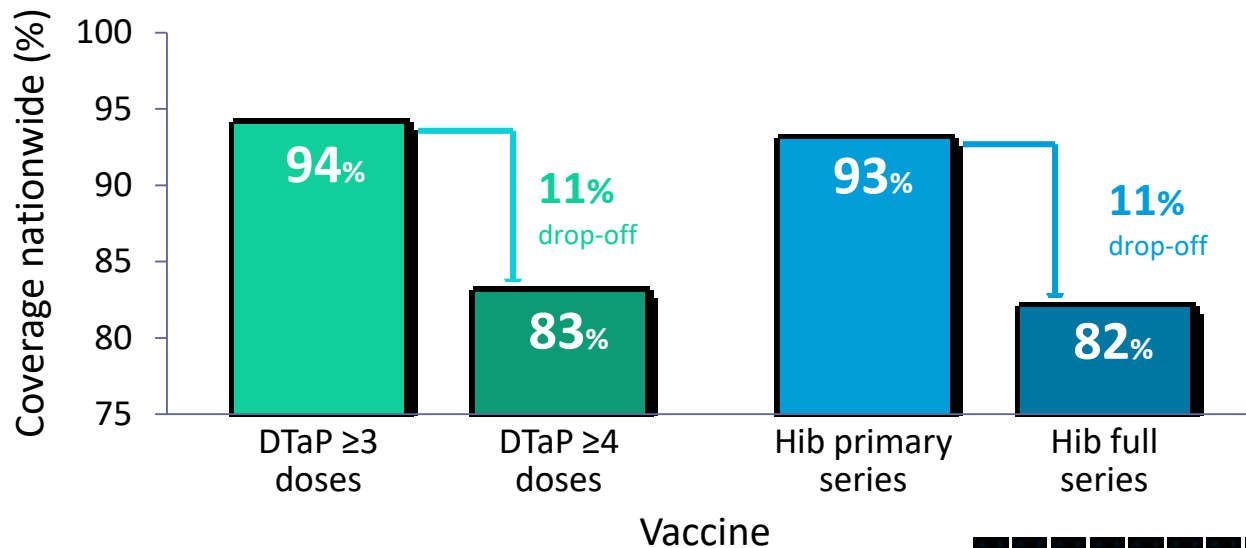
^b Meningococcal meningitis.

^c Based on pediatric patients who died from the flu, whose vaccination status was known and who were eligible to receive a flu vaccine.

References: 1. National Vital Statistics Report. Table 10. Number of deaths from 113 selected causes by age: United States 2005-2014. 2. CDC. Flu view. Influenza-associated pediatric mortality. <https://gis.cdc.gov/GRASP/Fluview/PedFluDeath.html>. Accessed December 13, 2017.

Nationwide Drop-off in Immunization Coverage from Primary Series to Booster for Both DTaP and Hib Vaccines in 2016

Coverage remains below the *Healthy People 2020* target of 90% for at least 4 doses of DTaP and the full series of Hib.^{1,2}

