Vaccine Fatigue

Regaining our passion & moving forward for greater vaccination success

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- Member WA State DOH Vaccine Advisory Committee
- Member CDC's ACIP RSV adult vaccine workgroup

Objectives

- Define vaccine fatigue and examine contributing factors for our patients and ourselves
- Identify ways to make your immunization efforts easier and more effective
- Discuss effective approaches to the vaccine conversation
- Highlight recent updates to vaccine recommendations

Who is tired of talking about vaccines?

What is vaccine fatigue?

"…people's inertia or inaction towards vaccine information or instruction due to perceived burden and burnout… vaccine fatigue broadly represents a transitory stage that is more common in people that hold a pro-vaccination view."

Frontiers in Immunology. Mind the "Vaccine Fatigue." Published March 10, 2022. Accessed April 22, 2023.

What factors contribute to patients' vaccine fatigue?

- Shifting/confusing messaging
- Increasing numbers of vaccination requests
- Fear of or experienced adverse effects from vaccination
- Less than ideal efficacy for preventing illness
- Misconceptions about the disease or the vaccines themselves
- Lack of adequate education on the topic of disease and/or vaccines
- Public apathy

Frontiers in Immunology. Mind the "Vaccine Fatigue." Published March 10, 2022. Accessed April 22, 2023.

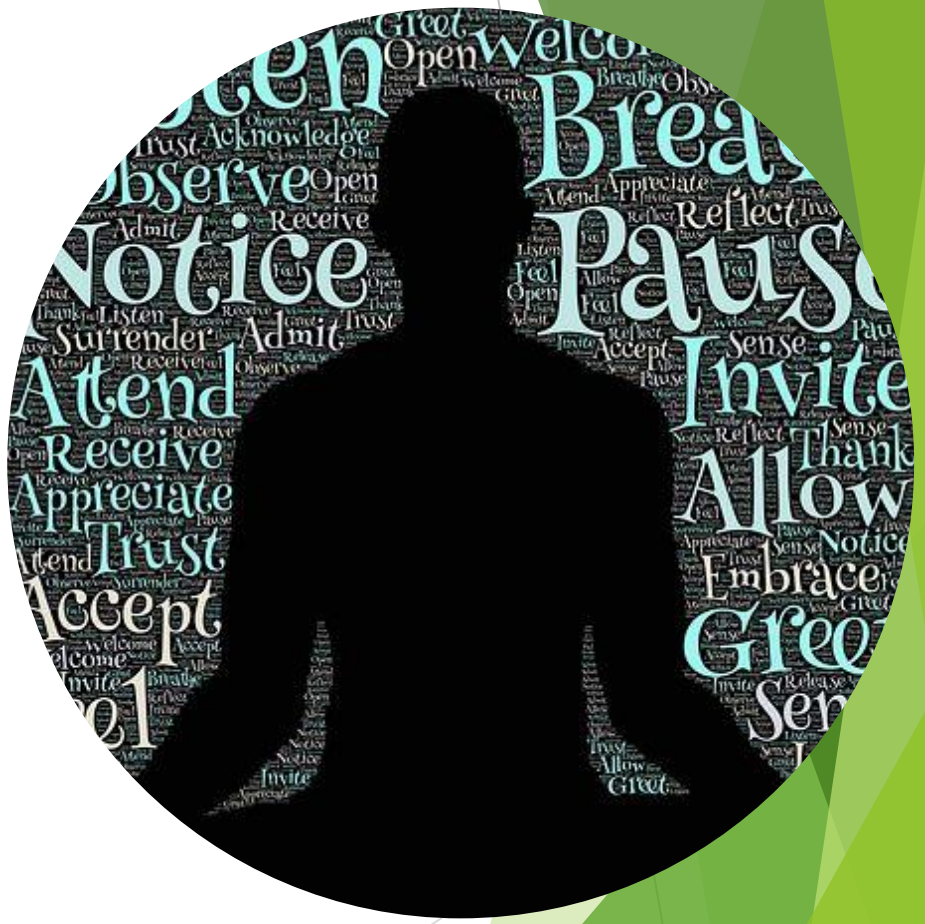
We have our own vaccine fatigue

- We’ve been fighting the good fight for three years – we’re tired
- Frustrated with those who have declined vaccines
- Fearful of negative interactions with patients
- Disheartened by the spill-over to other vaccines

