ACCORDS
ADULT AND CHILD CENTER FOR OUTCOMES RESEARCH AND DELIVERY SCIENCE
UNIVERSITY OF COLORADO
CHILDREN'S HOSPITAL COLORADO

Communicating Effectively with Vaccine-Hesitant Patients

David Higgins, MD, MPH, FAAP
Assistant Professor
ACCORDS/University of Colorado School of Medicine

Christine Spina, MSPH
Research Services Principal, Project Manager
ACCORDS/University of Colorado School of Medicine

Disclosures

The presenters have no financial relationships with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services discussed in this presentation.

Session Objectives

- **Summarize key evidence** on vaccine effectiveness, safety, and public health impact most relevant to common questions from vaccine-hesitant patients.

- **Identify common concerns, misconceptions, and misinformation** that contribute to vaccine hesitancy across clinical settings.

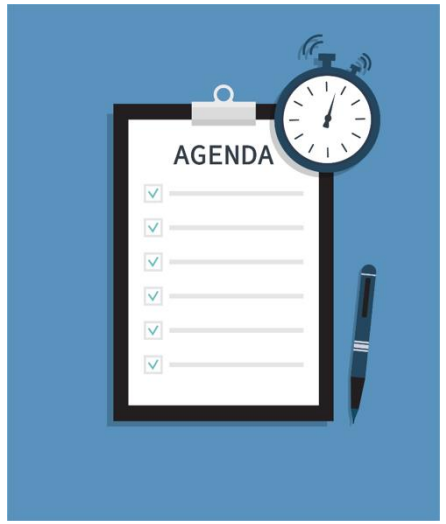
- **Demonstrate and practice communication strategies** that combine empathy and evidence to build trust and support informed vaccine decision-making in one-on-one conversations.

Communication Objectives

Understand	How to use the presumptive format to initiate the vaccine discussion
Understand	Core MI spirit, skills, and strategies for working with vaccine hesitant patients
Identify	Common conversation traps
Understand	How to address myths and misinformation in conversation
Apply	Skills in using MI and addressing vaccine myths
Develop	A plan to integrate these skills into your usual practice

Agenda

1. Background
2. Why hesitancy happens
3. What works in vaccine communication
4. Presumptive recommendations
5. Motivational interviewing
6. Putting it together



Let's Take a Poll

How often do you leave a vaccine conversation feeling frustrated or unsure how it went?

Often

Sometimes

Rarely

Never

Background

ACCORDS

ADULT AND CHILD CENTER FOR OUTCOMES RESEARCH AND DELIVERY SCIENCE

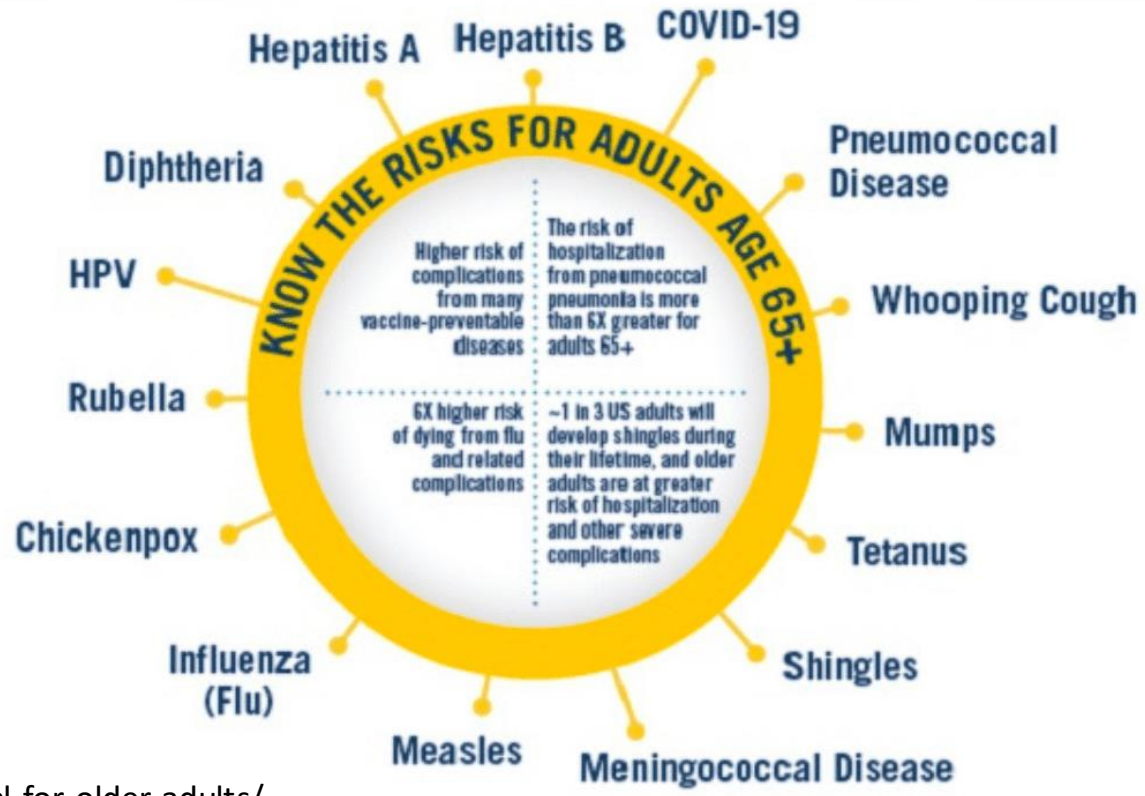
UNIVERSITY OF COLORADO
CHILDREN'S HOSPITAL COLORADO

How effective is the influenza vaccine in these vials?

Image: https://www.fda.gov/vaccines-blood-biologics/vaccines

"Vaccines alone don't save lives; Vaccination saves lives"

VACCINES ARE NOT JUST FOR CHILDREN
ADULTS 65+ CAN BE PROTECTED FROM DEADLY DISEASES



https://www.nfid.org/why-vaccinations-are-vital-for-older-adults/

Figure 1: Benefits of Vaccination in Reducing Disease Burden

PNEUMOCOCCAL DISEASE

22% reduction in all-case **mortality** in adults with cardiovascular disease

FLU

50% reduction in risk of illness*

HEPATITIS B

Up to 60% reduction of acute hepatitis B, and 26% decrease in **mortality** related to chronic liver disease

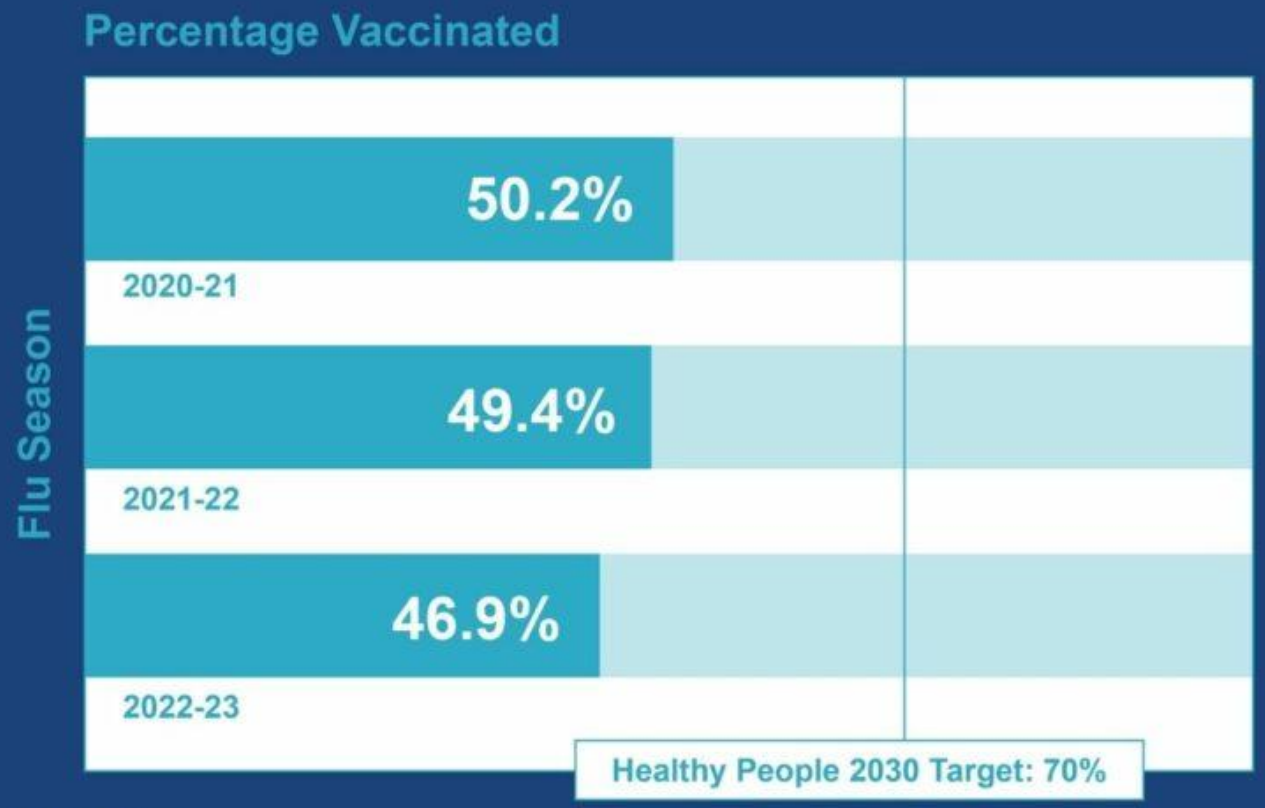
HERPES ZOSTER

More than 90% effective in prevention of shingles and postherpetic neuralgia

*In seasons when vaccine strains are well-matched to circulating strains

https://www.nfid.org/resource/call-to-action-strategies-to-improve-adult-immunization-in-the-us/

