

"No Thanks, Doc": Tools to Improve Difficult Conversations in the Medical Encounter

Tracie Newman, MD, MPH, FAAP

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Objectives

01. Discuss the history of vaccine hesitancy and the current state of ambivalence.
02. Analyze strategies for addressing ambivalence and vaccine hesitancy with patients at the medical encounter.
03. Improve confidence and comfort addressing common vaccine concerns.


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Comparison of 20th Century Annual Morbidity and Current Morbidity: Vaccine-Preventable Diseases

Disease	20 th Century Annual Morbidity [†]	2023 Reported Cases ^{††}	Percent Decrease
Smallpox	29,005	0	100%
Diphtheria	21,053	2	> 99%
Measles	530,217	47	> 99%
Mumps	162,344	429	> 99%
Pertussis	200,752	5,611	97%
Polio (paralytic)	16,316	0	100%
Rubella	47,745	3	> 99%
Congenital Rubella Syndrome	152	0	100%
Tetanus	580	15	97%
<i>Haemophilus influenzae</i>	20,000	27*	> 99%

† JAMA, 2007;296(18):2165-2163
†† CDC, National Notifiable Diseases Surveillance System, Weekly Tables of Infectious Disease Data, Atlanta, GA, CDC Division of Health Informatics and Surveillance. Available at: <https://www.cdc.gov/nndss/weekly-tables/>. Accessed on Jan 24, 2024; diphtheria and polio case counts reported by CDC Program.
* *Haemophilus influenzae* type b (Hib) < 5 years of age. An additional 12 cases of Hib are estimated to have occurred among the 257 notifications of *Haemophilus influenzae* (< 5 years of age) with unknown serotype.

National Center for Immunization & Respiratory Diseases
Historical Comparisons of Vaccine-Preventable Disease Morbidity in the U.S.
3/14/2024



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MarketWatch | The New York Times

9 million children to be vaccinated against polio in Africa after outbreak in Malawi

Published March 22, 2022 at 7:43 a.m. ET

JERUSALEM POST | CORONAVIRUS | ISRAELI NEWS | WORLD NEWS | MIDDLE EAST | BUSINESS & INNOVATION

Israel's current polio outbreak is tip of the iceberg - Health Min. D-G

Health Ministry director-general Nachman Ash stressed that polio can be eradicated through the use of vaccines.

By 10:30 PM | Published: APRIL 5, 2022 11:11

Measles cases across Europe continue to surge, putting millions of children at risk

Rapid response to measles outbreak is critical, as cases this year predicted to soon exceed total number reported in 2023

First Polio Case in Nearly a Decade Is Detected in New York State

A man who lives in Rockland County was infected by someone who received the oral polio vaccine, which is no longer used in the United States, officials said.

Polio makes a comeback in the Philippines 19 years after the country was declared free of the disease

Published on Sep 02, 2021, Tue September 02, 2021

CIDRAP | Center for Infectious Disease Research and Policy

News & Perspective | Infectious Disease Topics | Antimicrobial Stewardship | Ongoing Programs

FEATURED NEWS TOPICS | COVID-19 | Flu Vaccines Rise | MEKIS-CIV | Chronic Wasting Disease

US measles cases hit 1,234 as Brooklyn outbreak called over

Published: Measles | <https://www.cdc.gov/media/releases/2022/s0901-measles-us.html>

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World Health Organization

Vaccine Hesitancy

Top ten threats to global health in 2019



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Slide 6

CPO It might be worth adding a slide right after this like the one I have in other talks on the resurgence of VPDs (like polio and measles) around the world and now in the U.S. These diseases still circulate, and are only a plane ride away.

