

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



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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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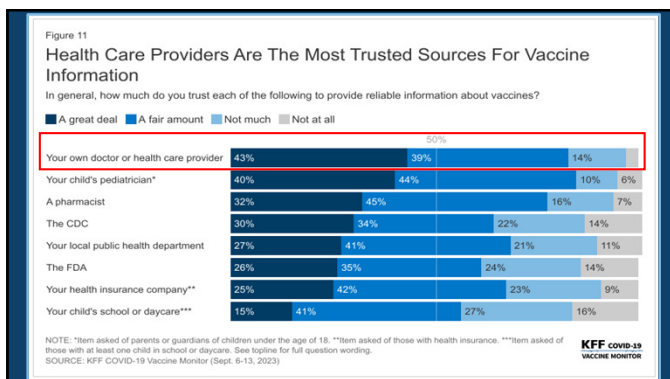


## Vaccine Hesitancy

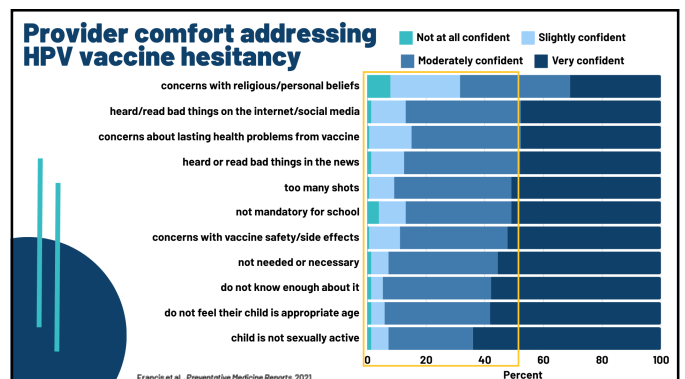
### Top ten threats to global health in 2019



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### Parents are less concerned than we think

Parent and provider perspectives on immunization: Are providers overestimating parental concerns?  
 C. Mary Healy<sup>a,c,\*</sup>, Diana P. Montesinos<sup>a,c</sup>, Amy B. Middleman<sup>b</sup>  
<sup>a</sup> Department of Pediatrics, Section of Infectious Diseases, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA  
<sup>b</sup> Department of Pediatrics, University of Oklahoma Health Sciences Center, Oklahoma City, USA  
<sup>c</sup> Department of Pediatrics, University of Oklahoma Health Sciences Center, Oklahoma City, USA

**Providers underestimated the importance of vaccines to parents in every category**

Child Health	9.5 (0-10)	9.3 (4-10)	<0.001
Meningitis <sup>b</sup>	9.4 (0-10)	9.2 (5-10)	0.002
Hepatitis <sup>b</sup>	9.5 (0-10)	8.7 (3-10)	<0.001
Rotavirus <sup>b</sup>	9.0 (0-10)	8.4 (2-10)	0.535
Pertussis <sup>b</sup>	9.5 (0-10)	9.3 (0-10)	0.006
Influenza	9.3 (0-10)	7.0 (1-10)	<0.001
HPV	9.3 (0-10)	5.2 (0-10)	<0.001
Adolescent vaccines <sup>c</sup>	9.2 (0-10)	7.8 (4-10)	<0.001

Healy CM, et al. Vaccine. 2014 Jan 23;32(1):379-84

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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 linking MMR to 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., 2014

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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.

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

Increased belief in a vaccine/autism link.

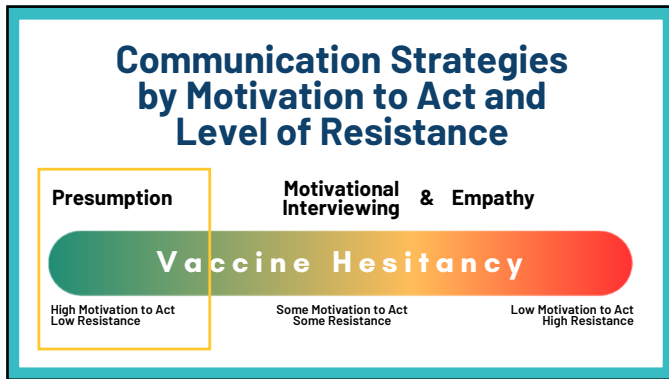
Increased belief in serious vaccine side effects.