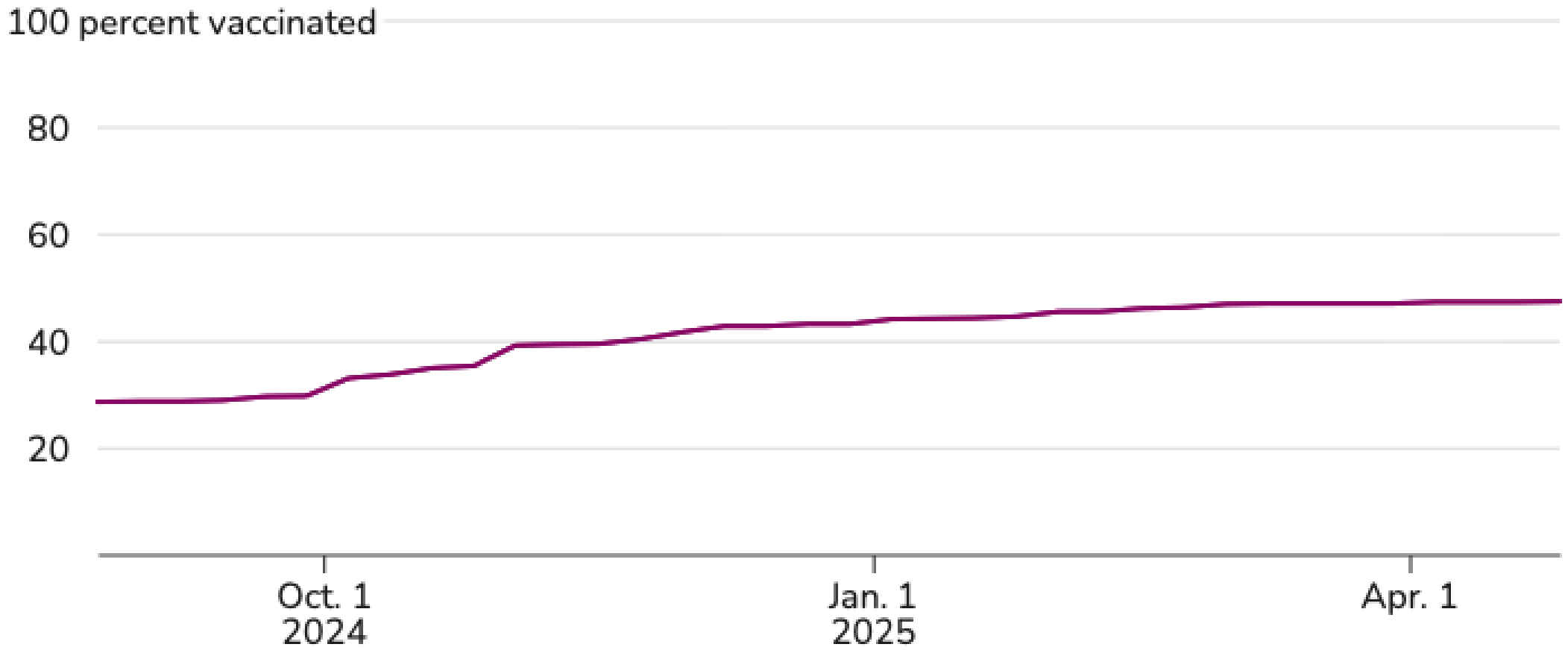
Figure 3: Declining Adult Influenza Vaccination Rates Lag Behind Public Health Target



Data Source: CDC FluVaxView

https://www.nfid.org/resource/call-to-action-strategies-to-improve-adult-immunization-in-the-us/

Weekly cumulative percent of adults 75+ vaccinated with RSV vaccine



https://www.cdc.gov/respiratory-viruses/data/vaccination-trends.html

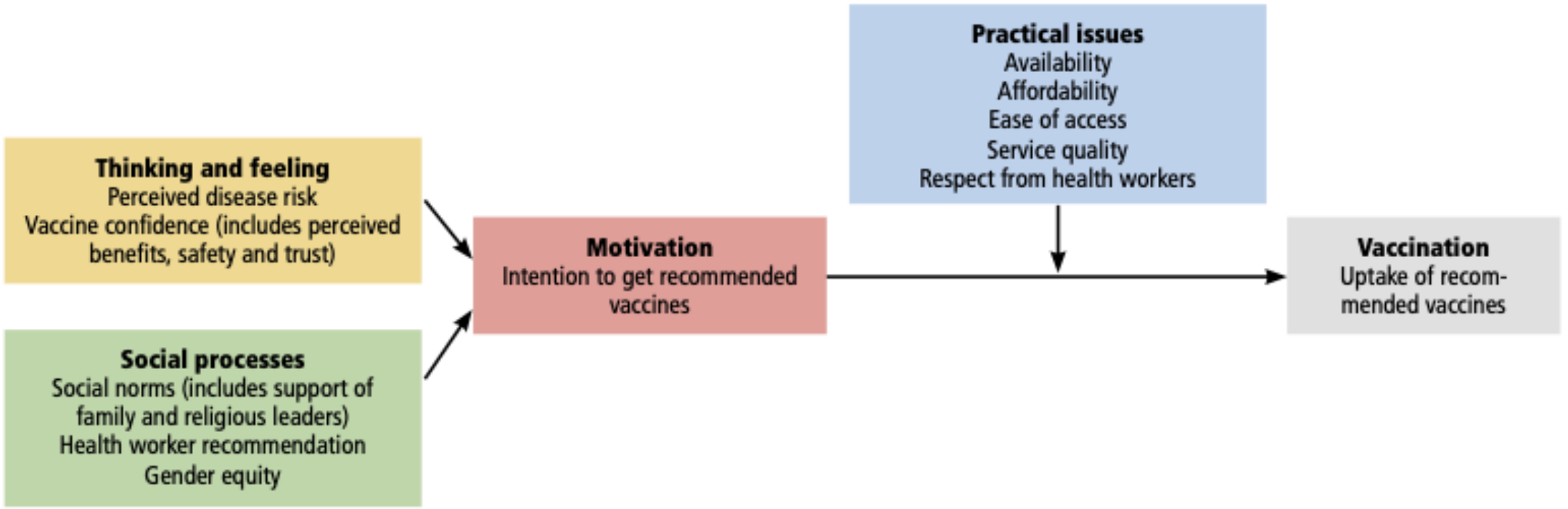
Why hesitancy happens

ACCORDS

ADULT AND CHILD CENTER FOR OUTCOMES RESEARCH AND DELIVERY SCIENCE

UNIVERSITY OF COLORADO
CHILDREN'S HOSPITAL COLORADO

Figure 1 **The WHO behavioural and social drivers of vaccination framework**
Figure 1 **Cadre OMS des facteurs comportementaux et sociaux de la vaccination**



https://iris.who.int/bitstream/handle/10665/354458/WER9720-eng-fre.pdf?sequence=1

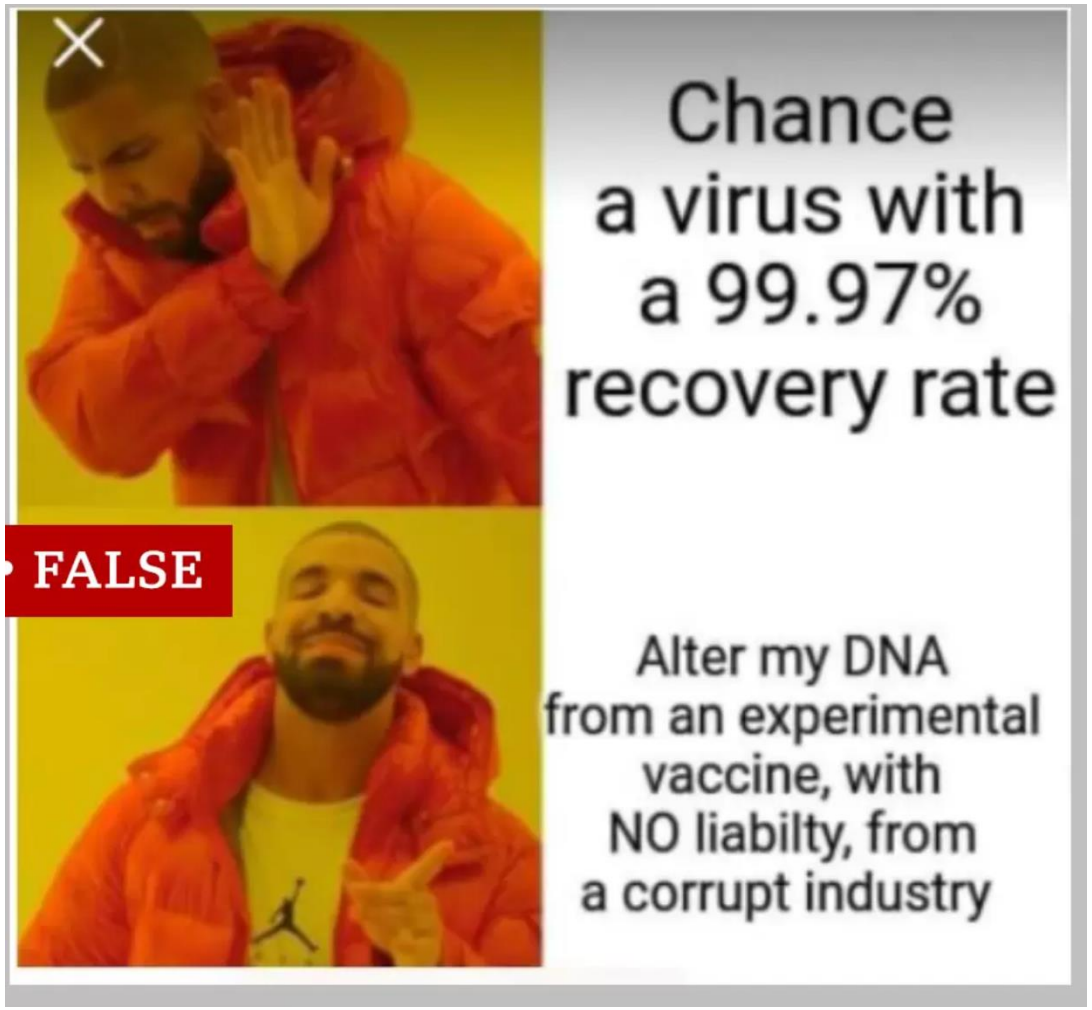
Cowpox vaccine, 1802

Image: Library of Congress, Prints & Photographs Division, LC-USZC4-3147, converted to JPEG with the GIMP 2.4.5, image quality 88. Downloaded from Wikimedia Commons.