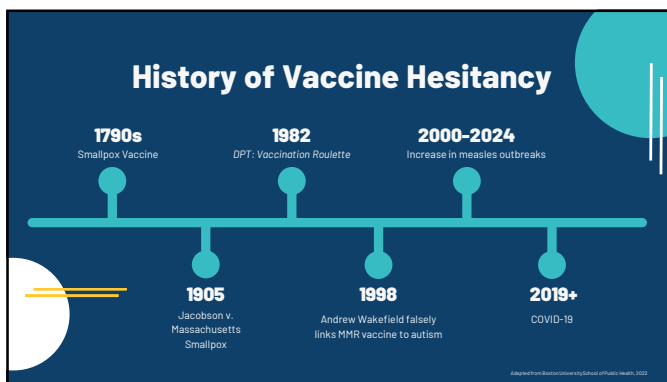
Carson, Paul, 2024-07-02T13:59:38.072



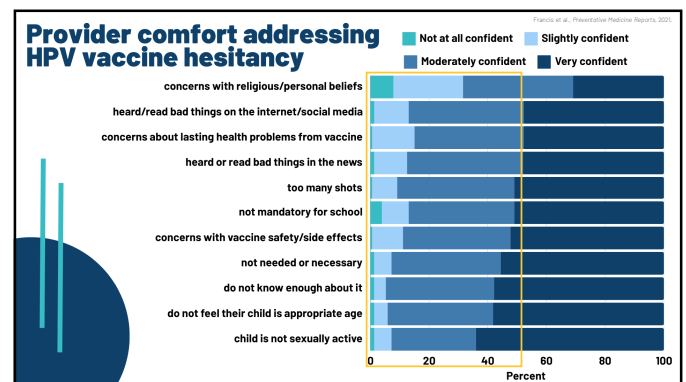
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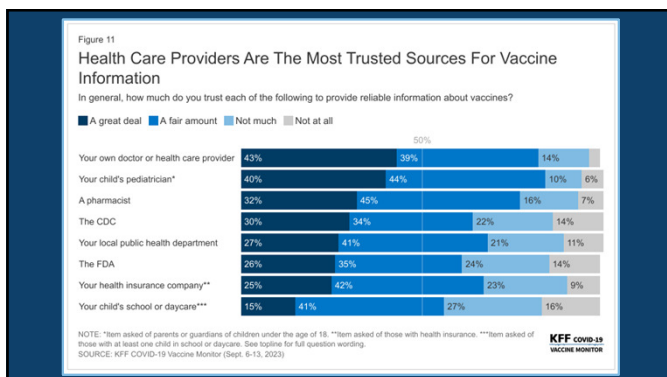
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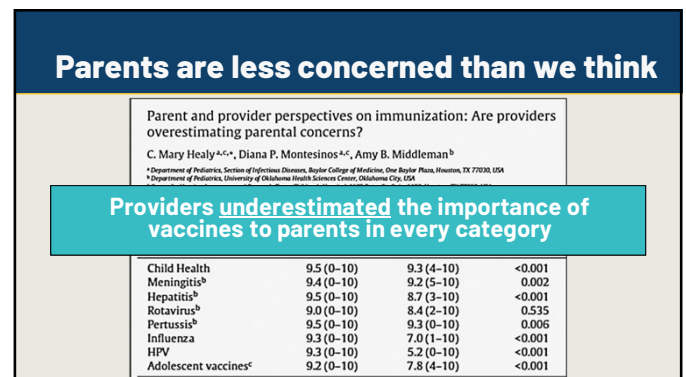
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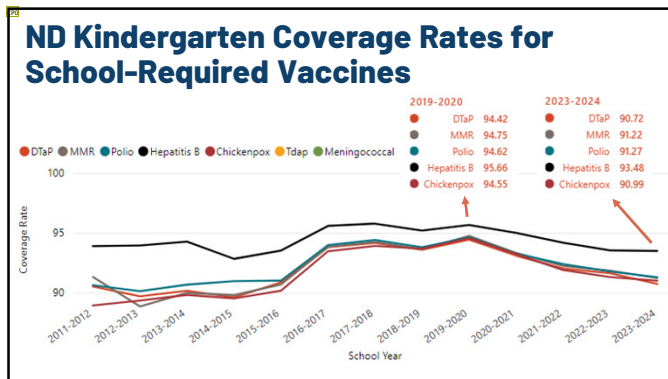
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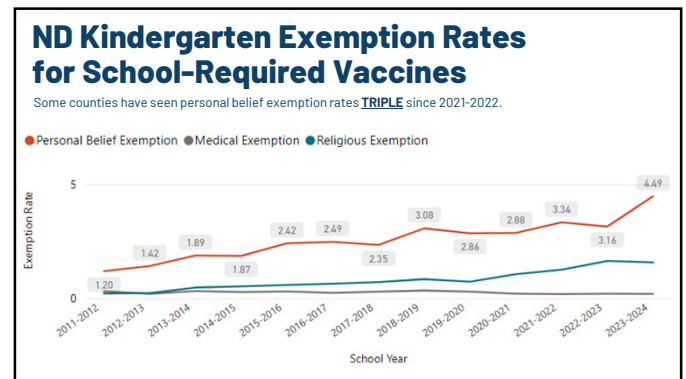
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13