ADDRESSING VACCINE FATIGUE IN OUR PATIENTS AND OURSELVES

SECURE YOUR OWN OXYGEN MASK BEFORE HELPING OTHERS

- Take a deep breath and give yourself grace
- Focus on your common ground with the patient
- Remember that your job is just to provide accurate and reliable information
- Use humor
- Remember that time is on your side – tomorrow is a new day

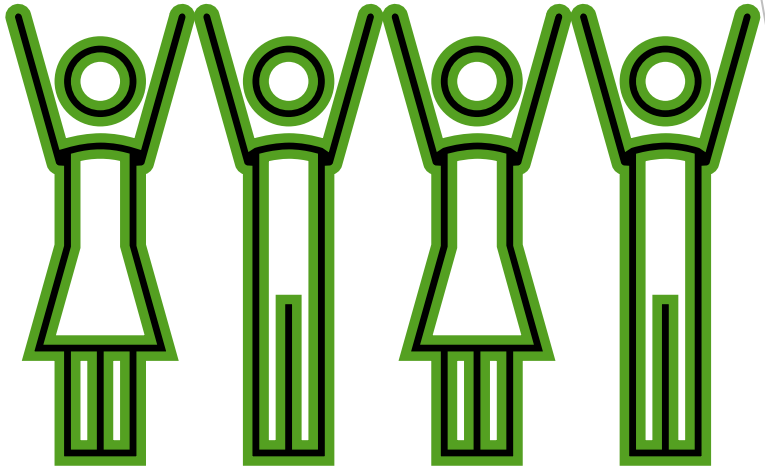


Admit the struggle

- Address vaccine fatigue head on – call it what it is
- Admit your own challenges
- Remind patients that we may tire of dealing with infectious disease, but it never tires of dealing with us

Go for the easy wins

- Hepatitis B vaccines for most
  - All through age 59
  - 60+ with risk factors
- HPV vaccination at 9



Hep B vaccines for most!

- Educate –
  - Hepatitis B is a liver infection that can cause life-long infection, liver disease, liver failure, liver cancer, and early death and there is currently no cure
  - It is spread by contact with blood and body fluids (including tears, saliva)
  - It doesn't take intimate contact to contract it. Hep B can live on surfaces for over a week, someone could cry into your open wound, people swap blood/body fluids during sports, etc.
  - In 2019, ~ 50% of all acute hepatitis cases occurred in 30-49 y/o and ~ 22% in 50-59 y/o
- Normalize –
  - This is a new recommendation for most adults, but not a new vaccine. We have been vaccinating our kids since the 90s
  - Those of us in professions with blood/body fluid contact (doctors, nurses, dentists, emergency workers, teachers, etc.) have been getting vaccinated for years
- Recommend –
  - I strongly recommend that you get this vaccine
  - For most people it's a one and done series, it offers life-long protection
  - As far as possible vaccine SE, it is one of the most well-tolerated vaccines we give!

https://www.cdc.gov/mmwr/volumes/71/wr/mm7113a1.htm

Why HPV at 9?