City of Toronto Archives, Fonds 1244, Item 2517

Anti-Vaccination League of Canada, 1919

Image: https://www.popsci.com/anti-vaccination-movements-measles-smallpox/



Social Media, 2025

Image: https://www.bbc.com/news/55101238

Vaccine Hesitancy Continuum

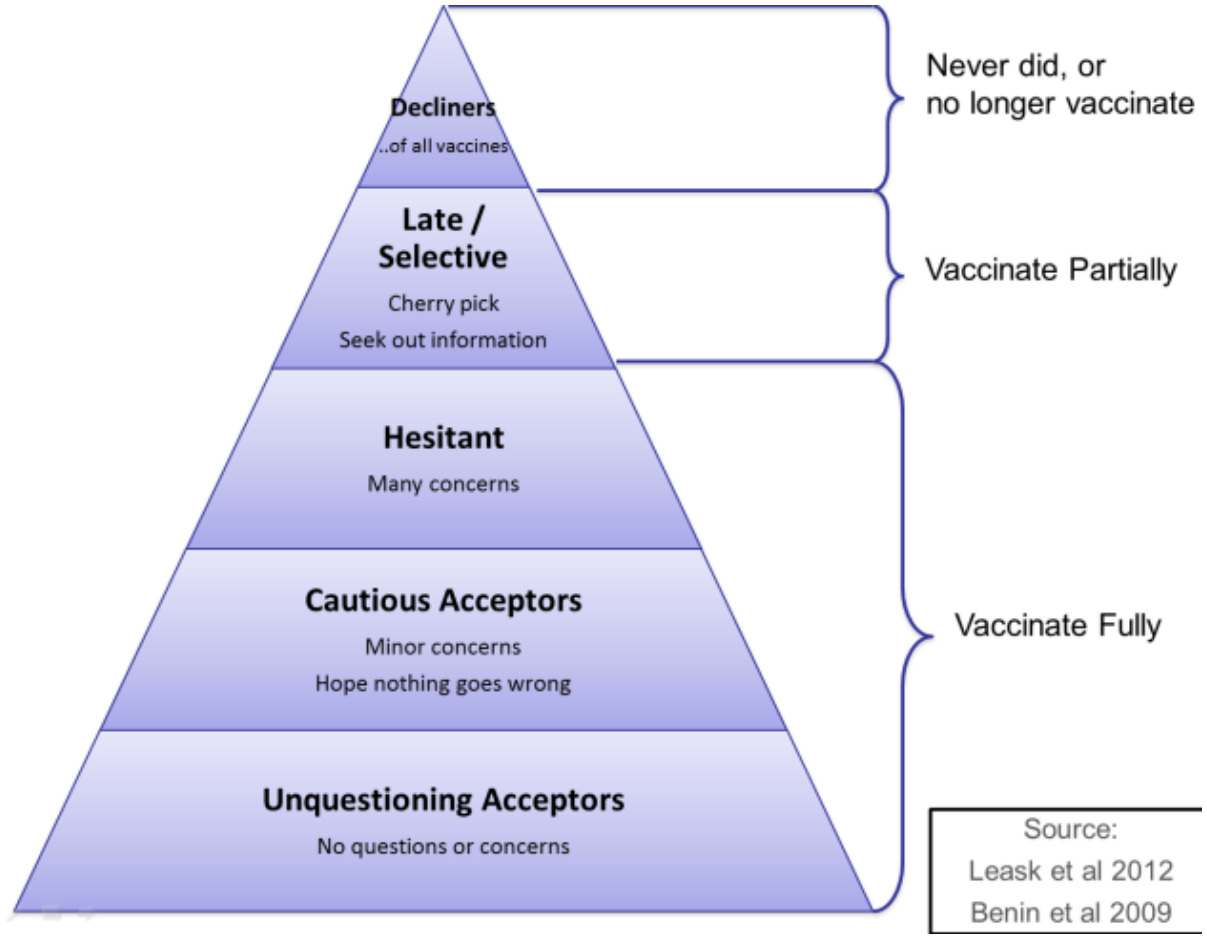
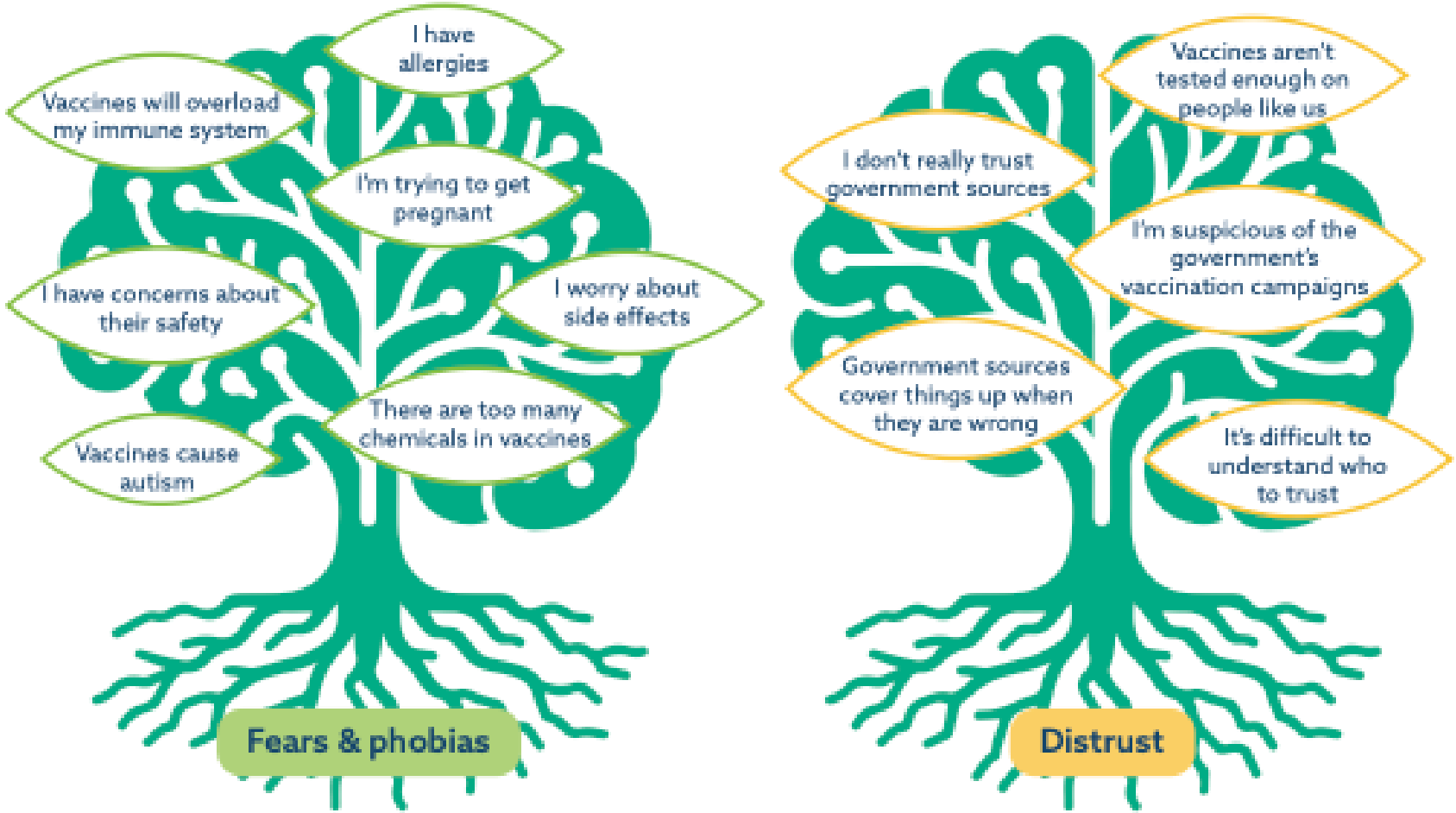


Image: https://julieleask.wordpress.com/2015/05/12/improving-communication-about-vaccination-sarah/



ATTITUDE ROOTS

Anderson, E. C., Holford, D., Gould, G., Lewandowsky, S., Karlsson, L., Taubert, F., & Verger, P. (2025). *The Empathetic Refutational Interview – User Guide*. JITSUVAX Project. https://jitsuvax.info

The Autism Myth Example

The Lancet (1998), Wakefield et al. suggest a relationship between MMR vaccine and autism

EARLY REPORT

Early report

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

A J Wakefield, S H Murch, A Anthony, J Linnell, D M Casson, M Malik, M Berelowitz, A P Dhillon, M A Thomson, P Harvey, A Valentine, S E Davies, J A Walker-Smith

RETRACTED

Summary

Background We investigated a consecutive series of children with chronic enterocolitis and regressive developmental disorder.

Introduction

We saw several children who, after a period of apparent normality, lost acquired skills, including communication. They all had gastrointestinal symptoms, including abdominal pain, diarrhoea, and bloating and, in some

- Case series methodology (12 cases)
- Most cases were self-referrals from anti-vaccine groups
- Several cases' symptoms began before (5) MMR vaccine
- Before submission, Wakefield had applied for patents on a vaccine to rival MMR vaccine
- Wakefield received >£400,000 from lawyers to prove the MMR vaccine was dangerous

Wakefield AJ, Murch SH, Anthony A, et al. Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children [retracted in: Lancet. 2004 Mar 6;363(9411):750. doi: 10.1016/S0140-6736(04)15715-2]. *Lancet*. 1998;351(9103):637-641. doi:10.1016/s0140-6736(97)11096-0.

Table 1. Studies that fail to support an association between measles-mumps-rubella vaccine and autism.

Source	Study design	Study location
Taylor et al., 1999 [5]	Ecological	United Kingdom
Farrington et al., 2001 [6]	Ecological	United Kingdom
Kaye et al., 2001 [7]	Ecological	United Kingdom
Dales et al., 2001 [8]	Ecological	United States
Fombonne et al., 2006 [9]	Ecological	Canada
Fombonne and Chakrabarti, 2001 [10]	Ecological	United Kingdom
Taylor et al., 2002 [11]	Ecological	United Kingdom
DeWilde et al., 2001 [12]	Case-control	United Kingdom
Makela et al., 2002 [13]	Retrospective cohort	Finland
Madsen et al., 2002 [14]	Retrospective cohort	Denmark
DeStefano et al., 2004 [15]	Case-control	United States
Peltola et al., 1998 [16]	Prospective cohort	Finland
Patja et al., 2000 [17]	Prospective cohort	Finland

Image: Gerber JS, Offit PA. Vaccines and autism: a tale of shifting hypotheses. *Clin Infect Dis* 2009;48(4):456-461. doi:10.1086/596476

What works for vaccine communication

ACCORDS
ADULT AND CHILD CENTER FOR OUTCOMES RESEARCH AND DELIVERY SCIENCE
UNIVERSITY OF COLORADO
CHILDREN'S HOSPITAL COLORADO

Let's Take a Poll

How much do you agree or disagree with the following statement:

"I am usually able to convince hesitant patients to vaccinate."

Strongly Agree

Agree

Disagree

Strongly Disagree

Childhood vaccines

Cochrane Review 2013: "The limited evidence available is low quality and suggests that face to face interventions to inform or educate parents about childhood vaccination have little to no impact on immunisation status, or knowledge or understanding of vaccination."

Cochrane Review 2018: "There is low- to moderate-certainty evidence suggesting that face-to-face information or education may improve or slightly improve children's vaccination status, parents' knowledge, and parents' intention to vaccinate. Face-to-face interventions may be more effective in populations where lack of awareness or understanding of vaccination is identified as a barrier, e.g. where people are unaware of new or optional vaccines."

Adult vaccines

Cochrane Library

Cochrane Database of Systematic Reviews

Interventions to improve vaccination uptake among adults (Protocol)

Jaca A, Sishuba M, Jacobson Vann JC, Wiysonge CS, Ndwandwe D

PLANNED REVIEW
Protocol Only

"Communication strategies: presumptive communication approach; gain-framed versus loss-framed communication; use of science and anecdotes; motivational interviewing; health coaching; clinicians providing a strong recommendation to the adult; and other communication tactics to facilitate decision-making."