Nyhan et al., 2014

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## Addressing vaccine hesitancy: One size does not fit all

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### Presumption of Vaccination

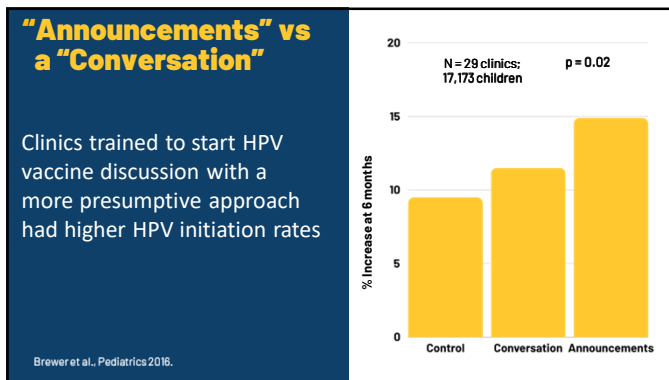
Presumption and strong provider recommendations are correlated with increased vaccine acceptance versus participatory communication.

“Your child needs the MMR and varicella vaccines today. I will have the nurse get those ready now” **vs** “How are we feeling about getting shots today?”

Presumptive | Participatory

Winters J, et al. Doing for the Vaccine-Hesitant Family: Evidence-Based Strategies to Disarm. The Journal of Pediatrics. 2020;224:131-140. https://doi.org/10.1016/j.pediatrics.2019.04.015

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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.” vs “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 thumbs down or a thumbs up?

Since Tyree just turned 11, he needs a tetanus booster and a meningitis shot, which are required for 7<sup>th</sup> 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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### Based upon the information we just covered, is this a thumbs down or a thumbs up?

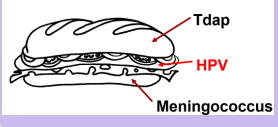
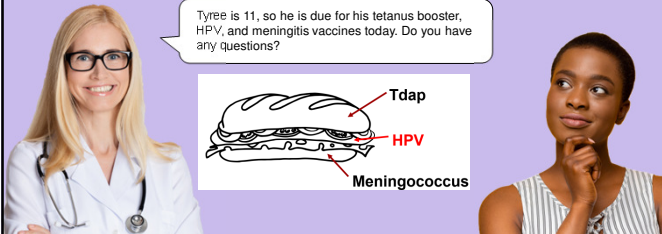
Tyree is 11, so he is due for his tetanus booster, HPV, and meningitis vaccines today. Do you have any questions?

No, that sounds good!

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

Tyre is 11, so he is due for his tetanus booster, HPV, and meningitis vaccines today. Do you have any questions?

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**What if presumption doesn't work?**




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**Communication Strategies by Motivation to Act and Level of Resistance**

**Presumption** | **Motivational Interviewing & Empathy**


**Vaccine Hesitancy**

High Motivation to Act / Low Resistance | Some Motivation to Act / Some Resistance | Low Motivation to Act / High Resistance



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**AMBIVALENCE IS ANOTHER WORD FOR HESITANCY**




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**Motivational Interviewing (MI)**

Patient-centered, *guiding* communication style for enhancing a person's *own motivation* for health behavior change by exploring and resolving *ambivalence*.

Studies have illustrated the effectiveness of using MI with patients' considering behavior, lifestyle, and addiction changes when *ambivalence* is present.

MI is being applied to help health care providers address vaccinations when *hesitancy* is present.




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**Rather than argue against a person's ambivalence...**

**HONOR AMBIVALENCE**

Understand that ambivalence is a **NORMAL** part of the change process.

Recognize that ambivalence is a state of mind - **coexisting but conflicting** feelings.