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Be Not Afraid

- Familiarize yourself with vaccine safety monitoring systems**
- Be comfortable responding to common vaccine concerns**
- Don't underestimate your expertise!**

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Communication Strategies to Address Vaccine Hesitancy

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Effective Messages in Vaccine Promotion: A Randomized Trial

Which message worked the best to increase vaccination rates for MMR?

- Corrective information about lack of evidence for MMR causing autism
- Text describing dangers of diseases prevented by MMR vaccine
- Images of children with diseases MMR vaccine prevents
- Narrative of near-death experience of an infant with measles

NONE OF THE ABOVE!!

Nyhan et al., 2016

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None of the interventions increased parental intent to vaccinate a future child.

Decreased intent to vaccinate in the most hesitant parents.

Increased belief in a vaccine/autism link.

Increased belief in serious vaccine side effects.

Which message worked the best to increase vaccination rates for MMR?

- Corrective information about lack of evidence for MMR causing autism
- Text describing dangers of diseases prevented by MMR vaccine
- Images of children with diseases MMR vaccine prevents
- Narrative of near-death experience of an infant with measles

Nyhan et al., 2016

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Slide 13

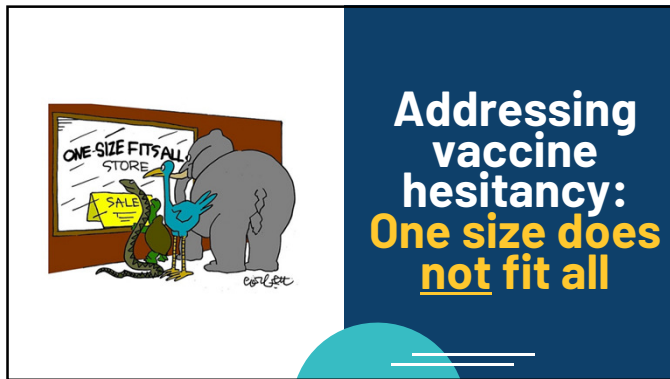
CP0 I would consider adding a slide right after this with the similar data from the NDDHHS website on the rise of non-medical exemptions in the state

Carson, Paul, 2024-07-02T14:01:31.931

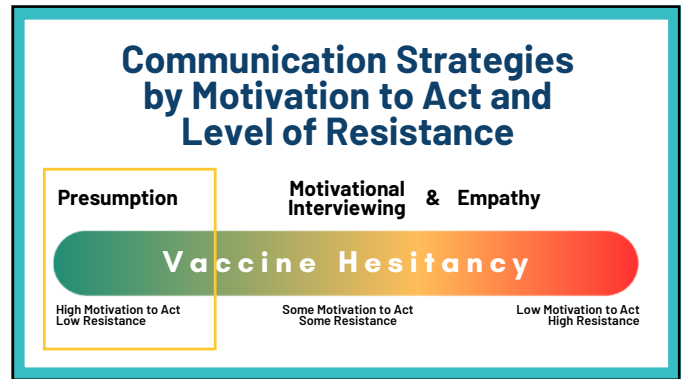
Slide 18

be0 I really like the extra explanation in this slide about how the interventions made things worse