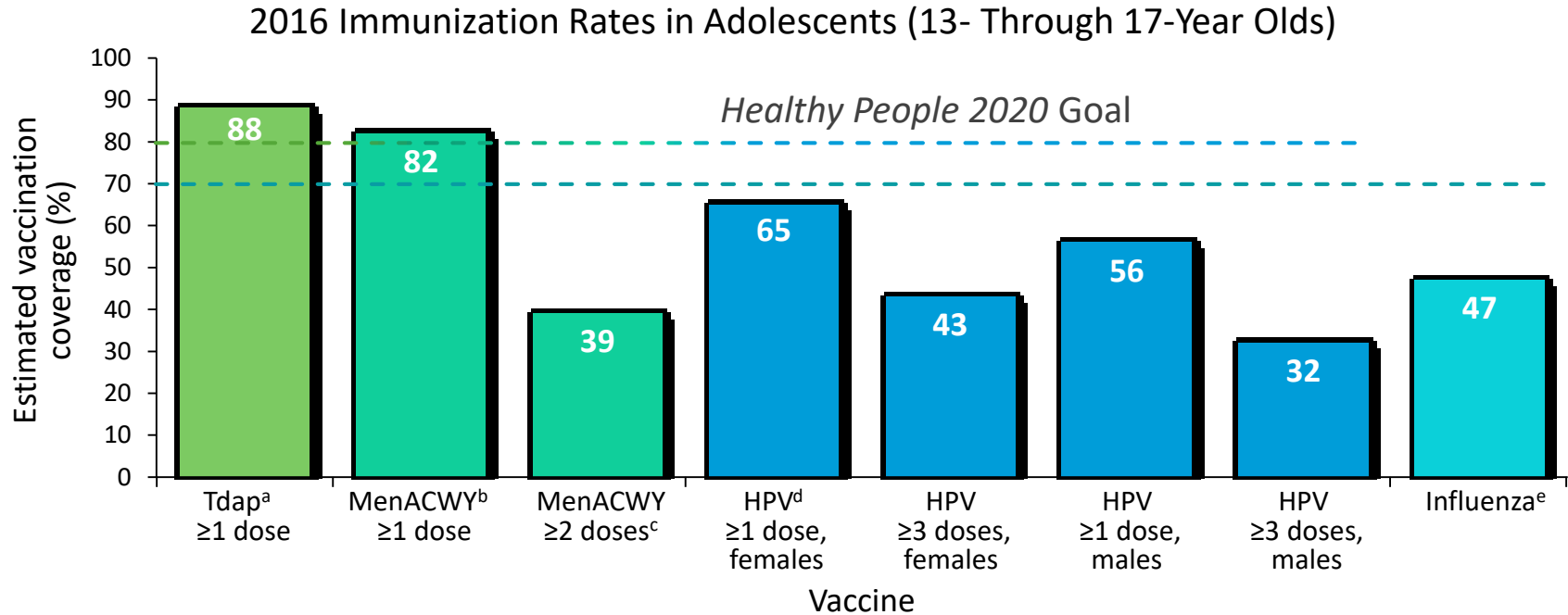


References: 1. CDC. *MMWR*. 2017;66(43):1171-1177.

2. HealthyPeople.gov. <https://www.healthypeople.gov/2020/topics-objectives/topic/immunization-and-infectious-diseases/objectives>. Accessed December 13, 2017. 3. Centers for Disease Control and Prevention (CDC). 2015 Final pertussis surveillance report. <https://www.cdc.gov/pertussis/downloads/pertuss-surv-report-2015.pdf>. Accessed January 17, 2017.



Where We Fall Short: Adolescents^{1,2}








^a Tdap = Tetanus, diphtheria, and acellular pertussis; ^b MenACWY = Quadrivalent meningococcal conjugate vaccine; ^c Second-dose rate based on 17-year-olds; ^d HPV = Human papillomavirus; ^e 2015-2016 influenza season.

References: 1. CDC. *MMWR*. 2017;66(33):874-882. 2. CDC. <https://www.cdc.gov/flu/fluview/coverage-1516estimates.htm#age-group-children>. Accessed December 13, 2017.