Encouraged by AAP, ACS, National HPV Roundtable
Supported by CDC

Prevalence of cervical disease at age 20 after immunisation with bivalent HPV vaccine at age 12-13 in Scotland: retrospective population study

Palmer, *BMJ* (2019)

Age at Vaccination	Effectiveness (against CIN3+)
12-13	86%
17	51%
≥18	15%

Age at Vaccination: Younger is better

The effects of the national HPV vaccination programme in England, UK, on cervical cancer and grade 3 cervical intraepithelial neoplasia incidence: a register-based observational study

Milena Falcaro, PhD • Alejandra Castañon, PhD • Busani Ndlela, PhD • Marta Checchi, MSc • Kate Soldan, PhD • Jamie Lopez-Bernal, PhD • et al. Show all authors

Published: November 03, 2021 • DOI: https://doi.org/10.1016/S

13.7 million years of follow-up for women

Best Protection:
HPV Vaccine at age 12-13

Age at Vaccination	Reduction in Cervical Precancers (CIN3)	Reduction in Cervical Cancer Incidence
12-13	97%	87%
14-16	75%	62%
16-18	39%	34%

Falcaro, *The Lancet* (2021)

4

Completing series at a younger age means better cancer prevention!

It’s easier!

- It gets us away from discussing HPV and sex – a positive for providers and parents alike!
- It lets us focus on HPV vaccination as CANCER PREVENTION
- Fewer pokes at the 11-12 y/o visit
- Fewer pokes overall
- More relaxed conversations with hesitant parents
- More time and opportunity to get kids vaccinated

It improves on-time completion rates!

Higher rates of on-time completion by age 13

	HPV completion by age 13	
Age of HPV initiation	Private Insured	Publicly Insured
9-10	76.2%	70.4%
11-12	48.1%	40.0%

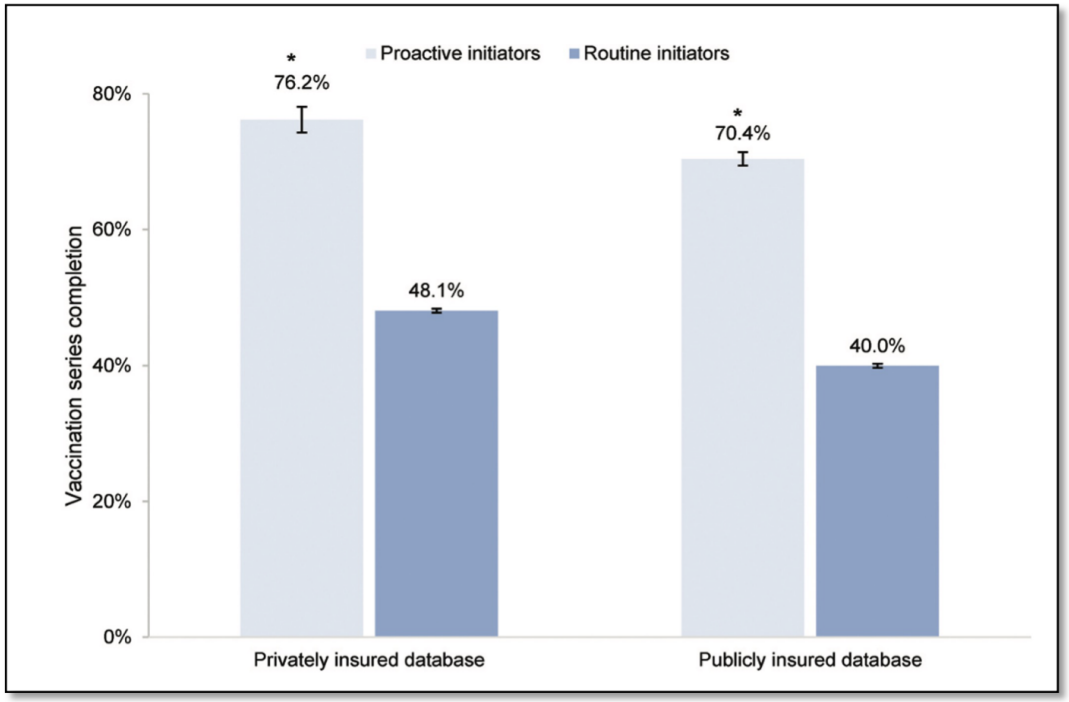


Figure 2. Percent HPV vaccination series completion by 13 years of age among proactive and routine initiators enrolled in the privately insured and publicly insured databases. Note: The base-case results are denoted by the blue bars. The error bars show the 95% confidence intervals. Asterisk indicates a statistically significant difference between proactive and routine initiators in the base-case analysis ($p < 0.001$).