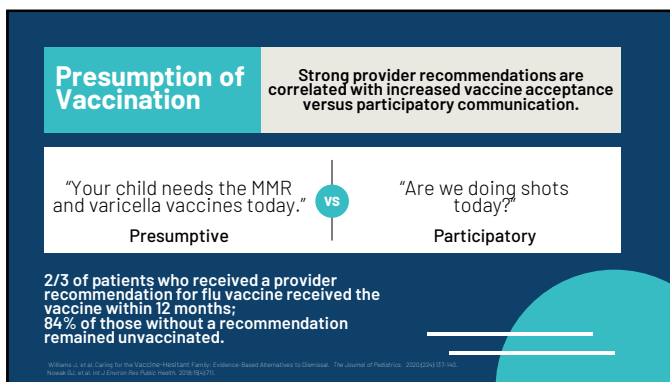
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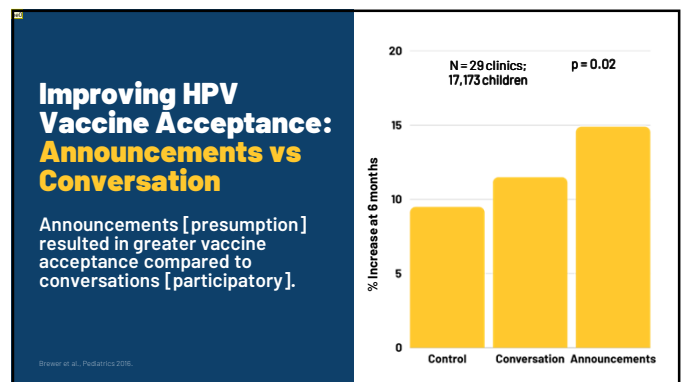
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Advantages of the Presumptive Method

- It works!**
Presumptive approach improves vaccine acceptance.
- Similar approach to making other medical recommendations**
The more confident you are, the more confident the patient is likely to be.

"She has strep throat. I'll prescribe you an antibiotic called amoxicillin to treat it."	"She has strep throat. Do you want her to have amoxicillin to treat it?"
--	--
- Saves time**
Most patients and families are highly accepting of vaccines.

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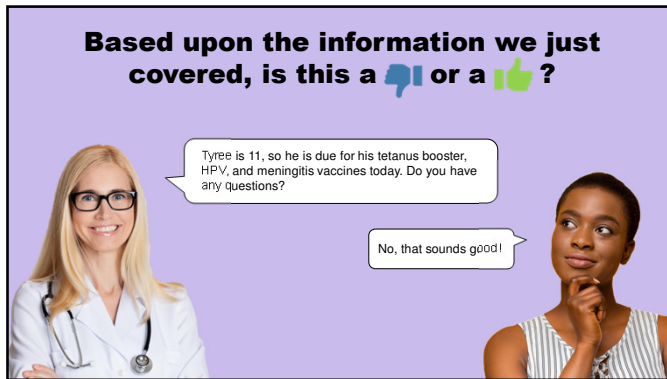
Based upon the information we just covered, is this a 🗑️ or a 🍏 ?

Since Tyree just turned 11, he needs a tetanus booster and a meningitis shot, which are required for 7th grade. He can also have the HPV vaccine if you want him to have that too.

We will take the tetanus and meningitis vaccines, but we will skip that other one. Three shots is a lot.