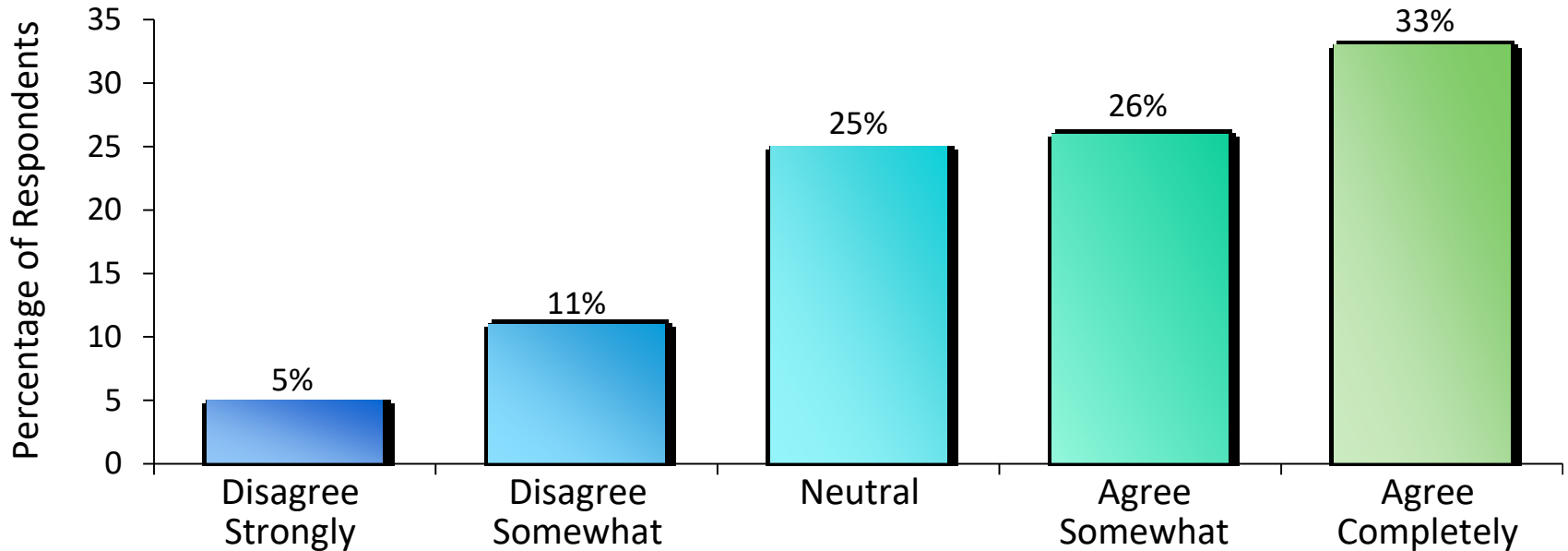
The Range of Parental Attitudes on Immunization

Spend Your Valuable Time Wisely!

These are the parents you need to spend your time with answering questions and reassuring.

 Immunization Advocate	 Go Along to Get Along	 Cautious Acceptor	 Fence-Sitter	 Absolute Refuser
<ul style="list-style-type: none">• Patients and/or parents agree that vaccines are necessary and safe.• Patients and/or parents tend to have a strong relationship with their provider.	<ul style="list-style-type: none">• Patients and/or parents would like to vaccinate their children but may lack detailed knowledge of vaccines and/or have a few questions.	<ul style="list-style-type: none">• Patients and/or parents may have minor concerns about vaccines but ultimately vaccinate their children after a strong provider recommendation and reassurance.	<ul style="list-style-type: none">• Patients and/or parents have significant concerns about vaccines.• Patients and/or parents may refuse or delay vaccines and might have a neutral or distrustful relationship with their provider.	<ul style="list-style-type: none">• Patients and/or parents refuse all vaccines.• Reasons for refusal may vary and may include distrust in the medical system, safety concerns, or religious beliefs.

Most Parents Believe They Should Ask Questions About Vaccines and Alternative Schedules^{1,2a}



^a A total of 1000 respondents, including moms with at least 1 child under 6 years of age, as well as pregnant women, were asked how much they agreed or disagreed with the following statement: "Parents should question doctors and consider alternative schedules."

References: 1. Psyma Market Research. February 2010. 2. Psyma Vaccine Advocacy Concept Testing. April 2010.

Suggested Approaches to Discussing Immunizations With Parents *or Providers*

Summing It Up: What you learned today

- Clinician recommendations are key in influencing vaccine administration^{1,2}
- Making a **strong recommendation** using a *presumptive* format is critical in improving immunization rates^{3,4}
 - This can involve employing specific communication strategies, as well as understanding how to address vaccine hesitancy
- Other methods for taking a **proactive approach** to improving immunization rates
 - Vaccinating at every opportunity (in every season)
 - Implementing immunizations into the workflow
 - Training office staff to be champions for immunizations
 - Standing orders
 - Quality improvement projects measuring immunization rates

References: 1. CDC. *MMWR*. 2009;58(RR-8):1-52. 2. Nichol KL. *Cleve Clin J Med*. 2006;73(11):1009-1015. 3. Opel DJ, et al. *Pediatrics*. 2013;132(6):1037-1046. 4. Opel DJ, et al. *Am J Public Health*. 2015;105(10):1998-2004.