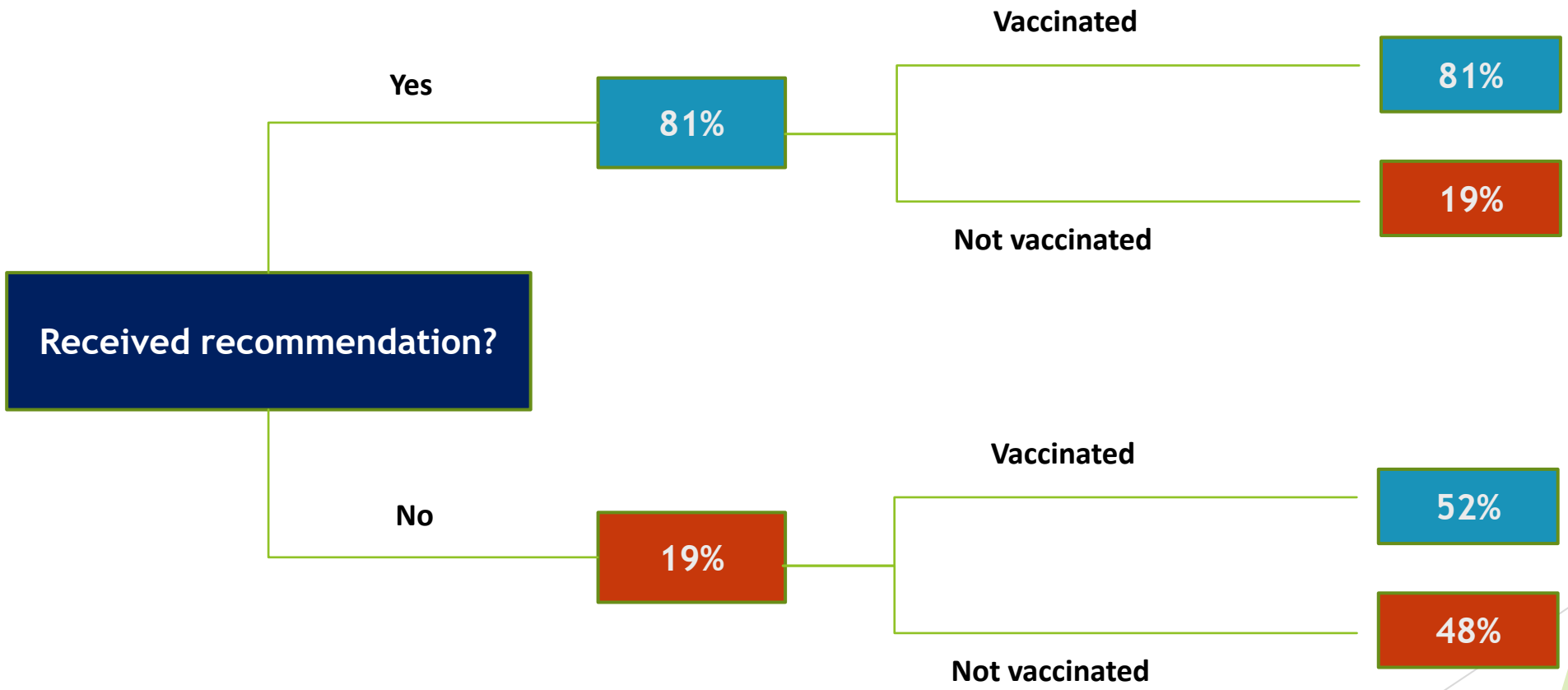
National Claims Data

Saxena, *Human Vaccines and Immunotherapeutics* (2023)