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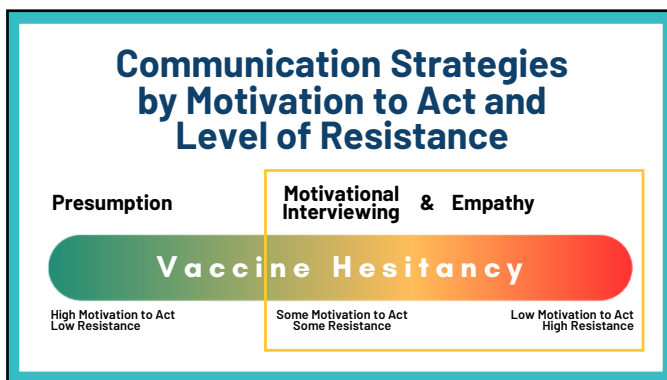
be0 This graph is confusing to me, not sure what
"% increase at 6 months" means exactly,
might need some notes
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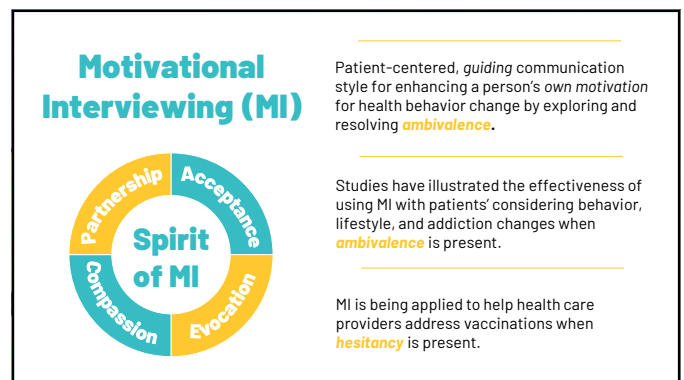
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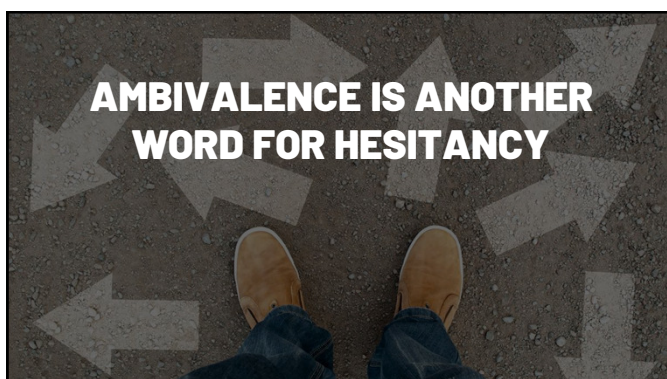
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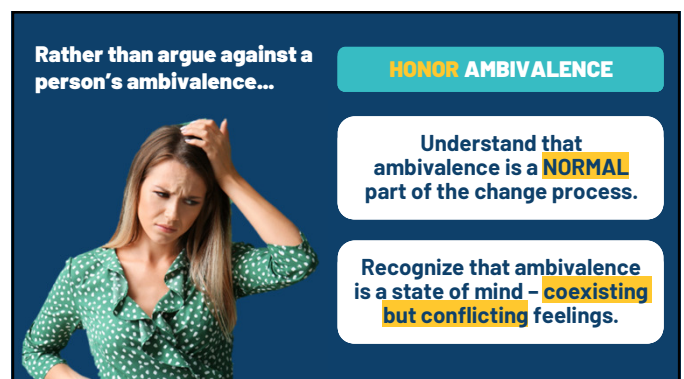
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29



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Communication Techniques

Open-Ended Questions

"You aren't sure about the HPV vaccine today. What worries you?"

Reflect Back

"You are really worried about the ingredients in vaccines."

Honor Ambivalence

"So you don't want her to get cervical cancer, and you are worried about the long term effects of this vaccine. Many parents feel that way."

Ask Permission to Share

"Can I share some information that I think might ease your mind?"

Personal Recommendation

"My own children have gotten the vaccine, and I recommend it to all of my patients."

Support Autonomy

"He is your child and this is your decision."

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MI-Consistent Strategies to Consider

1. **Scaling Questions: Importance, Confidence, and Readiness**
2. **Elicit-Provide-Elicit (E-P-E)**



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Scaling Questions

Assess a patient's readiness, confidence, and priorities.

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SCALING QUESTIONS



"On a scale of 0 to 10, how **important** is it for you to get the vaccine today?"

- ↓ "Why did you say **5** and not a lower number, like **4**?"
- ↑ "What would it take to get you to a higher number, like **6**?"

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Case #1

You are wrapping up your last patient of the day, a 12-year-old who is totally up-to-date on her vaccines. It's flu season, and since she has never missed an influenza vaccine, you make the fair presumption this family will agree to vaccinate.