The CASE Model for Conversations About Vaccines¹

- **C**orroborate
 - Acknowledge the parent's concern
 - Find some point of agreement between you and the parent
 - Set the tone for a respectful conversation
- **A**bout me
 - Talk about what you've done to enhance your knowledge and expertise (eg, attended a conference)
- **S**cience^a
 - Describe what science has to say about the topic in question
- **E**xplain and advise
 - Offer your recommendation, based on the science

^a Bear in mind that not every parent will be interested in what science has to say about immunization.

Reference: 1. Singer A. <http://www.vicnetwork.org/wp-content/uploads/VICNetworkWebinarSept-23SlidesFinal1.pdf>. Accessed November 29, 2017.

Tips and Talking Points for Common Scenarios



Parents worry about the well being of their children



Eye contact!



Try it...



Two ears
One mouth



How to Pursue Vaccine Recommendations in the Face of Parental Resistance

- “Help me understand how you came to that decision”
- “Help me understand your reasons for feeling that way”
- “What is it about vaccines that worries you?”
- “Share with me what you’ve read”
- “Share with me what you’ve heard about getting 2 or more shots at once”

Scenarios for Role Play

Common Parental Concerns About Vaccines

- “Overloading of the immune system with too many vaccines at one time”
- “Too much, too soon”
- “Autism or other neurologic side effects”
- “Brain damage due to mercury exposure or aluminum toxicity”
- “Formaldehyde injection”
- “Natural infection is safer than vaccination”
- “Most of the vaccine-preventable diseases don’t even exist anymore”
- “My [fill in the blank] told me not to let you vaccinate my baby”
- “The government has no right to tell me how to raise my child”

A Touch of Humor



TABLE 2. Number of Immunogenic Proteins and Polysaccharides Contained in Vaccines Over the Past 100 Years

1900		1960		1980		2000	
Vaccine	Proteins	Vaccine	Proteins	Vaccine	Proteins	Vaccine	Proteins/ Polysaccharides
<u>Smallpox*</u>	~200	Smallpox	~200	Diphtheria	1	Diphtheria	1
Total	~200	Diphtheria†	1	Tetanus	1	Tetanus	1
		Tetanus‡	1	WC-Pertussis	~3000	AC-Pertussis¶¶	2-5
		WC-Pertussis§	~3000	Polio	15	Polio	15
		<u>Polio </u>	15	Measles¶¶	10	Measles	10
		Total	~3217	Mumps#	9	Mumps	9
				<u>Rubella**</u>	5	Rubella	5
				Total	~3041	Hib††	2
						Varicella‡‡	69
						Pneumococcus§§	8
						<u>Hepatitis B </u>	1
						Total	123-126



Purely educational approaches assumes human decision making is rational (which it clearly is not)

Human behavior is influenced by deep-seated cognitive biases and heuristics resistant to rational influence



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Addressing Concerns About Autism or Other Neurologic Side Effects

- Some parents may still have questions about the 1998 report (retracted by *The Lancet* in 2010) alleging a link between measles, mumps, rubella (MMR) vaccine and autism¹
- Although vaccines are given at around the same time that autism becomes apparent, they do not cause autism²
- To explain the difference between causal and temporal relations, use the rooster analogy²
 - The sun will rise whether or not the rooster crows



Getty Images

References: 1. Healy CM, Pickering LK. *Pediatrics*. 2011;127(suppl 1):S127-S133. 2. Harrington JW. *Consultant Ped*. 2011;10(11):S17-S21.

“The risk I took was calculated, but man, am I bad at math!”

What we ARE afraid of	What we SHOULD be afraid of
 <p>28 attacks avg./year</p>	 <p>4,500,000 bites avg./year</p>
 <p>50 deaths by peanut allergy avg./year</p>	 <p>27,531 deaths by poisoning avg./year</p>
 <p>321 deaths by plane crash avg./year</p>	 <p>34,017 deaths by car crash avg./year</p>