MAKING YOUR VACCINE CONVERSATIONS EASIER AND MORE EFFECTIVE

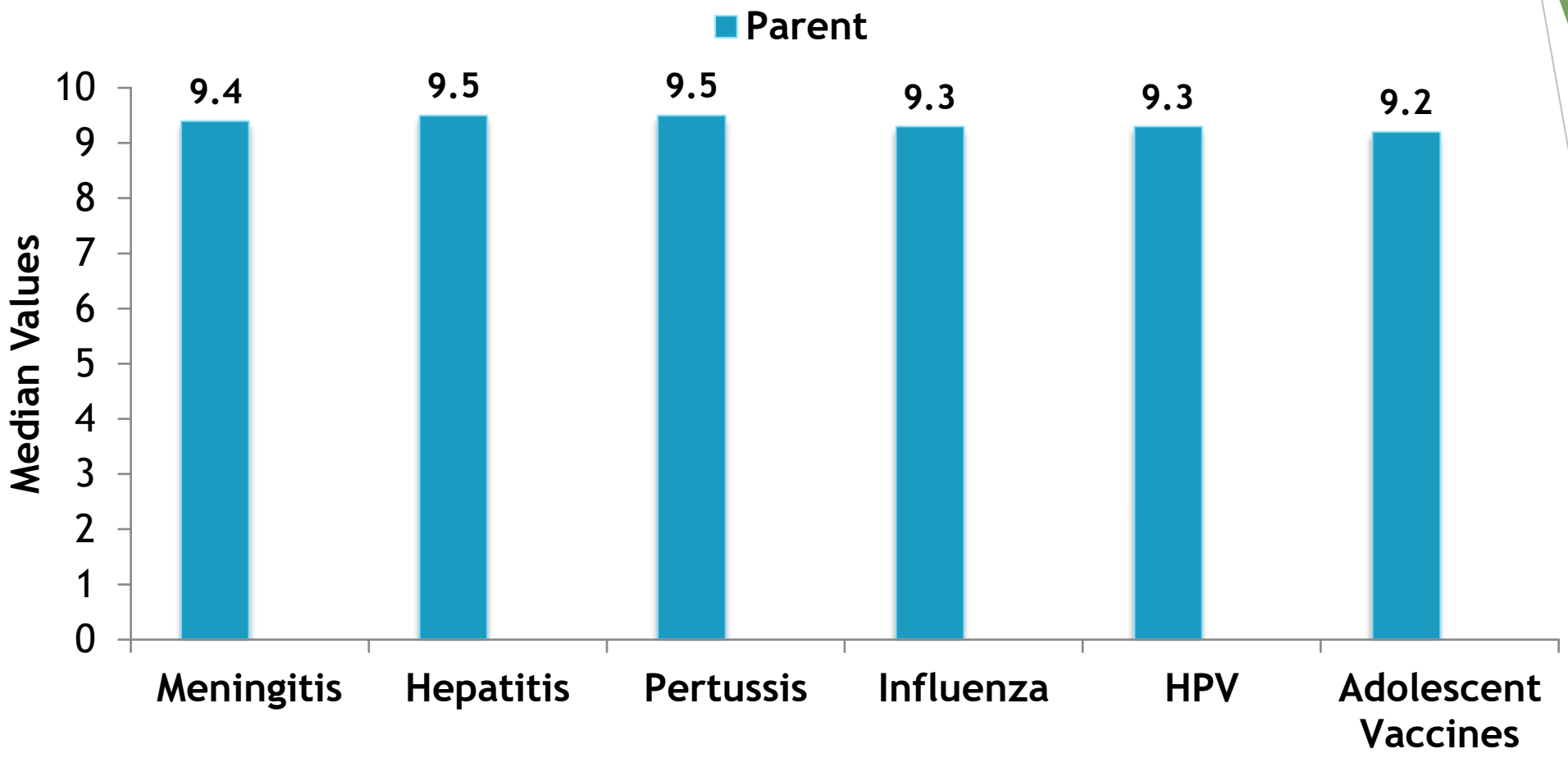
YOUR VOICE MATTERS

HPV VACCINATION COVERAGE HIGHER AMONG THOSE REPORTING A RECOMMENDATION



Source: CDC unpublished, NIS-Teen 2020

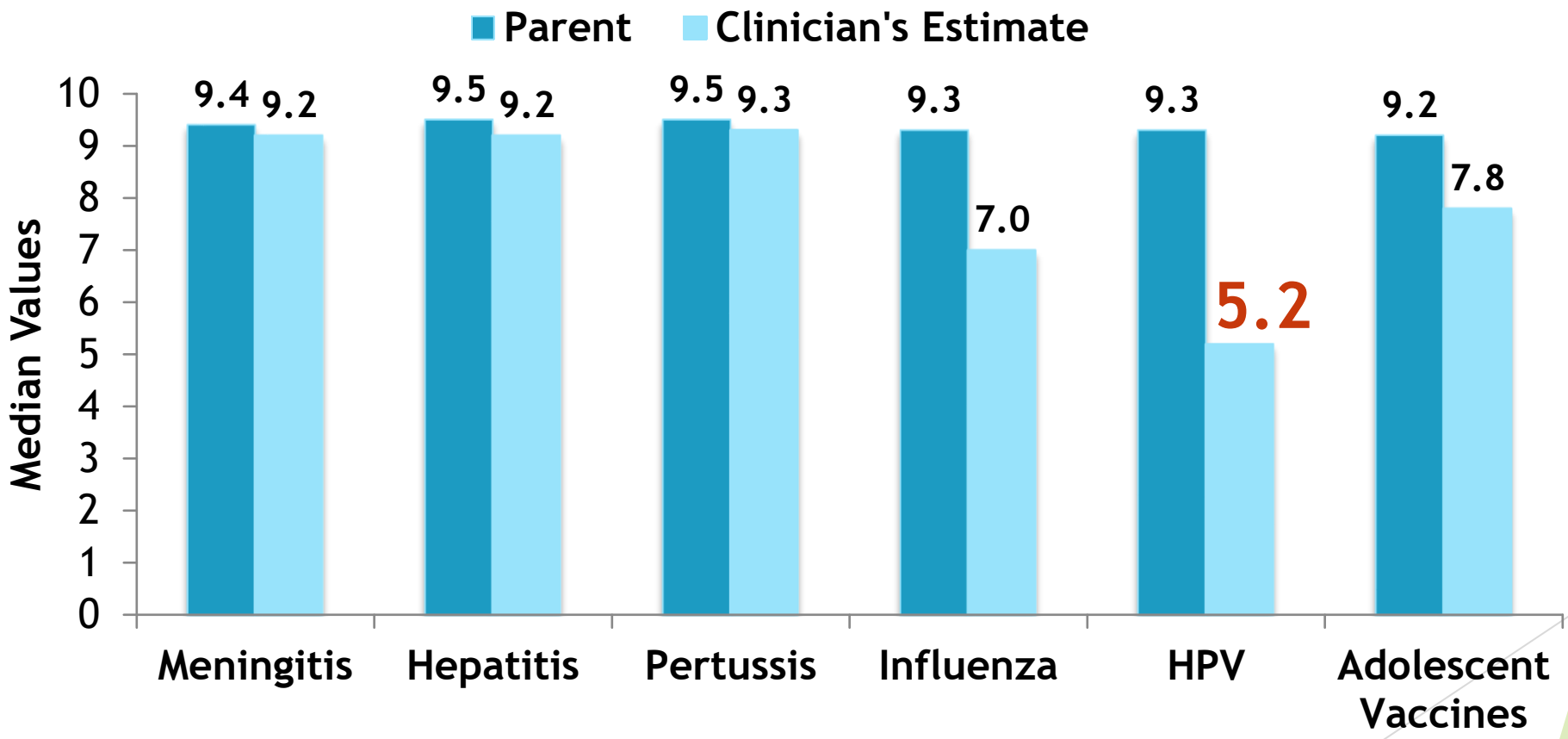
PARENTS VALUE PROTECTING AGAINST HPV CANCERS



Parents Place Similar Value on Vaccines

Adapted from Healy, et al. *Vaccine*. 2014

Clinicians Underestimate the Value Parents Place on HPV Vaccine



Adapted from Healy, et al. *Vaccine*. 2014

VACCINATION IS A TEAM SPORT!