All right Kate, you look great! You've grown so much this year. Good luck with the rest of your volleyball season. Last thing, it's October, and you are due for your flu vaccine. I can have my nurse give that to you before you head to practice.

Um, I'm not sure we are going to do that this year. I know we have gotten it every year, but last year she got it and it made her sick!



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Influenza Vaccine Types

Traditional Inactivated Vaccine

Contains whole influenza viruses that have been grown in eggs and inactivated (killed), so they can't cause influenza after vaccination.



Recombinant Influenza Vaccine

Only contains one protein from influenza virus, called hemagglutinin, so it can't cause influenza after vaccination.



Intranasal Influenza Vaccine

Contains live, weakened influenza virus that can reproduce in the nose but not the lungs, so it can't cause influenza after vaccination.



Cell Culture-based Influenza Vaccine

Vaccine virus is grown in cells in the lab instead of in eggs. The viruses are then inactivated (killed), so they can't cause influenza after vaccination.



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CP0 I think if you are short on time and space, this slide and the next might be optional. And if used, might consider putting them after slide 37 to as info for the "other ideas" the doctor might share. They could also be moved later under the "EPE" section as an example of the "P"

Carson, Paul, 2024-07-02T14:07:20.244

be0 0 I like them here! Similar to what we are doing with the other cases, it's like a pause to remind providers the background of these myths and how to debunk.

beccajobakke@gmail.com, 2024-07-08T13:47:06.518

Why might people think the influenza vaccine makes them sick?



Immune response after vaccine (fever, muscle aches)

Occurs in fewer than 1% of recipients.



Takes 1-2 weeks to reach peak protection

People may get sick before their body has created influenza antibodies.



Only prevents influenza

Many viruses circulate during this season that could be mistaken for influenza.



Effectiveness varies

Effectiveness is 40-60% depending on the season and age of recipient.
Other things that are not 100% effective: seatbelts, bike helmets, condoms, handwashing.

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Back to Case #1

So you are worried that the vaccine might make Kate sick, but you have had her vaccinated against the flu in the past. Tell me, on a scale of 0-10, 10 being you will get the vaccine today, and 0 being you definitely won't, how important is it to you that she get the vaccine today?

Oh, I would say a 4.

Okay, so you're pretty unsure. That's fair. Why did you say 4 and not 2 or 3?

Well, my dad just started chemotherapy, and we see him a lot. I really don't want Kate to get him sick, especially now.

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Case #1: Continued

Gosh, I'm so sorry to hear about your dad. I can understand why you would want to protect him while he is immunocompromised. What made you say 4 and not 5 or 6?

She was just sick constantly last year, and I think it was from that shot! Plus, she has a volleyball game tonight, and I don't want her to be sore.

So if I could assure you that the shot won't make her sick, and we can talk about how to handle any soreness from the vaccine, you might be ready to get her vaccinated today?

Maybe.

Can I share some ideas?

Sure.

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Elicit Provide Elicit (EPE)

Share information and advice with patients.

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Sharing Information Using EPE

ELICIT

Elicit knowledge and/or needs from the patient

- Question with empathy
- Learn what the patient has tried/already knows

PROVIDE

Provide information after asking permission

- Stay neutral
- Validate feelings
- Debunk myths without reinforcing them

ELICIT

Elicit patient's response

- Reflect on discussion
- Emphasize autonomy

- “
- What are your specific concerns?
 - What have you heard?
 - What would you most like to know?

- May I make a suggestion?
- This may not fit for you, but some people find ...
- Would you be interested in some resources?

- ”
- What are your thoughts on that?
 - How do you think that would work for you?

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Eliciting the Main Concern: Varicella Vaccine

Could translate to:

- "My child has already had chickenpox."
- "I don't think chickenpox is that bad."
- "I'm pregnant and I'm not sure about my child getting a live vaccine."

"I don't want my child to get this vaccine."

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Eliciting the Main Concern: COVID Vaccine

"I don't think
this vaccine
is safe."

Could translate to:

- "I think this vaccine causes female infertility."
- "I am concerned about myocarditis."
- "I heard this vaccine didn't complete the usual clinical trials."
- "I am concerned about what is in the vaccine."