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## Communication Techniques

<p><b>Open-Ended Questions</b></p> <p><i>"You aren't sure about the HPV vaccine today. What worries you?"</i></p>	<p><b>Reflect Back</b></p> <p><i>"You are really worried about the ingredients in vaccines."</i></p>	<p><b>Honor Ambivalence</b></p> <p><i>"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."</i></p>
<p><b>Ask Permission to Share</b></p> <p><i>"Can I share some information that I think might ease your mind?"</i></p>	<p><b>Personal Recommendation</b></p> <p><i>"My own children have gotten the vaccine, and I recommend it to all of my patients."</i></p>	<p><b>Support Autonomy</b></p> <p><i>"He is your child and this is your decision."</i></p>

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## MI-Consistent Strategies to Consider

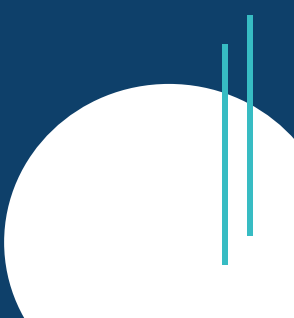
1. **Scaling Questions: Importance, Confidence, and Readiness**
2. **Elicit-Provide-Elicit (E-P-E)**



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# Scaling Questions

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



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## SCALING QUESTIONS

0 1 2 3 4 5 6 7 8 9 10

Limited intervention

Elicit patient's motivation to change

**"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 kind of information might lead 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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### 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	PROVIDE	ELICIT
<b>Elicit knowledge and/or needs from the patient</b> <ul style="list-style-type: none"> <li>Question with empathy</li> <li>Learn what the patient has tried/already knows</li> </ul>	<b>Provide information after asking permission</b> <ul style="list-style-type: none"> <li>Stay neutral</li> <li>Validate feelings</li> <li>Debunk myths without reinforcing them</li> </ul>	<b>Elicit patient's response</b> <ul style="list-style-type: none"> <li>Reflect on discussion</li> <li>Emphasize autonomy</li> </ul>
<ul style="list-style-type: none"> <li>What are your specific concerns?</li> <li>What have you heard?</li> <li>What would you most like to know?</li> </ul>	<ul style="list-style-type: none"> <li>May I make a suggestion?</li> <li>This may not fit for you, but some people find ...</li> <li>Would you be interested in some resources?</li> </ul>	<ul style="list-style-type: none"> <li>What are your thoughts on that?</li> <li>How do you think that would work for you?</li> </ul>

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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 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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## Autism/MMR Origins

British physician and researcher, gastroenterologist

Study published in Lancet 1998

Study of 12 children with a history of autism or developmental disorder "referred" to gastroenterology clinic.

Findings:

- Onset of behavioral symptoms, per parents, started after MMR immunization in 8 of the children
- Bowel abnormalities in all of the children on endoscopy

Conclusions: speculated a connection between bowel pathology after MMR immunization that allowed "toxins" to circulate to brain causing brain damage and autism

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## Brian Deer - Investigative Reporter

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## Early report

### Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children

A J. Wakefield, S. D. Smith, A. Anthony, J. Palmer, D. M. Connor, M. Seal, M. Bellizzi, A. P. Dixon, M. A. Thomas, P. Davison, A. Valleron, S. E. Davies, J. A. Walker (2001)

**Summary**  
Background: We investigated a constellation series of children with chronic enterocolitis and regressive developmental disorder.

**Methods** 12 children (mean age 4 years [range 3-12]; 11 boys) were referred to a paediatric gastroenterology and gastroenterology clinic for chronic enterocolitis and regressive developmental disorder. Children underwent gastroenterology and developmental assessment, and review of developmental records, immunisation and biopsy sampling, magnetic resonance imaging (MRI), endoscopy, histology, and endoscopy with ileocolonoscopy were done under sedation. Endoscopy through radiography was also done. Histology, immunohistochemistry, and immunological profiles were measured.

**Results** Onset of behavioural regression was preceded by the parents, with measles, mumps, and rubella (MMR) immunisation in eight of the 12 children, with the first regression in one child, and other children in subsequent months. All children had regressive developmental disorder. Histology showed acute chronic inflammation of the ileum and colon. Immunohistochemistry showed increased immunoreactivity for T cells and mast cells in the colon. Immunological profiles were abnormal.

**Conclusions** This study provides evidence that MMR immunisation is associated with chronic enterocolitis and regressive developmental disorder in children. The study also suggests that MMR immunisation may be associated with chronic enterocolitis and regressive developmental disorder in children.