Jaca A, Sishuba M, Jacobson Vann JC, Wiysonge CS, Ndwandwe D. Interventions to improve vaccination uptake among adults. Cochrane Database of Systematic Reviews 2021, Issue 11. Art. No.: CD015057. DOI: 10.1002/14651858.CD015057. Accessed 19 January 2026.

Addressing vaccine hesitancy is complicated! There are no easy solutions!

Image: https://www.dreamstime.com/illustration/dont-do.html

Effective Messages in Vaccine Promotion: A Randomized Trial

AUTHORS: Brendan Nyhan, PhD,[a] Jason Reifler, PhD,[b] Sean Richey, PhD,[c] and Gary L. Freed, MD, MPH[d,e]

WHAT'S KNOWN ON THIS SUBJECT: measles-mumps-rubella immunizatic

Parents were randomly assigned to receive 1 of 4 interventions:

(1) info explaining the lack of evidence that MMR causes autism
(2) info about measles, mumps, and rubella from VIS
(3) images of children with measles, mumps, rubella
(4) a dramatic narrative about a severe case of measles
(5) Control group

Nyhan B, Reifler J, Richey S, Freed GL. Effective messages in vaccine promotion: a randomized trial. *Pediatrics*. 2014;133(4):e835-e842. doi:10.1542/peds.2013-2365

Effective Messages in Vaccine Promotion: A Randomized Trial

AUTHORS: Brendan Nyhan, PhD,[a] Jason Reifler, PhD,[b] Sean Richey, PhD,[c] and Gary L. Freed, MD, MPH[d,e]

WHAT'S KNOWN ON THIS SUBJECT: measles-mumps-rubella immunizatic

- None of the interventions increased parental intent to vaccinate, and they often **BACKFIRED**
  - Refuting claims of an MMR/autism link **decreased** intent to vaccinate among parents who had the least favorable vaccine attitudes
  - Images of sick children **increased** expressed belief in a vaccine/autism link

Nyhan B, Reifler J, Richey S, Freed GL. Effective messages in vaccine promotion: a randomized trial. *Pediatrics*. 2014;133(4):e835-e842. doi:10.1542/peds.2013-2365

The Persuasion Trap

"You cannot reason people out of something they were not reasoned into."

-Jonathan Swift, 1721

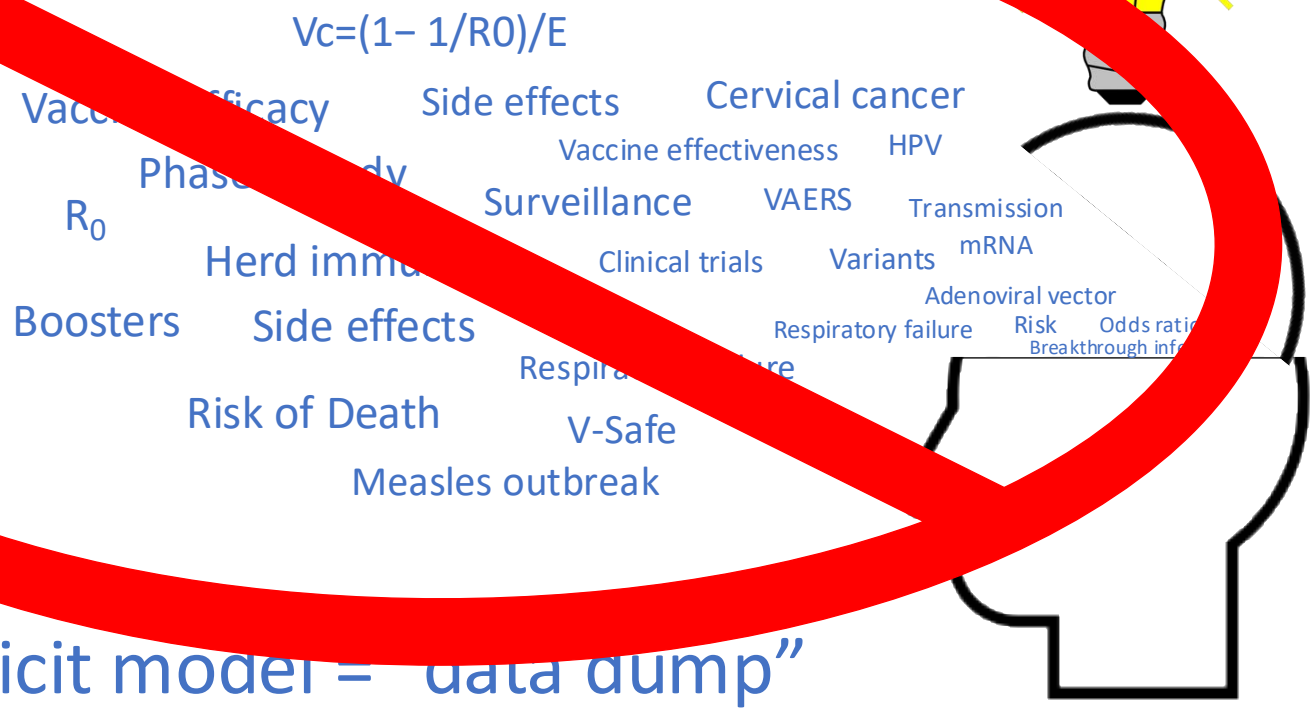
In the "Persuasion Trap," the provider tries to convince hesitant patients of the benefits.
This assumes human decision-making is rational ***(It is not!)***

or

?

The Data Dump

What if we just give them more information?



Information deficit model = "data dump"

The Persuasion Trap

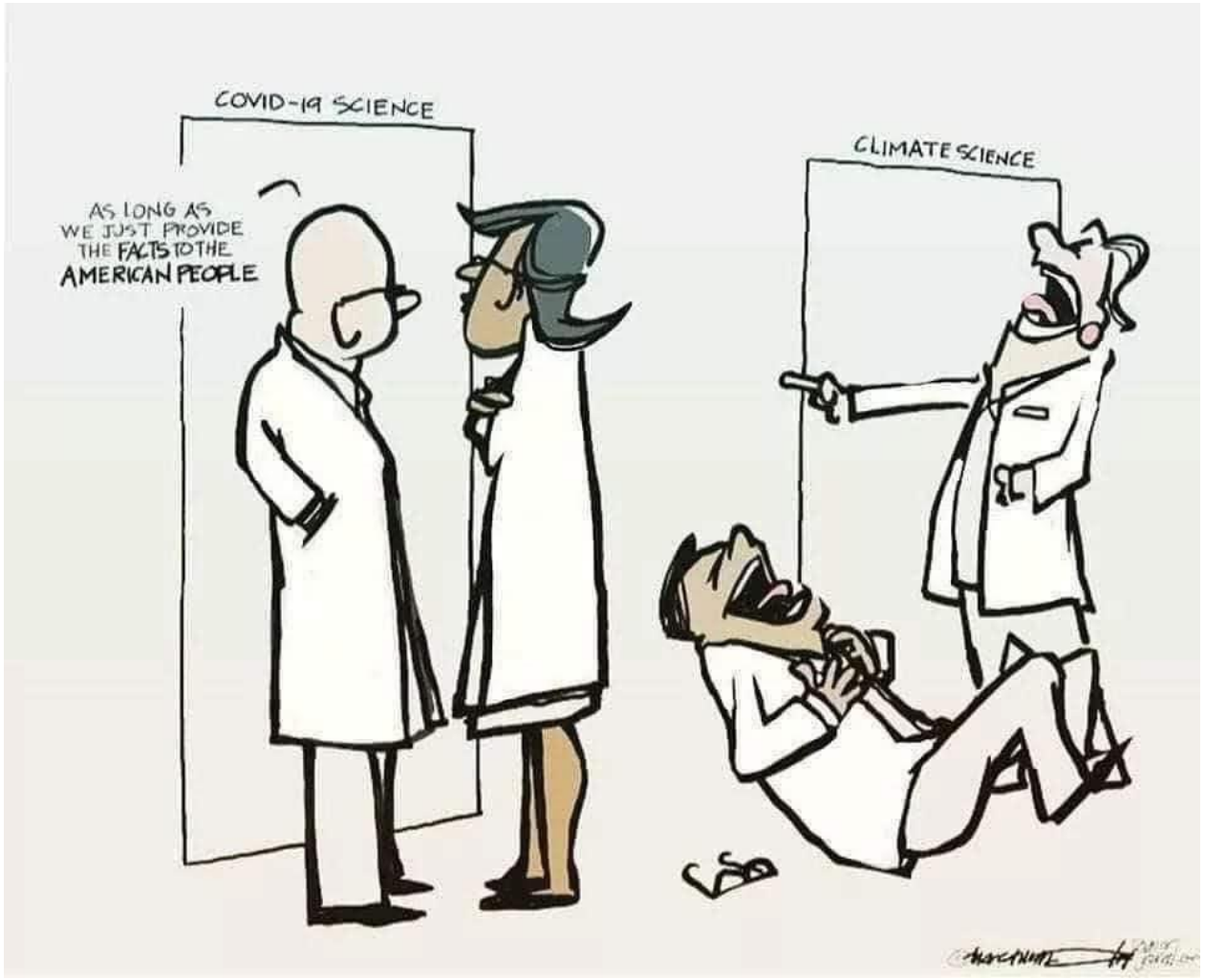


Image: https://meta-narrator.com/2020/08/12/a-farewell-to-facts/

It's Not Just About the Facts

How we communicate about vaccines is just as important as **What** we communicate.

The facts are **necessary** but often **not sufficient**.

Image: https://www.bridgemi.com/special-report/introduction-just-facts-2018-michigan

So, what works?