Common Parental Concerns About Vaccines

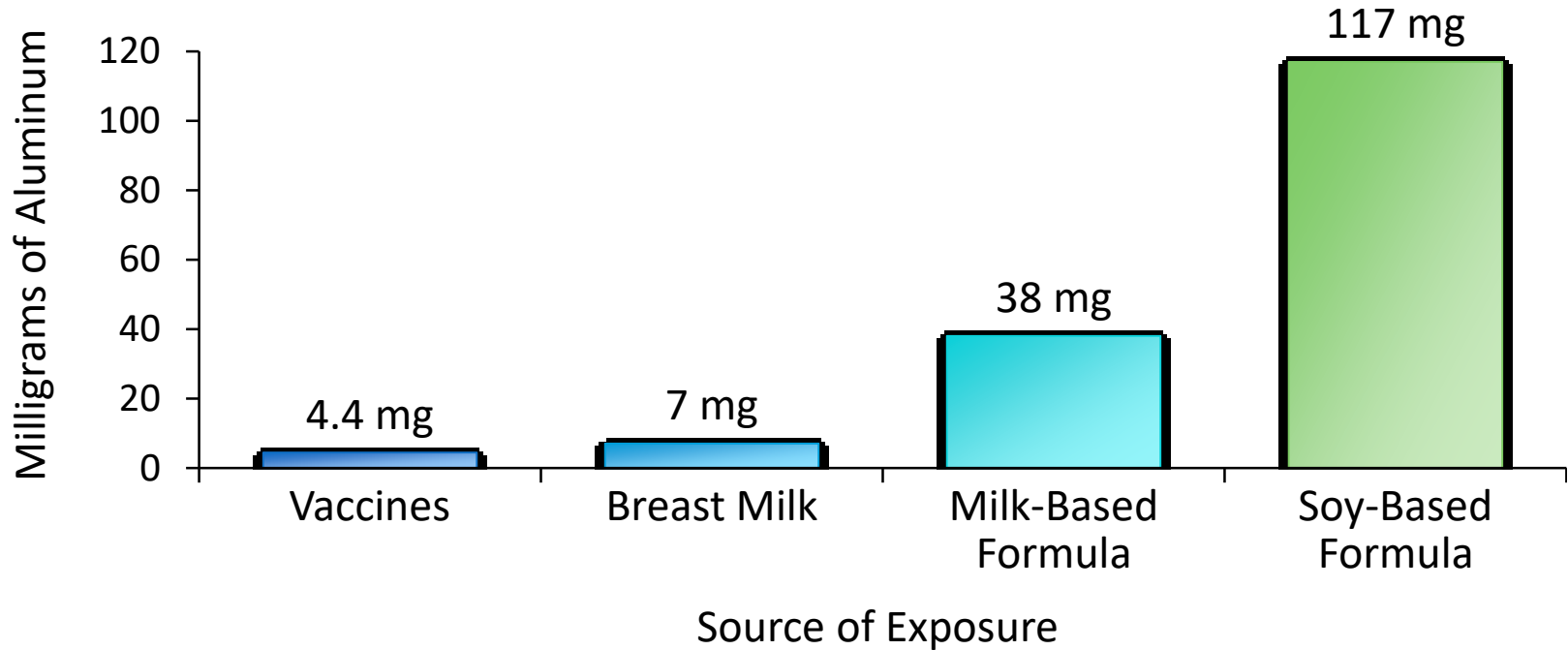
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Refuting Myths About Mercury Exposure

- Thimerosal: a mercury-containing preservative that helps prevent bacterial or fungal contamination in some multidose vials of influenza vaccine^{1,2}
- Mercury in thimerosal is metabolized to ethyl mercury, which differs greatly from the seriously neurotoxic methyl mercury^{1,3}
- Studies do not demonstrate a link between thimerosal-containing vaccines and autism⁴
 - The pharmacokinetics of ethyl mercury make such an association less likely
 - Epidemiologic studies that support a link demonstrated significant design flaws that invalidate their conclusions
 - Evidence does not support a change in the standard of practice with regard to administration of thimerosal-containing vaccines in areas of the world where they are used

References: 1. Offit PA, Jew RK. *Pediatrics*. 2003;112(6):1394-1401. 2. US Food and Drug Administration. <http://www.fda.gov/BiologicsBloodVaccines/Vaccines/QuestionsaboutVaccines/ucm070430.htm>. Accessed November 29, 2017. 3. Cooper LZ, Katz SL. *Pediatrics*. 2013;131(1):152-153. 4. Parker SK. *Pediatrics*. 2004;114(3):793-804.