**Keywords** Autism, developmental regression, enterocolitis, MMR, MMR2, MMR3, MMR4, MMR5, MMR6, MMR7, MMR8, MMR9, MMR10, MMR11, MMR12, MMR13, MMR14, MMR15, MMR16, MMR17, MMR18, MMR19, MMR20, MMR21, MMR22, MMR23, MMR24, MMR25, MMR26, MMR27, MMR28, MMR29, MMR30, MMR31, MMR32, MMR33, MMR34, MMR35, MMR36, MMR37, MMR38, MMR39, MMR40, MMR41, MMR42, MMR43, MMR44, MMR45, MMR46, MMR47, MMR48, MMR49, MMR50, MMR51, MMR52, MMR53, MMR54, MMR55, MMR56, MMR57, MMR58, MMR59, MMR60, MMR61, MMR62, MMR63, MMR64, MMR65, MMR66, MMR67, MMR68, MMR69, MMR70, MMR71, MMR72, MMR73, MMR74, MMR75, MMR76, MMR77, MMR78, MMR79, MMR80, MMR81, MMR82, MMR83, MMR84, MMR85, MMR86, MMR87, MMR88, MMR89, MMR90, MMR91, MMR92, MMR93, MMR94, MMR95, MMR96, MMR97, MMR98, MMR99, MMR100.

**CERTIFIED 100% FRAUD**

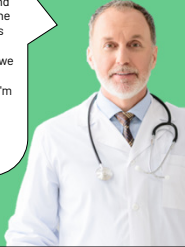
**RETRACTED**

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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 only 12 children in 1998. The doctor doing the research was found to have committed fraud, the paper was retracted, and he lost his medical license. Since then, studies from dozens of countries on millions of children have been unable to find any link between autism and the MMR vaccine. And we are now learning a lot more about the real causes of autism. My own children received the vaccine because I'm confident that the benefits of preventing measles, which can cause brain damage and even death - far outweigh any risks. That said, this is your child and your decision. What are your thoughts?




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## Case #3



Jack looks great! He is growing and developing perfectly. You are doing a fantastic job. Since he is 2 months old, he is due for his first set of vaccines today. That means 3 shots in his legs and one vaccine that is a drink he will take by mouth. Do you have any questions?



Three shots is a lot! I am not anti-vax, but I don't want to do them all today. It sounds like too much for his little body. Can we do the most important one today and I'll come back every few weeks for the other ones?

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## Too Many Too Soon?

- B and T cells are present by 14 weeks gestation
- Within hours, prior sterile GI tract is heavily colonized with bacteria
- Start making secretory IgA against potentially harmful gut bacteria immediately
- Childhood antigen exposure – 2,000-6,000 per day
- Vaccine antigen exposure ~ 416 per lifetime



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## More Vaccines – Fewer Antigens

	Prior to 1960	1980	2021
<b>Diseases protected against</b>	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
<b>Antigenic exposure</b>	200	3,041	149-157 (depending on certain versions of vaccines)

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## Spacing Out Vaccines: The Problems


- Delayed vaccines means more time vulnerable to disease
- Vaccine errors more likely
- Excessive appointments mean more missed work and school, and strain on HC system
- More clinic visits = more exposures to infectious diseases in busy waiting rooms
- Easy to fall behind on shots
- Multiple appointments more stressful for kids

**Developmental Change in Infant Cortisol and Behavioral Response to Inoculation**  
 Douglas S. Hammar and Michael Lewis  
 Institute for the Study of Child Development  
 and Robert Wood Johnson Medical School


Recent research by Lewis and Hammar (2005) has shown that the infant cortisol response to vaccination is not simply a function of the amount of antigen exposure, but is also influenced by the infant's developmental stage. The study found that infants who were vaccinated at 12 months of age showed a significantly higher cortisol response than those vaccinated at 18 months. This suggests that the infant's developing immune system is more sensitive to the stress of vaccination at an earlier age. The study also found that infants who were vaccinated at 12 months showed a higher behavioral response to the injection than those vaccinated at 18 months. This suggests that the infant's developing nervous system is more sensitive to the stress of vaccination at an earlier age. The study's findings have important implications for the timing of vaccination. It suggests that the infant's developing immune and nervous systems are more sensitive to the stress of vaccination at an earlier age than previously thought. This suggests that the infant's developing immune and nervous systems are more sensitive to the stress of vaccination at an earlier age than previously thought.