ACCORDS

ADULT AND CHILD CENTER FOR OUTCOMES RESEARCH AND DELIVERY SCIENCE

UNIVERSITY OF COLORADO
CHILDREN'S HOSPITAL COLORADO

The Physician Communication Study (PCOM)

- Cluster RCT among 16 public and private practices in Colorado
- Multi-component intervention
  1. **HPV Fact Sheet developed by clinicians**
  2. **Communication training including Motivational Interviewing**
  3. HPV Decision Aid
  4. Tailored web-based intervention

JAMA Pediatrics | Original Investigation

Effect of a Health Care Professional Communication Training Intervention on Adolescent Human Papillomavirus Vaccination
A Cluster Randomized Clinical Trial

Amanda F. Dempsey, MD, PhD, MPH; Jennifer Pyrznawoski, MSPH; Steven Lockhart, MPH; Juliana Barnard, MA; Elizabeth J. Campagna, MS; Kathleen Garrett, MA; Allison Fisher, MPH; L. Miriam Dickinson, PhD; Sean T. O'Leary, MD, MPH

The Physician Communication Study (PCOM)

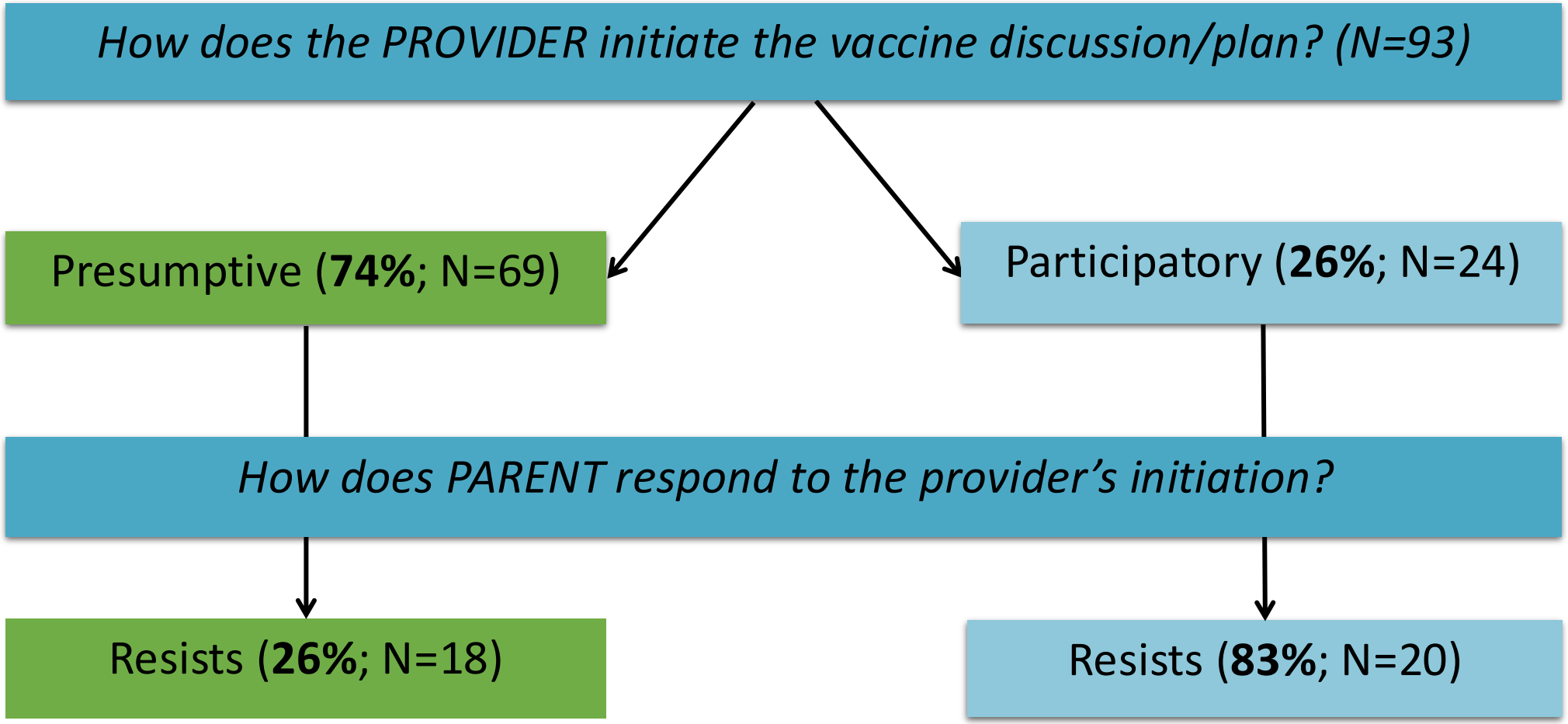
- Self-efficacy for changing parents' minds about HPV vaccine improved among clinicians
- Clinicians spent the same amount of time or less time on HPV vaccine discussions after the training.
- **9.5% higher** rates of in HPV vaccine initiation in training intervention clinics versus control clinics

JAMA Pediatrics | Original Investigation

Effect of a Health Care Professional Communication Training Intervention on Adolescent Human Papillomavirus Vaccination
A Cluster Randomized Clinical Trial

Amanda F. Dempsey, MD, PhD, MPH; Jennifer Pyrznawoski, MSPH; Steven Lockhart, MPH; Juliana Barnard, MA; Elizabeth J. Campagna, MS; Kathleen Garrett, MA; Allison Fisher, MPH; L. Miriam Dickinson, PhD; Sean T. O'Leary, MD, MPH

The Presumptive or Announcement Format



Opel et al. *Pediatrics* 2013

Formats to Initiate the Vaccine Discussion

Presumptive / Announcement Format:

-A declarative statement

-Presupposes patient will vaccinate

-"Sara is due for 3 shots today."

Participatory Format:

-An open-ended question

-Presupposes patient will question

-"How do you feel about shots today?"

Opel et al. *Pediatrics* 2013

Start the vaccine conversation by presuming parents or patients are interested in vaccinating

Example: "Sara is due for a flu shot today." *or* "Johnny needs 2 vaccines today to be up to date."

Example: "You are also due for the RSV vaccine."

Patient accepts vaccines (with or without subsequent questions)

Example: "OK."

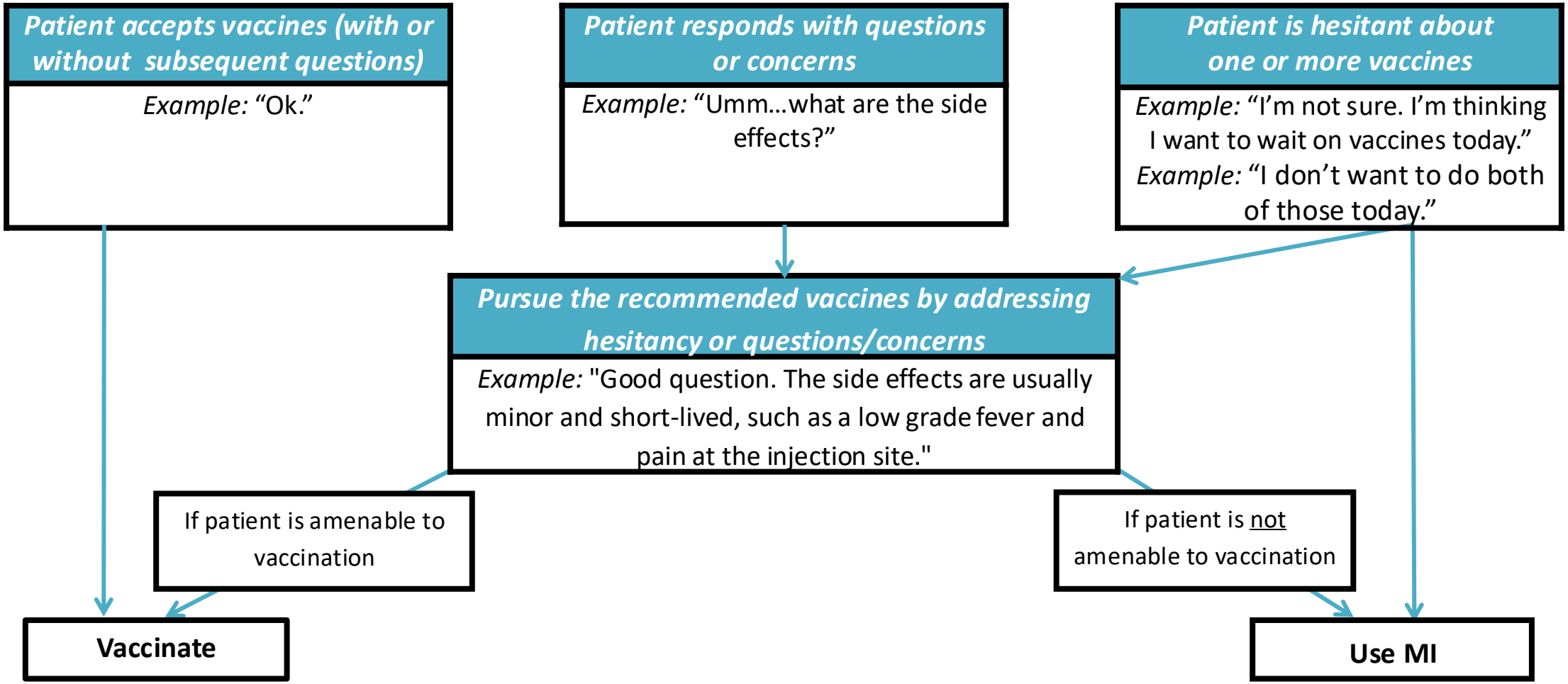
Patient responds with questions or concerns

Example: "Umm…what are the side effects?"

Patient is hesitant about one or more vaccines

Example: "I'm not sure. I'm thinking I want to wait on vaccines today."
Example: "I don't want to do both of those today."

Adapted from https://publications.aap.org/pediatrics/article/153/3/e2023065483/196695/Strategies-for-Improving-Vaccine-Communication-and?autologincheck=redirected



Adapted from https://publications.aap.org/pediatrics/article/153/3/e2023065483/196695/Strategies-for-Improving-Vaccine-Communication-and?autologincheck=redirected

Patient response: *"Are there side effects from these vaccines that I should be worried about?"*

Which one of the dispositions is the patient?

1. Patient accepts vaccines (with or without subsequent questions)

2. Patient responds with questions or concerns

3. Patient is hesitant about one or more vaccines

Patient response: *"Sounds good. Can you remind me what these vaccines are for?"*

Which one of the dispositions is the patient?

1. Patient accepts vaccines (with or without subsequent questions)

2. Patient responds with questions or concerns

3. Patient is hesitant about one or more vaccines

Presumptive Pearl # 1

Tone and body language matter.

When delivering the presumptive format: make eye contact, square shoulders, and don't be distracted.

Know what the patient is due for before using the presumptive format!

Standard 1

"I know we talked about vaccines last time. You are due for 3 shots today."

Standard 2

"I know we talked about vaccines last time, and I recommend you get these 3 shots today."

Standard 3

"I know we talked about vaccines last time, but I'd like to get you caught up today. You are due for 3 shots."

Standard 4

"I know you had some concerns last time, but you is due for 3 shots today."

You can use a presumptive format at a visit even though a patient has voiced resistance at an earlier visit.

AVOID THIS:

"I know we talked about this last time…what do you think about vaccines today?"

Let's Take a Poll

In your practice, who is usually the first person to talk with a family about vaccines during their visit?

1. Front desk or administrative staff member
2. Medical Assistant
3. Nurse
4. Clinician (physician, nurse practitioner, physician assistant)
5. Other

Medical assistants, nurses and other staff who communicate with patients about vaccines should use the presumptive format too.

”You are due for 3 shots today that we recommend to all our patients. "

You can still use a presumptive format after a MA, nurse, or other staff tells you the patient is hesitant.