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Case #2

The nurse just told me that Johnny is due for his MMR shot today. I'm don't think I want him to have that.

You have some concerns about the MMR vaccine. What is worrying you?

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Case #2: Continued

I am worried that the vaccine might cause autism. My cousin's son has autism, and he was perfectly healthy before he got his MMR vaccine. I know doctors think there is no link, but a lot of moms in my Facebook parenting group have said the same thing. I just don't think it is worth the risk.

Thanks for telling me about your concern. I'm so sorry about your cousin's son, and I understand you want to do everything you can to support Johnny's health and development. Since I give vaccines every day and have a number of children with autism in my practice, I have read a lot about this. May I share some additional information with you?

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The Facts Behind the Claim

In 1998, Andrew Wakefield and colleagues published a case series in the *Lancet* hypothesizing that MMR vaccine might predispose children to autism.

Hypothesis: MMR vaccine causes intestinal damage, allowing proteins from the vaccine to enter the bloodstream and cause brain damage leading to autism.



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The Problems (just some!)

- Case series with no control group
- No IRB approval
- Several of the children didn't actually have autism
- Results were falsified - in 9 cases the results were changed from "unremarkable" to "non-specific colitis" after review
- Most kids were referrals by anti-vaccine groups (not disclosed)
- Wakefield had a patent pending for a vaccine to replace the MMR vaccine (not disclosed)
- 10 of his 12 co-researchers asked for their names to be removed
- Paper was retracted and Wakefield eventually lost his medical license
- His findings are not replicable, and numerous research studies with millions of children show no link between MMR vaccine and autism



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Back to Case #2

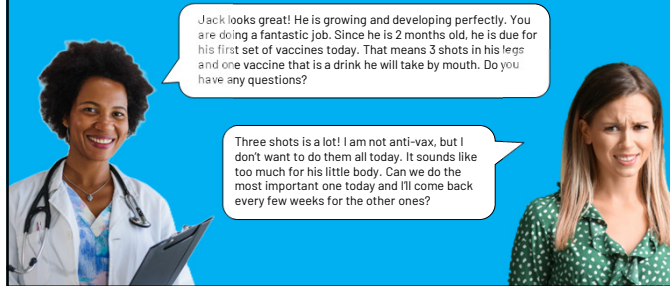
The publication that suggested a link between autism and the MMR vaccine was based on a study of 12 children in 1998. There were lots of problems with the paper that led it to be retracted, and the doctor who wrote it lost his medical license. Since then, there's been lots more studies on millions of children that have not found any link between autism and the MMR vaccine. My own children received the MMR vaccine because I'm confident that the benefits of the vaccine - like preventing measles, which can cause brain damage and even death - outweigh the risks. That said, this is your child and your decision. What are your thoughts?

48

be0 Is this too long of an explanation? Will it lose people? (I know I wrote it!) Hard to summarize this in a brief conversation though.

beccajobakke@gmail.com, 2024-07-08T13:48:46.191

Case #3



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Too Many Too Soon?

- When babies are born, they leave a sterile environment (the womb) and are exposed to thousands of different bacteria and organisms within minutes.
- Immune systems are well equipped to handle multiple challenges at once.
- The immune response is not dependent of the number of shots an infant or child receives, but rather on the number of *antigens* in the vaccines.
- Antigens are substances (proteins and sugars) that elicit an immune response inside the body.



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Vaccine Schedules Through Time

	Prior to 1960	1980	2021
Diseases protected against	Smallpox	Diphtheria, Tetanus, Pertussis, Polio, Measles, Mumps, and Rubella	Diphtheria, Tetanus, Pertussis, Polio, Measles, Mumps, Rubella, Hib, Pneumococcus, Rotavirus, Influenza, Hepatitis A, Hepatitis B, and Varicella
Antigenic exposure	200	3,041	149-157 (depending on certain versions of vaccines)

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Spacing Out Vaccines: The Problems