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## Back to Case #3



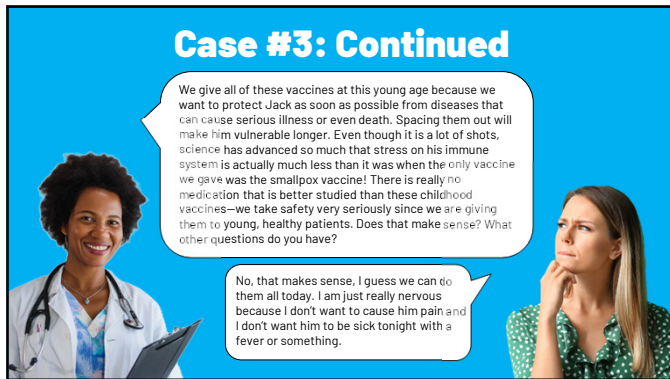
It is a lot of shots! I get it! And certainly having concerns doesn't make you "anti-vax." I want you to feel comfortable with whatever decision you make, so these conversations are really important. Can we talk about why I would recommend getting all of the vaccines today instead of spreading them out?



Sure.

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### Improving Comfort with Vaccinations

- 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

**Improving patient experience may improve compliance!**

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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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### Great Resources for Doctors and Patients

<https://www.chop.edu/vaccine-education-center>

<https://www.immunize.org/>

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### MOTIVATIONAL INTERVIEWING for Vaccine Hesitancy

**1 HOUR CME FREE**

[www.ciremitraining.org](http://www.ciremitraining.org)

Four-Part Video Series

**TRAINING MODULE For Healthcare Providers**

DEVELOPED & TAUGHT BY: **Dr. Mary Larson**, PhD, MPH, RD, CHES, Member of the MI Network of Trainers

**TRAINING TOPICS**

- ✓ The Spirit of Motivational Interviewing (MI)
- ✓ Elicit-Provide-Elicit
- ✓ Change Talk & Scaling Questions
- ✓ Best First Responses