Aluminum Exposure During an Infant's First 6 Months of Life^{1,2}



References: 1. Marshall G. *The Vaccine Handbook: A Practical Guide for Clinicians*. 6th ed. Professional Communications, Inc; 2017. 2. The Children's Hospital of Philadelphia. <http://www.chop.edu/centers-programs/vaccine-education-center/vaccine-ingredients/aluminum>. Accessed November 29, 2017.

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Key Facts About Formaldehyde

- Used to inactivate¹:
 - Viruses that cause influenza and polio
 - Tetanus and diphtheria toxins
- Diluted during the manufacturing process¹
- Naturally occurring in all humans to synthesize thymidine, purines, and amino acids¹
 - Quantity of formaldehyde found in infant's blood is much greater than that contained in any individual vaccine²

EXPECTED AMOUNT IN THE BLOOD OF A 10-KG CHILD	ADDITIONAL AMOUNT IN THE BLOOD OF A 10-KG CHILD AFTER INFLUENZA VACCINATION
>2000 mcg	≤100 mcg

References: 1. Offit PA, Jew RK. *Pediatrics*. 2003;112(6):1394-1401. 2. Marshall G. *The Vaccine Handbook: A Practical Guide for Clinicians*. 6th ed. Professional Communications, Inc; 2017.

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Natural Infection Is Dangerous

- Fatal disease is not a risk worth taking¹
- Not vaccinating one's child puts his or her entire community at risk
- Low immunization coverage rates at the local level have led to outbreaks²

References: 1. Offit PA, Moser CA. *Pediatrics*. 2009;123(1):e164-e169. 2. CDC. *MMWR*. 2015;64(14):373-376.

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Ebola



EV-D68

Enterovirus D-68

STATES REPORTING ACUTE FLACCID MYELITIS



CONFIRMED CASES
SUSPECTED CASES

WTAP NEWS
thenewscenter.tv
5:17 60°

JIM LEACH, LC News

United States Vice President Mike Pence will be in

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“My [Fill in the Blank] Told Me Not to Let You Vaccinate My Baby”^{1,2}

- Ask for clarification: What are the underlying concerns of the person who gave that advice?
- Offer your recommendation, based on facts
- Recommend or provide reading material
- Refer the parent to reliable resources

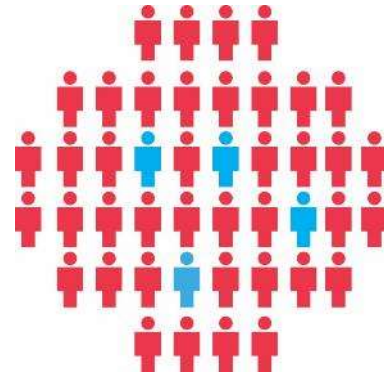
References: **1.** Morgana T, Pringle J. Approaches to families questioning vaccines—the ASK approach for effective immunization communication. Presented at: 48th Annual Meeting of the Infectious Diseases Society of America, Vancouver, BC, October 23, 2010. Abstract 92. **2.** Singer A. <http://www.vicnetwork.org/wp-content/uploads/VICNetworkWebinarSept-23SlidesFinal1.pdf>. Accessed November 29, 2016.

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Government Does Have a Right to Mandate Vaccination

- Immunization benefits individual children and communities through herd immunity
- The mandates exist to help prevent disease in children who cannot be vaccinated for bona fide medical reasons
- Bear in mind that government:
 - Mandates use of car seats for infants and young children
 - Requires children to wear helmets when bicycling
 - Prohibits operation of a motor vehicle while intoxicated
 - Requires all drivers to be licensed in accordance with state regulations



“The Use of Fetal Cells in Vaccine Production Is Immoral”

- Cell lines derived from aborted fetal lung tissue were used to develop vaccines against hepatitis A, polio, rubella, and varicella^{1,2}
 - Some Catholics may refuse vaccination in order to express their strong opposition to abortion¹
 - Others may believe that vaccination involves some form of cooperation with abortion¹
- Per the Vatican, use of all currently available vaccines is morally justified in the absence of ethically acceptable alternatives^{1,2}

References: 1. Furton EJ. *Ethics & Medics*. 1999;24(3):3-4. 2. Vatican statement on vaccines derived from aborted human fetuses. <http://www.immunize.org/concerns/vaticandocument.htm>. Accessed November 29, 2017.