- More time in between vaccines leaves infants and children vulnerable to deadly disease for a longer period of time
- Vaccine errors more likely
- Excessive appointments mean more missed work and school, and can overwhelm healthcare systems during busy times
- More clinic visits = more exposures to infectious diseases in busy waiting rooms
- Easy to fall behind on shots
- Multiple appointments can be more stressful for kids

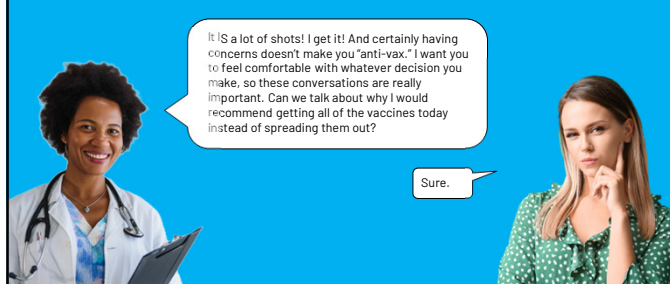
Developmental Change in Infant Cortisol and Behavioral Response to Inoculation

Douglas S. Ramsey and Michael Lewis
Institute for the Study of Child Development
and Robert Wood Johnson Medical School

Infants in Sweden's and New Zealand's universal infant immunization programs have been shown to have lower cortisol levels and less behavioral distress during vaccination than infants in the United States. This may be due to differences in the timing and spacing of vaccines. In the United States, infants receive a large number of vaccines in a short period of time, which may lead to higher cortisol levels and more behavioral distress. In contrast, in Sweden and New Zealand, vaccines are spaced out over a longer period of time, which may lead to lower cortisol levels and less behavioral distress. This suggests that spacing out vaccines may be beneficial for infants and children, as it may reduce the stress and anxiety associated with vaccination.

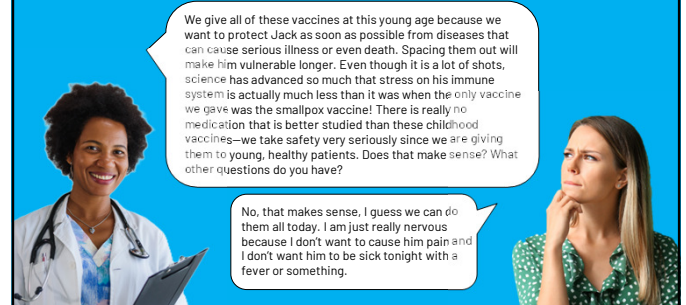
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Back to Case #3



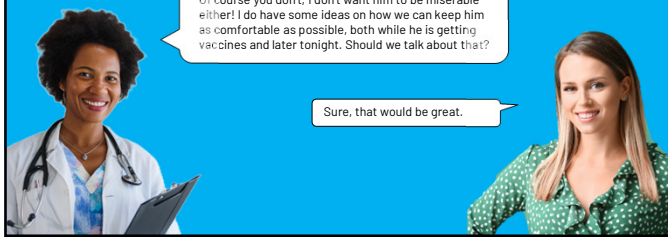
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Case #3: Continued



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Case #3: Continued



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Improving Comfort with Vaccinations



Improving patient experience may improve compliance!

- Positioning
 - Supine is generally the worst
 - Allow parents to hold children in their laps when practical
- Breastfeeding during/after injections
- Sucrose for infants
- Simultaneous versus sequential administration
- Topical numbing creams (available OTC), apply about 30 minutes prior to administration
- Distraction (bubbles, videos, light up toys)
- Acetaminophen (AFTER vaccines only)
 - May decrease immune response if given before

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Key Takeaways

01. Start with the presumptive approach and move to motivational interviewing techniques when ambivalence is present.
02. Familiarize yourself with common vaccine concerns so you can debunk myths and answer questions.
03. Showing empathy and supporting autonomy will break down barriers and build trust between you and your patient.

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MOTIVATIONAL INTERVIEWING for Vaccine Hesitancy

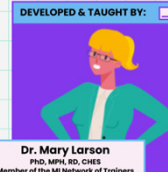


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 - ☒ Elicit-Provide-Elicit
 - ☒ Change Talk & Scaling Questions
 - ☒ Best First Responses

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What questions do you have?



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