**SCAN ME**

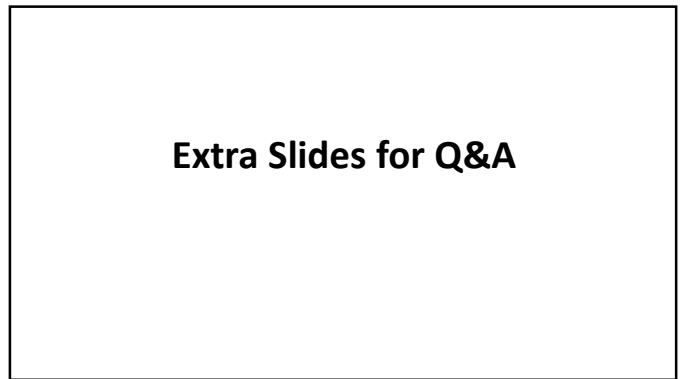
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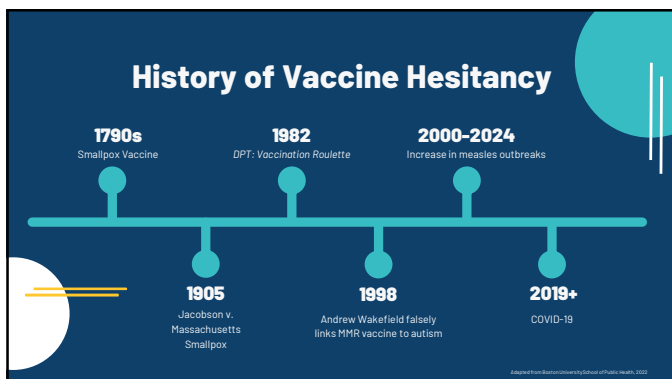
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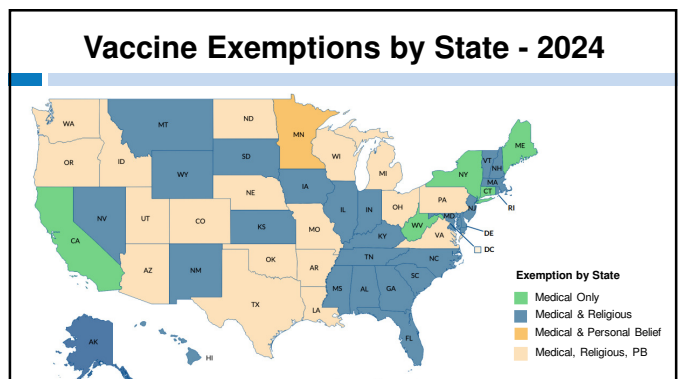
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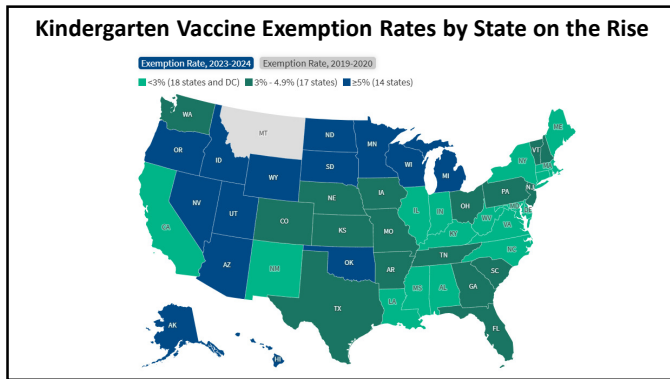
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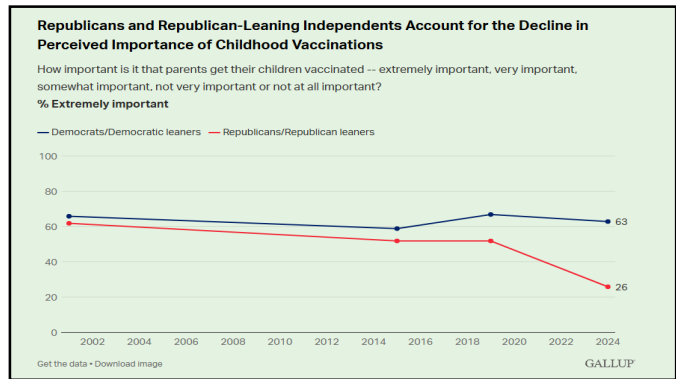
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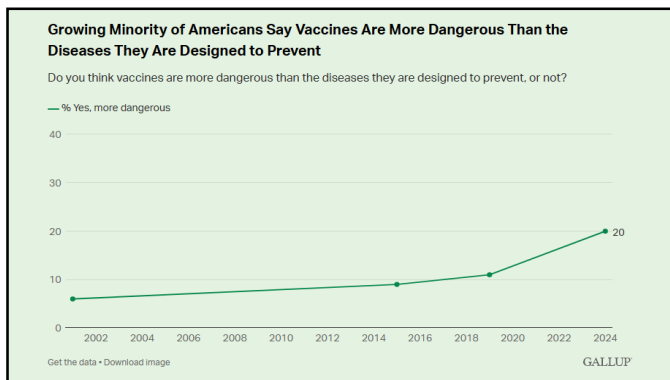
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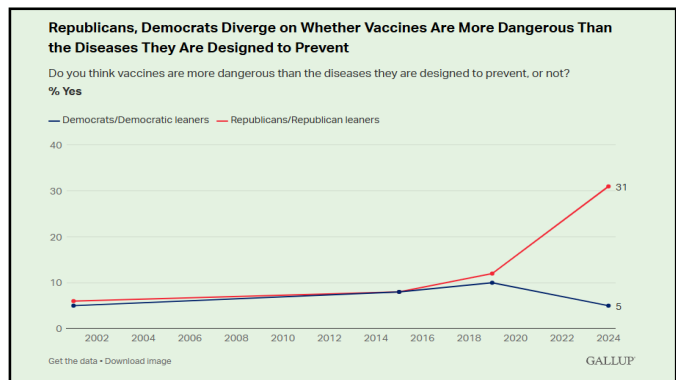
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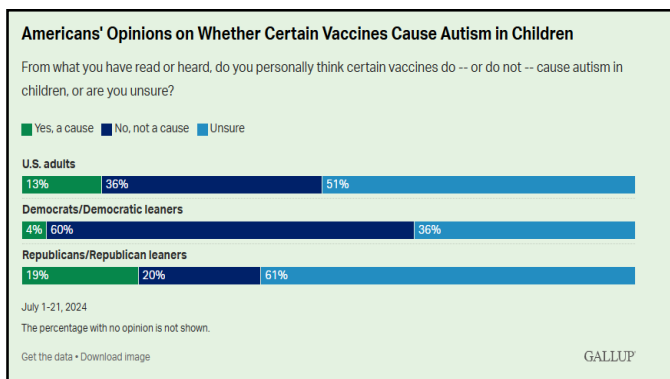