“The Use of Vaccines Containing Pork Gelatin Is Wrong”

- Islam and Judaism accept vaccination¹
- According to Islamic legal scholars, it is permissible for observant Muslims to receive vaccines containing pork gelatin¹
- Jewish laws do allow receipt of non-oral products containing porcine ingredients¹

Reference: 1. Institute for Vaccine Safety, Johns Hopkins Bloomberg School of Public Health. <http://www.vaccinesafety.edu/Porcine-vaccineapproval.htm>. Accessed November 29, 2017.

Your own Scenarios?

- I have more cases if you don't give me any....



Vaccine Hesitancy...it can happen to anyone!



The AIMS method for talking about protection

A
I
M
S

Announce
Inquire
Mirror
Secure



The AIMS method for healthy conversations



ANNOUNCE

Assume that vaccination will occur



- Begin by announcing that the person is due for a vaccine and that you will vaccinate today
- A presumptive 'announcement', which assumes that someone is ready to vaccinate may increase acceptance¹⁻³
- Avoid being paternalistic, but maintain a firm approach
- Start with a statement, not a question
- Repeat your recommendation with hesitant people
- This may cover most people and the conversation is quick and simple. *If they hesitate or refuse then...INQUIRE*

"It's time for Jo's shots."

"I see Jo has just turned 2. She is due for her MMR vaccine. We will give her that at the end of the visit today."

"The influenza season is just beginning. We will give you your flu shot at the end of today's visit"

In one study, starting the conversation with an announcement led to **74% of patients accepting the recommendation vs. 26% with a participatory discussion approach**¹

INQUIRE

Understanding a concern, gauging the level of hesitancy¹



- Your goals are to understand:
 - What drives their concern
 - The strength of their concern (level of hesitancy)
- Active listening:
 - Take the time to listen to their concern
 - Don't interrupt – let the person finish
- Use open-ended questions, which:
 - Facilitate dialogue
 - Elicit information in a neutral way
 - Cannot be answered with a single word
 - Help you understand their point of view & feelings
- Use questions of *how* or *what* (better than questions of *why*)
- Watch your body language – make them feel heard

"Tell me what concerns you about this vaccine."

"You seem undecided. What are your thoughts about this vaccine?"

"You seem to have mixed feelings about vaccines. Would you tell me how you're thinking about them now?"

"How can I be most helpful to you in making a decision about vaccination?"



Understand what is behind their concern

In one study, doctors interrupted patients within 23 seconds!¹

MIRROR

Make the person feel heard

- Reflect back to the person what you have understood
- But first ask their permission to do so
 - This increases their receptivity
- The aim is to show them that you understand their *concerns* and how they *feel* about them
- Repeat this process until the person is convinced that they were heard and understood
- Then you may respond to their concern
- You do not have to acknowledge the validity of the concern, but you should acknowledge the person's right to have a question¹

"Let me see if I have this right, you're saying that your friend read an article that said that children get too many vaccines too soon. Is this it?"

"If I understand correctly you have some friends who tell you that you should know more and make sure you know the dangers when you vaccinate. Have I caught your concern?"

"Are you saying that the show you watched had people who believed their children had developed multiple sclerosis because they were vaccinated?"



The person should feel that you understand them from *their* point of view, not your point of view

RESPONDING TO A CONCERN



- Give the evidence-based facts or statistics
 - People want facts about vaccination¹
 - But facts alone will probably not convince them^{2,3}
- So also give the **gist**⁴
 - Bottom line message, what this means for the person
- Alert to possible local reactions
 - Distinguish clearly between local reactions and severe and very rare events
 - If concerns arise, explain relative risk, discuss the risks of not vaccinating
- The **Desk Reference** can help you with responses to specific questions

"I can see you are a caring parent who wants to do everything to keep Jo healthy and safe." [Affirmation]

"Sometimes I have a patient who develops a small rash. This can be a good sign because it shows that the vaccine is stimulating the immune system which is what it's supposed to do."