Standard 1

"You are due for 3 shots today. The MA mentioned you had some concerns."

Standard 2

"I heard you have some vaccine concerns, but I'd like to get you caught up on vaccines today."

Motivational Interviewing (MI)?

- Brief MI skills for vaccine conversations
- The spirit of MI:
  - Partnership
  - Acceptance
  - Compassion
  - Evocation

Why use MI with a Vaccine-hesitant Patients?

- MI is effective and efficient.
- What we think will change someone's mind:
  - Persuasion
  - Knowledge and facts
- What actually leads to change:
  - Connecting to a person's values
  - Ambivalence toward change is typical

5 MI Skills to Use in Vaccine Conversations

- **Open Ended Questions**
  "Why would you prefer to wait on the MMR vaccine today?"
- **Affirmation**
  "It is clear that you want to do what's best for your health."
- **Reflection**
  "It sounds like you're most concerned about side effects."
- **Autonomy Support**
  "This is your decision to make. I am here to support you."
- **Ask Permission to Share**
  "Would it be ok if I share with you why I recommend these?"

Exploring Ambivalence

- "I'm wondering, do you see any benefits from vaccination today?"
- It's ok to hear out negative motivations. Don't need to refute every statement.
- Look for opportunities to re-focus a conversation
  - On benefits of vaccination
  - Reminding patient of their own positive feelings
  - Promoting change talk
- Always CHECK BACK IN!

  "Has anything I shared changed what you would like to do today?"

Breakout Groups!

- Next, we'll move into groups to practice:
  - Presumptive format and MI skills in context

- We will come back together after to discuss

Let's practice!

Patient – Disposition options: accepting of vaccines OR has questions OR is hesitant.

- Think of a recent conversation in your clinic for inspiration
- You may be hesitant because of an internal conflict but you are **not fully resistant**. If the clinician is too directive, not empathetic, your motivation goes down. If the clinician asks open-ended questions, listens and affirms, your motivation goes up.

Clinician – Begin the conversation using the announcement format. Pay attention to the patient's disposition. Use your MI skills to engage the parent.

Observer – Pay close attention to what the clinician says and does. Note any changes in the patient's motivation to accept. Which skills were used?

Group Debrief: BACK IN LARGE GROUP

Conversation Traps

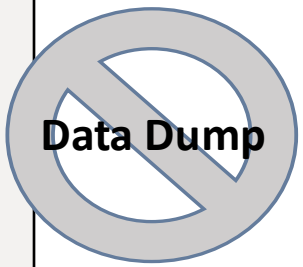
Lecture or Data Dump

Long recitation of everything you've ever learned about immunology, vaccine safety, autism, and infectious diseases…

https://www.youtube.com/watch?v=ss2hULhXf04

Sharing Information: Elicit, Provide, Elicit

Elicit	***Clinician***: Tell me what your concerns are about the influenza vaccine? ***Patient*** : <responds with concerns>
Provide Information	***Clinician***: I can tell you're worried about side effects. Can I share some information that you may find helpful? ***Patient***: Sure ***Clinician***: Most people have mild side effects, like a sore arm or feeling achy for a day or two. Serious side effects are very rare. The flu vaccine lowers your risk of severe illness, hospitalization, and missing work or family responsibilities. That's why I recommend it to all of my adult patients each year.
Elicit	***Clinician***: What's your reaction to that?



Conversation Traps

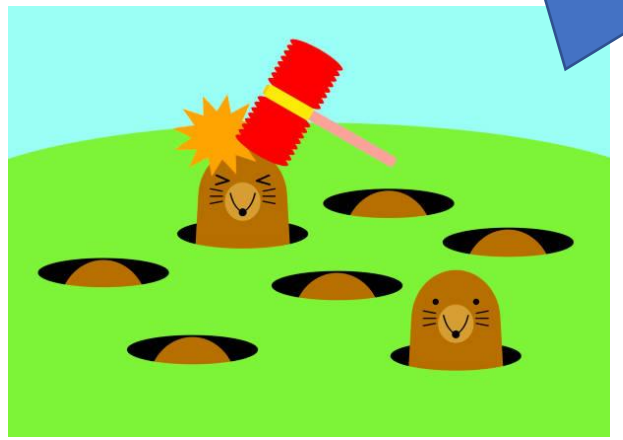
Persuasion or Whack-a-Mole

Clinician: “So those are all the ways we know this is safe”

Patient: “Yes, but…”

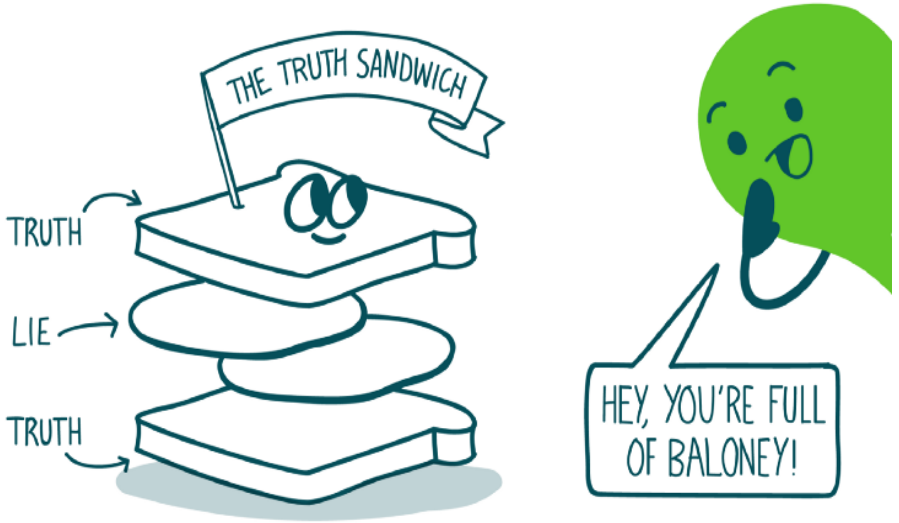
Clinician: “Well here’s a bunch more info”

Patient: “Ok, but…”



Challenges: Addressing Myths

- Ask permission to share
- State truth, why myth is false, then repeat the true message that you want them to remember
- If you've never heard the myth before, ask if you can look into it more and get back to them. Then be sure to follow through!

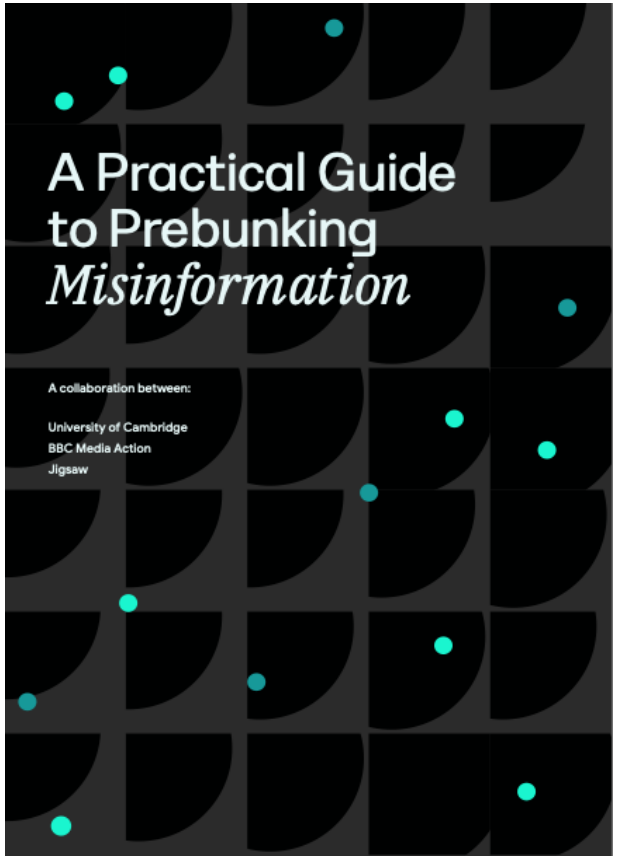


https://communicatehealth.com/wehearthealthliteracy/the-truth-sandwich-a-better-way-to-mythbust/

Patient: I don't usually get the flu shot. I'm pretty healthy, and I've heard it can actually make you sick. I'd rather let my immune system handle it.	**Myth**: The flu vaccine can cause the flu or isn't needed for healthy adults
Clinician: It sounds like you're worried about side effects and whether the flu vaccine is really necessary for you. Would it be okay if I shared what I know?	Reflection Ask permission to share
Patient: Yeah sure.	
Clinician: Most people only have mild side effects from the flu shot, like a sore arm or feeling achy for a day or two. A common concern I hear is that the flu vaccine can cause the flu — but it can't. What it does do is lower your risk of getting seriously ill, being hospitalized, or missing work or family responsibilities, even if you're otherwise healthy. That's why I recommend it every year.	**Truth** Myth **Truth**

Inoculating Patients Against Misinformation Tactics

- Just as vaccines build immunity to disease, **psychological inoculation ("pre-bunking")** builds immunity to misinformation
- Exposes people to common manipulation tactics
- Teaching patients how falsehoods spread helps them **spot and resist misinformation**



A_Practical_Guide_to_Prebunking_Misinformation.pdf
Prebunking Manipulation Techniques: Emotional Language (v2)

Empower Patients by Highlighting Key Misinformation Strategies

Emotional manipulation:

Exploiting fear, urgency , or outrage to make misinformation more persuasive

Cherry-picking data:

Selecting only data that support a misleading claim while ignoring the broader scientific consensus

Science denial:

Using false experts, conspiracy theories and impossible expectations for certainty in vaccine science.

False dichotomy:

Presenting two options as the only available options, but they're not mutually exclusive

Scapegoating:

Blaming a complex problem on a group or entity that couldn't possibly be responsible for the problem

Ad hominem:

Attacking a person rather than the contents of the argument

Inoculating Patients Against Misinformation Tactics

- **Check the source:** Encourage patients to verify if the information comes from reputable organizations.
- **Cross-check with trusted sites:** If only fringe sources report a claim and major health organizations remain silent, it's likely misinformation. If a claim lacks references, that's a red flag.
- **Follow the money:** Misinformation often is tied to financial motives for people who spread it. This may look like excessive advertising, sensationalized headlines and the promotion of alternatives to vaccination.

Back into Groups!