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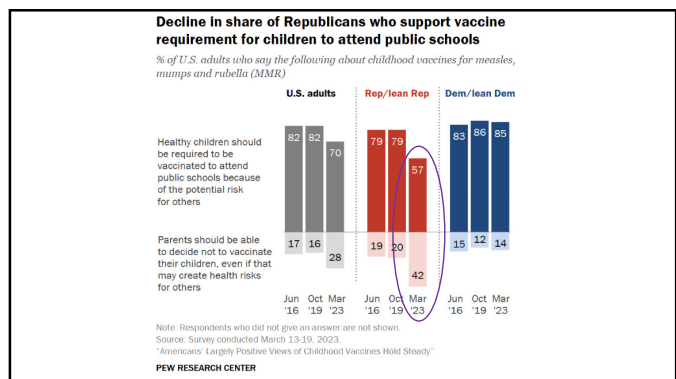
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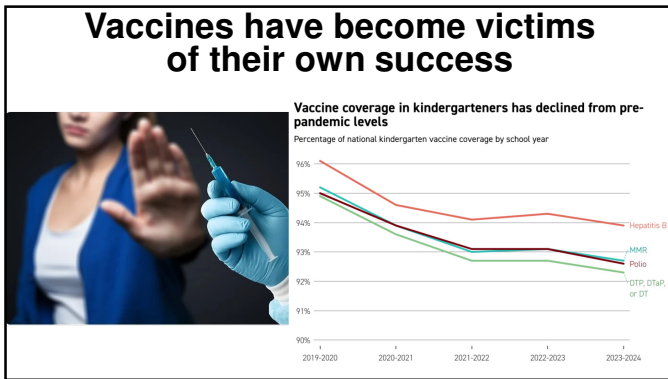
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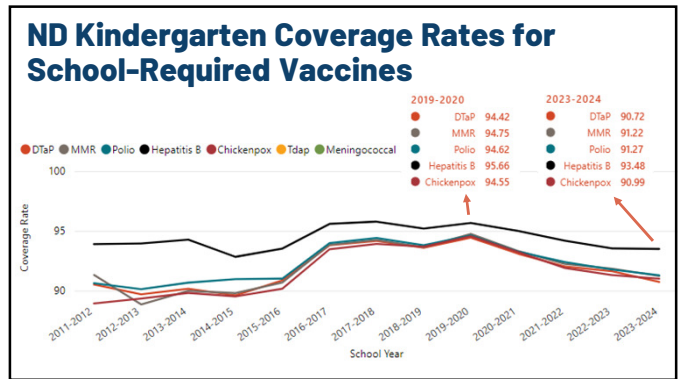
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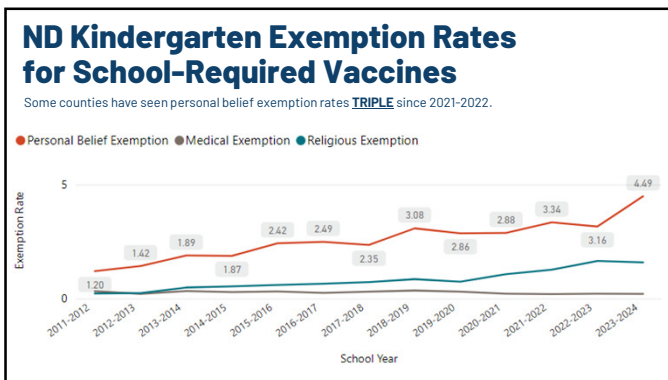
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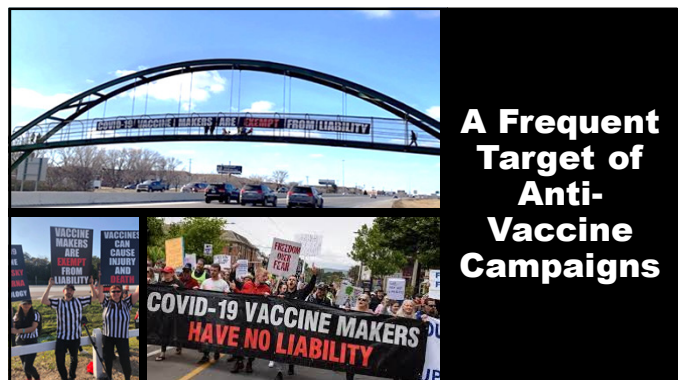
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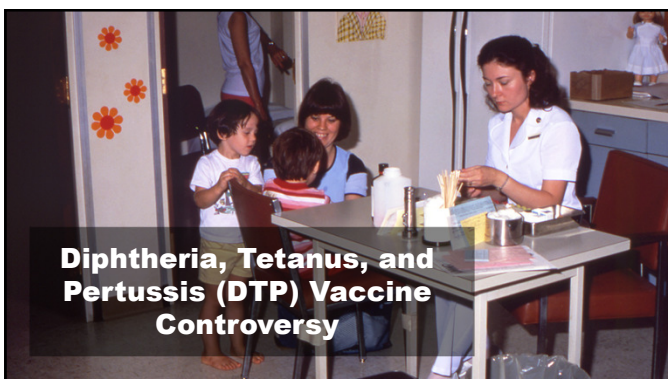
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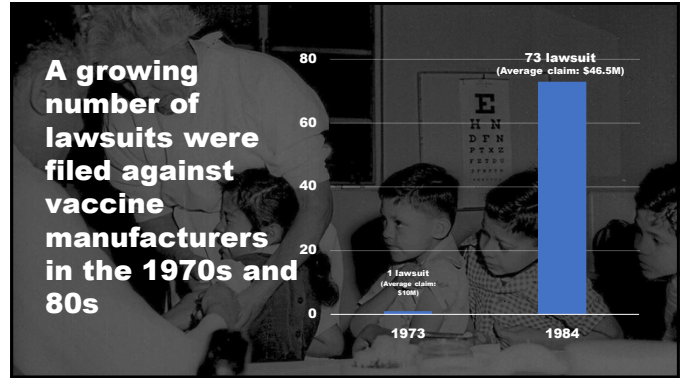
### Concerns about the Diphtheria - Tetanus - Whole Cell Pertussis Vaccine (DTP)