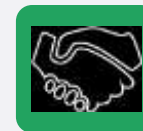
"The risk of a serious reaction to the vaccine is very low. There is a greater risk of being struck by lightning."

"The biggest risk you took getting vaccinated today was getting into a car when you drove here."

People understand risk through both **facts** and **gist** (bottom line meaning), but tend to recall and rely on the **gist**⁴

SECURE TRUST

- The way you respond to a concern will determine whether you build trust or not.
- If there are questions, the conversation may go in one of three directions:
 1. You have ameliorated their concerns and gained more trust so you move back to ANNOUNCE.
 2. If the person continues to be hesitant, demonstrate respect and understanding, provide access to information and suggest revisiting the topic in the future (securing trust and opportunity to succeed at a later date).
 3. If the person declines, move to secure a trusting relationship – despite disagreement - by demonstrating respect for their opinion and emphasizing your mutual concern for their own or their child's health.



Trust is both
a decision
and a feeling¹

"Well, in my professional judgment, vaccination is the best option, but I respect your right to decline. Let's move forward and work together to do what we can to keep you and/or your child healthy."

Regardless of how the conversation develops, finish by securing trust

Conclusions



1

You are trusted

1. YOU are the most trusted source of vaccine information & advice
2. Do everything to maintain that trust

2

See each interaction as a conversation

1. People communicate through conversation
2. Listening helps you understand & builds rapport
3. This approach frees you to continue the discussion next consultation

3

AIMS

1. ANNOUNCE vaccination each time. Repeat
2. INQUIRE to understand someone's concern
3. MIRROR to show you have listened
4. SECURE trust with every conversation

Adolescent Immunization Scenarios

Scenario 1:

The father of a 12-year-old girl tells you—in no uncertain terms— that his job is to protect his daughter from any and all harms. “Someday in the very distant future,” he jokes, “that will include protection from bad boyfriends.” But today, he goes on, it includes preventing you from giving her the human papillomavirus (HPV) vaccine, because “It’s dangerous and she doesn't need it.”

Scenario 2:

The mother of a 17-year-old high school student says that since the meningococcal B (MenB) vaccine is “optional” and very expensive, she’d just as soon skip it.

Scenario 3:

An 18-year-old who is headed off to college received MenACWY vaccine at 12 years of age but has not had the second dose. You are seeing him in June for a bad cold that has gone on for 5 days. After prescribing an antibiotic for sinusitis, you suggest that he get his MenACWY booster while he’s there, but he says he’d rather come back before he heads up to school.

Influenza Immunization Scenarios

Scenario 1:

You tell the parents of 2 children, 5 and 8 years of age, that their kids need flu shots. The dad says, “Give me a break. I know the vaccine doesn't work. I got it last year at work and a month later I was sick as a dog. Now they are telling us not to get the nasal spray because it doesn't work. Why should our kids get a shot that provides absolutely no benefit?”¹

Scenario 2:

The mother of a 6-month-old consents to the infant receiving influenza vaccine but balks at your insistence that she also be vaccinated. She says that she's never had the flu and never gets sick, but she understands that the baby needs protection.

Scenario 3:

You are on the PTA of your kids' middle school. The question of a school-based influenza immunization campaign is raised. Many of the PTA members object to this idea, citing the idea that vaccines should be a personal choice and not something you are pressured into.

Reference: 1. Caspard H, et al. *Vaccine*. 2016;34(1):77-82.

Combination Vaccine Scenarios

Scenario 1:

The mother of a 2-month-old does not want her baby to receive a DTaP-containing combination vaccine because it is “too much for her system to handle at one time.”

Scenario 2:

The mother of a 6-month-old wants the vaccines that are due today—DTaP, IPV^a, Hib, hepatitis B, rotavirus, and pneumococcal conjugate vaccine—spread out over the next few months.

Scenario 3:

The mother of a 6-month-old who previously received a DTaP-based combination vaccine wants the separate shots this time around because she read that the combination doesn't work as well as vaccines administered separately.

^aIPV = Inactivated poliovirus.