- Let's move back into groups to practice:
  - Presumptive format and MI skills in context
  - **Myth busting**

- We will come back together after to discuss

Group Debrief: BACK IN LARGE GROUP

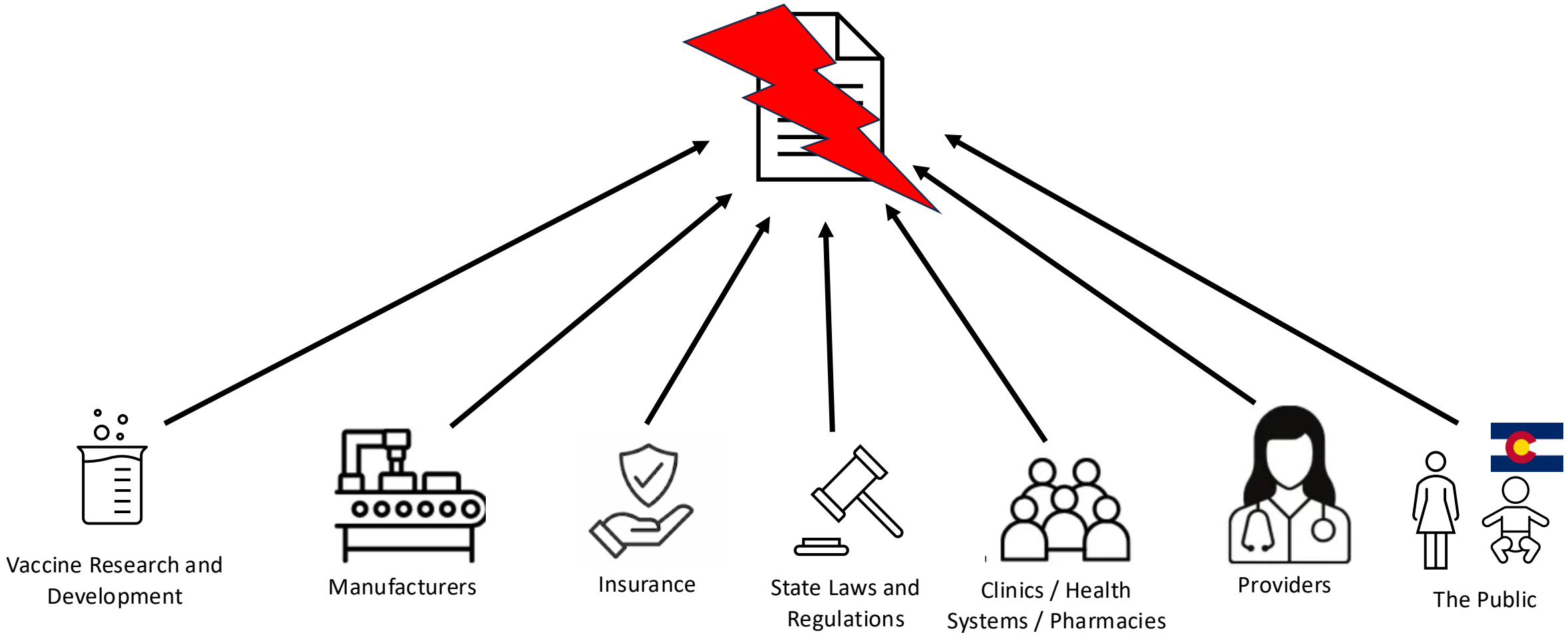
Our Current Moment

ACCORDS

ADULT AND CHILD CENTER FOR OUTCOMES RESEARCH AND DELIVERY SCIENCE

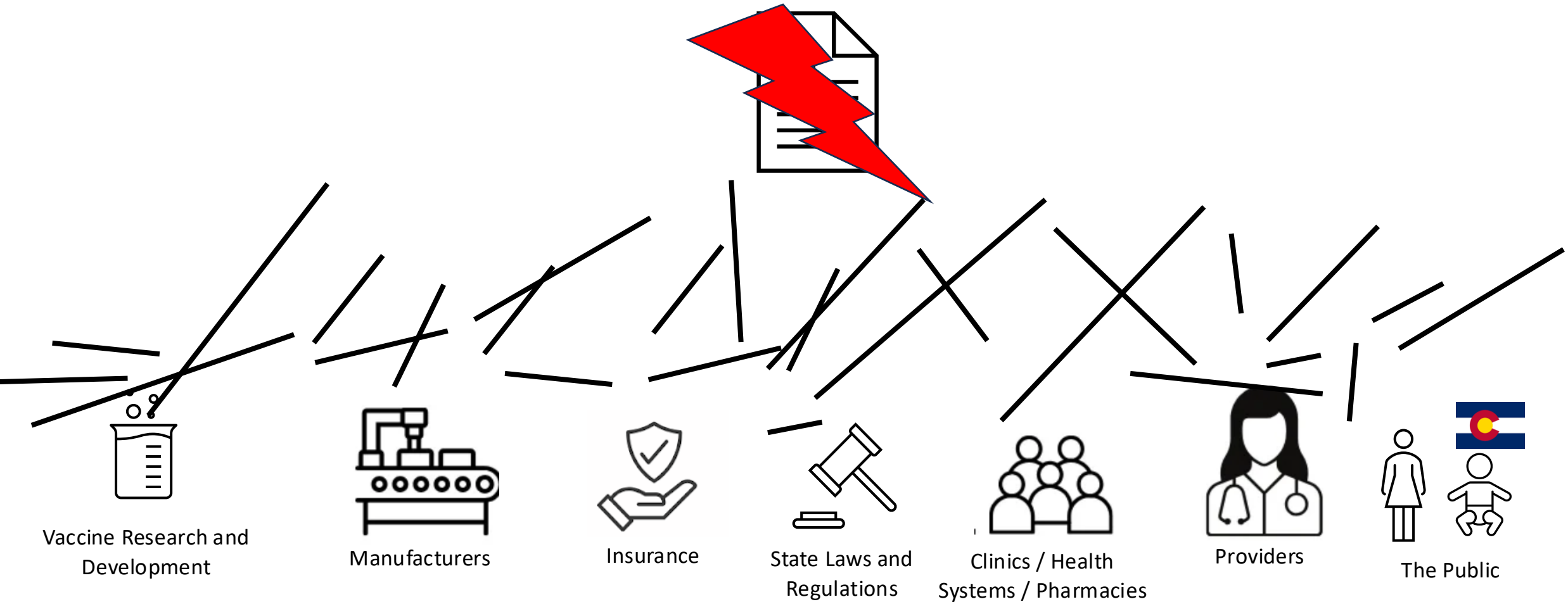
UNIVERSITY OF COLORADO
CHILDREN'S HOSPITAL COLORADO

Federal Vaccine Approval, Guidance, and Communication



Adapted figure from Katelyn Jetelina, PhD, Your Local Epidemiologist

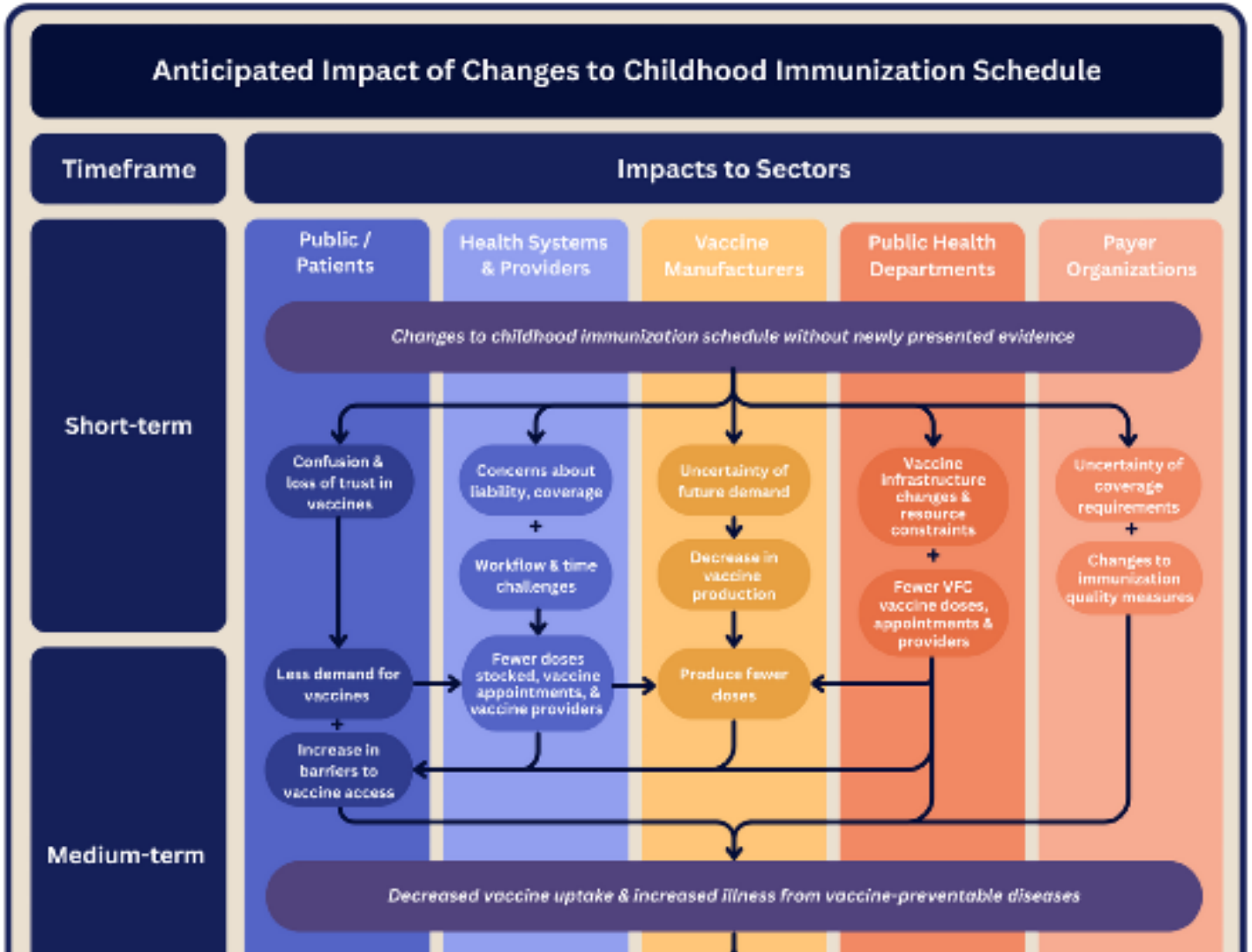
Federal Vaccine Approval, Guidance, and Communication