- The DTP vaccines were very reactogenic
  - Injection site reactions, fever, febrile seizures, hypotonic hyporesponsive episodes, persistent crying, whole limb swelling
- Concerns regarding DTP vaccine safety grew in the 1970s and 1980s
  - "Pertussis vaccine encephalopathy"
  - Rediagnosed years later as Dravet syndrome
- Vaccine change from DTP to DTaP (acellular pertussis) starting in 1996

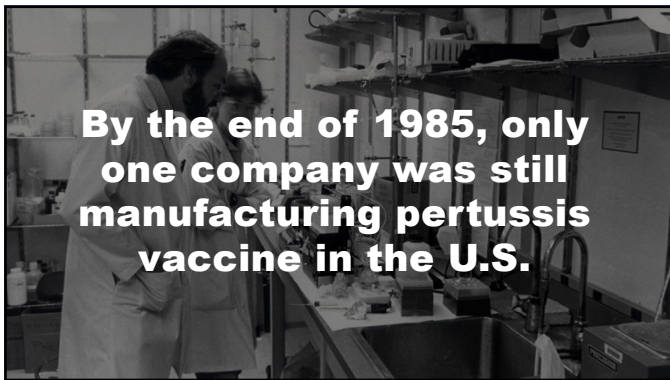
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- ### NCVIA Provisions
- Creation of the Vaccine Adverse Event Reporting System (VAERS)
  - Establishment of the National Vaccine Program Office (NVPO)
  - Requires healthcare providers to provide Vaccine Information Statements (VIS)
  - Established the National Vaccine Injury Compensation Program (NVICP), adjudicated by a Vaccine Court

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**According to the CDC, from 2006 to 2019 over 4B doses of covered vaccines were distributed in the U.S. For petitions filed in this time period:**

- 8,941 petitions were adjudicated by the court, and of those, 6,390 were compensated
- This means for every 1M doses of vaccine that were distributed, approximately 1 individual was compensated

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