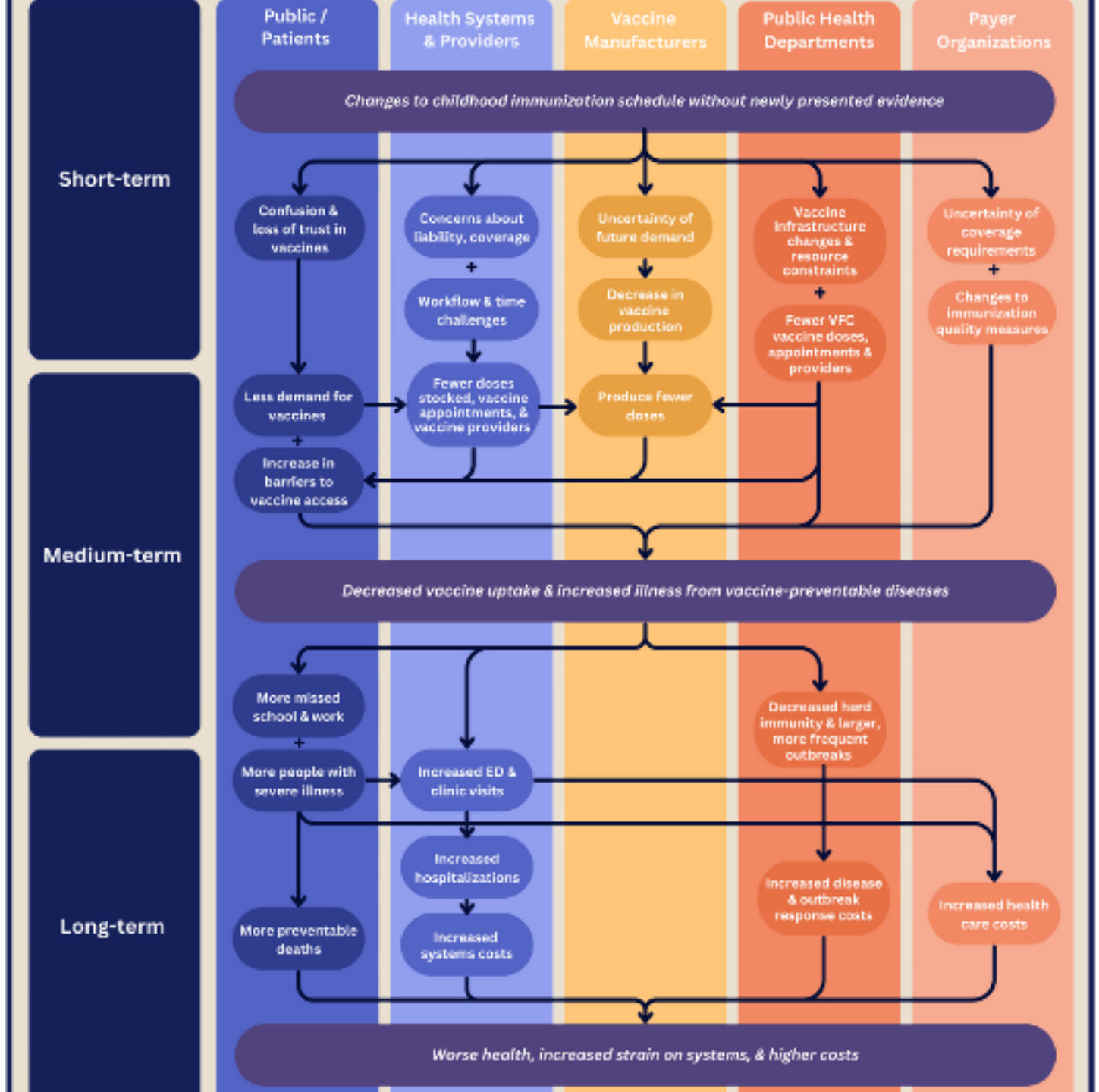
Adapted figure from Katelyn Jetelina, PhD, Your Local Epidemiologist

Common Health Coalition

This diagram is intended to display possible cascading impacts resulting from changes to the childhood immunization schedule across patients, providers, manufacturers, public health, and payers over time. It is not intended to be specific to any one vaccine or region in the country.



https://commonhealthcoalition.org/wp-content/uploads/2026/01/Infographic_ChildImmsImpacts_v7.pdf



https://commonhealthcoalition.org/wp-content/uploads/2026/01/Infographic_ChildImmsImpacts_v7.pdf

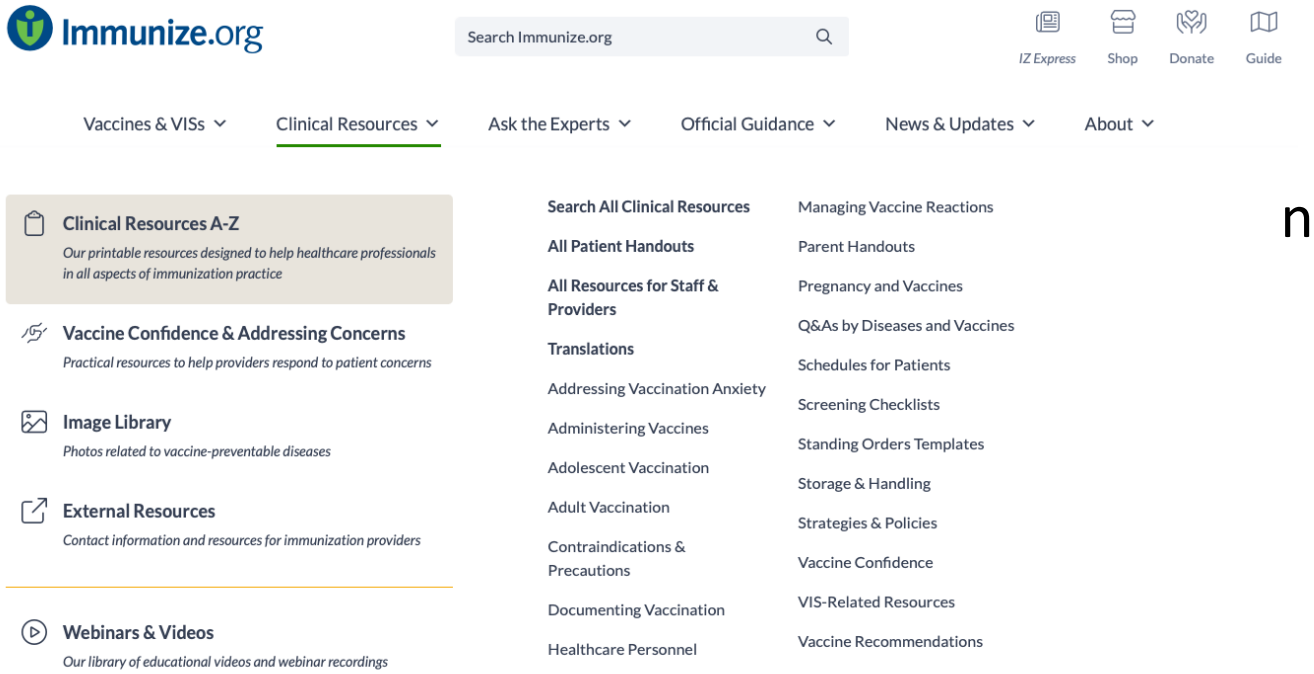
Resources

ACCORDS

ADULT AND CHILD CENTER FOR OUTCOMES RESEARCH AND DELIVERY SCIENCE

UNIVERSITY OF COLORADO
CHILDREN'S HOSPITAL COLORADO

Where can I Find Credible, Trustworthy Information?



Immunize.org is a U.S.-based nonprofit dedicated to improving vaccination rates by offering educational materials and practical support to healthcare professionals and the public.

Where can I Find Credible, Trustworthy Information?

VaccineInformation.org is a public-facing resource developed by Immunize.org to provide accurate, accessible, and evidence-based information about vaccines and diseases.

National Foundation for Infectious Diseases

The National Foundation for Infectious Diseases (NFID) offers comprehensive, evidence-based resources on immunization across the lifespan, aiming to educate the public and healthcare professionals about the prevention and treatment of infectious diseases.

Thank You

David.Higgins@cuanschutz.edu

Substack: *Community Immunity* – communityimmunity.substack.com

Instagram/Facebook/Threads/LinkedIn: @DrHigginsMD

Acknowledgments

CU Anschutz/ACCORDS

- **Sean O'Leary***
- **Ally Kempe***
- Jessica Cataldi
- Sarah Brewer
- Catie Perreira
- Amanda Skenadore
- Dennis Gurfinkel
- Katie Colborn
- Laura Helmkamp
- Tina Studts
- Elisha Lehrhoff

The practices, staff , and patients who have participated in projects.

References

- Anderson, E. C., Holford, D., Gould, G., Lewandowsky, S., Karlsson, L., Taubert, F., & Verger, P. (2025). The Empathetic Refutational Interview – User Guide. JITSUVAX Project. https://jitsuvax.inf
- Dubé, E., Gagnon, D., & MacDonald, N. E.; SAGE Working Group on Vaccine Hesitancy. (2015). Strategies intended to address vaccine hesitancy: Review of published reviews. Vaccine, 33(34), 4191–4203. https://doi.org/10.1016/j.vaccine.2015.04.041
- Gee, J., et al. (2024). Overview of U.S. COVID-19 vaccine safety surveillance. Vaccine. https://doi.org/10.1016/S0264-410X(24)00224-X
- Gerber, J. S., & Offit, P. A. (2009). Vaccines and autism: A tale of shifting hypotheses. Clinical Infectious Diseases, 48(4), 456–461. https://doi.org/10.1086/596476
- Hill, H. A., Yankey, D., Elam-Evans, L. D., et al. (2024). Decline in vaccination coverage by age 24 months and vaccination inequities among children born in 2020 and 2021—National Immunization Survey-Child, United States, 2021–2023. MMWR Morbidity and Mortality Weekly Report, 73, 844–853. https://doi.org/10.15585/mmwr.mm7338a3
- Nyhan, B., Reifler, J., Richey, S., & Freed, G. L. (2014). Effective messages in vaccine promotion: A randomized trial. Pediatrics, 133(4), e835–e842. https://doi.org/10.1542/peds.2013-2365
- Opel, D. J., et al. (2013). The influence of provider communication behaviors on parental vaccine acceptance and visit experience. Pediatrics, 132(6), 1037–1046.
- Panthagani, K., Melnick, E. R., Jetelina, K., & Ranney, M. L. (2025). Training health communicators—The need for a new approach. New England Journal of Medicine, 393(6), 526–529. https://doi.org/10.1056/NEJMp2500320
- Pickering, L. K., Peter, G., & Shulman, S. T. (2013). The Red Book through the ages. Pediatrics, 132(5), 897–906. https://doi.org/10.1542/peds.2013-2754
- Wakefield, A. J., Murch, S. H., Anthony, A., et al. (1998). Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children [Retracted]. The Lancet, 351(9103), 637–641. https://doi.org/10.1016/S0140-6736(97)11096-0
- Walton, L. R., Orenstein, W. A., & Pickering, L. K. (2014). The history of the United States Advisory Committee on Immunization Practices (ACIP). Vaccine, 33(40), 4051–4055. https://doi.org/10.1016/j.vaccine.2014.09.043
- World Health Organization. (2022). Report of the SAGE Working Group on Vaccine Hesitancy. Weekly Epidemiological Record, 97(20). https://iris.who.int/handle/10665/354458