Who’s on the team?

- Broader community
- Medical community
- Clinic staff
- You

Engage your community

- Community Partners - faith leaders, civic organizations, community educators, and others
- Medical Partners - There are multiple medical stakeholders in preventing HPV-related cancers
  - Work with your specialists (Ob/gyn, Urology, ENT, Oncology) to encourage vaccines
  - Encourage your local dentists to make HPV vaccination recommendations from an early age
  - Pharmacists can be an excellent resource to help provide vaccinations to the community

Engage your clinic staff

- The sole responsibility to vaccinate doesn't have to lie only with you
- RNs, MAs, office staff play a key role in vaccination – provide education and get everyone offering the same talking points
- Post HPV-related information in exam and waiting rooms

Engage your patients

- Use anticipatory recommendations and counseling
- Use motivational interviewing and other effective approaches to address questions/concerns

Effective approaches to the vaccine conversation

Use	The Presumptive/Announcement Approach
Use	The Bundled Approach
Use	Motivational Interviewing

The Presumptive or Announcement Approach

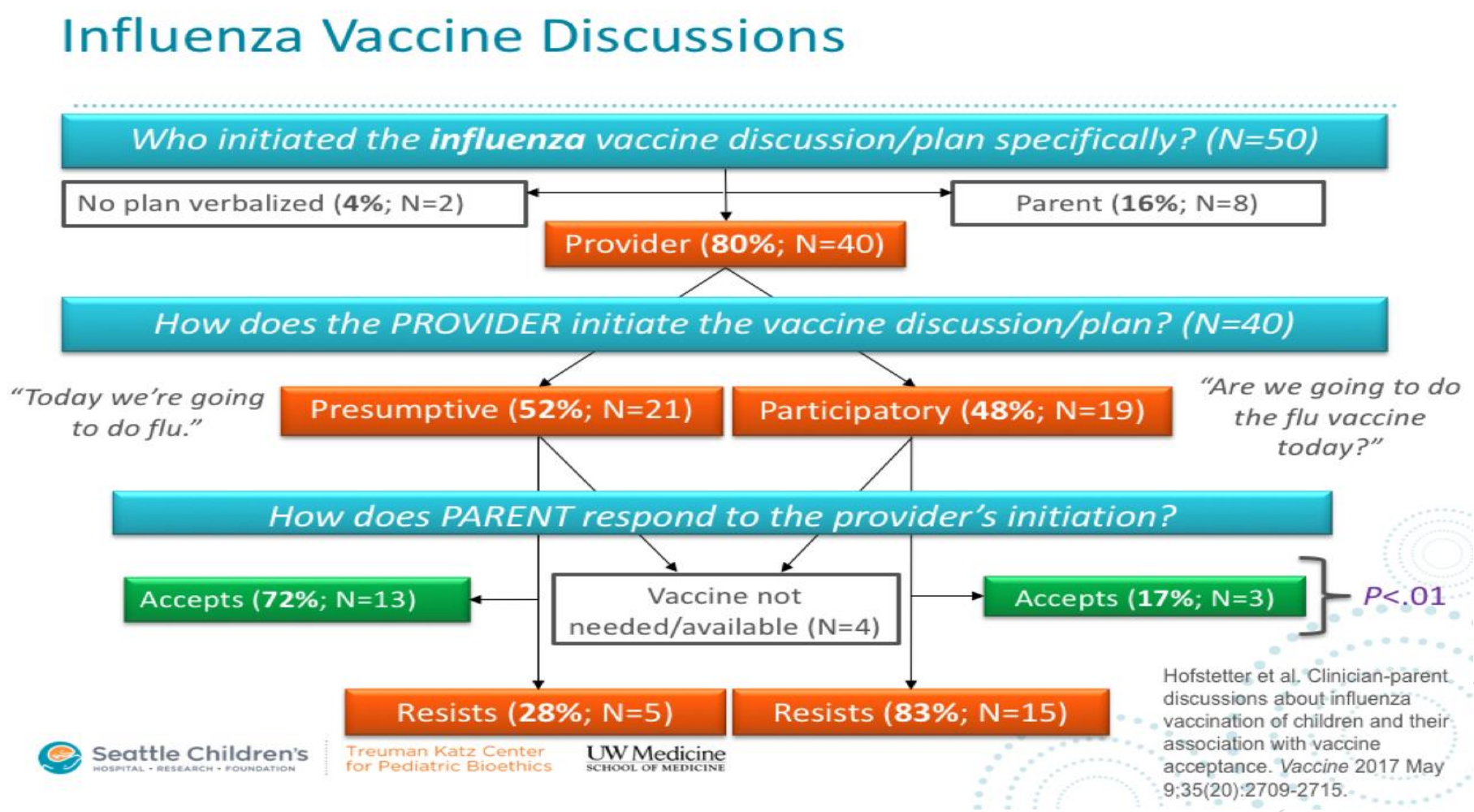
Presumptive Approach –

"Today Sarah is 9 so we will start her HPV cancer-prevention vaccine series."

Participatory Approach –

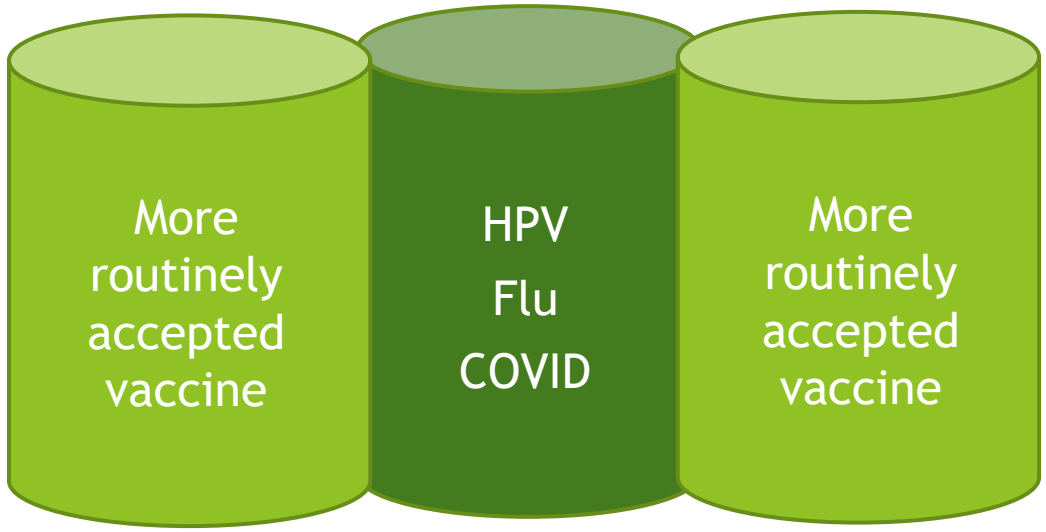
"What would you like to do about the HPV vaccine today?"

The Presumptive Approach



Hofstetter et al. Clinician-parent discussions about influenza vaccination of children and their association with vaccine acceptance. *Vaccine* 2017 May 9;35(20):2709-2715.

The Bundled Approach



- Also called… discussing vaccines in the “same way on the same day”
- Particularly helpful for vaccines that people are more wary of

Bundling sample conversation

- “Today we are doing vaccines to protect against tetanus, flu, and meningitis.

vs

- “Today we are doing tetanus and meningitis vaccines. We also offer the flu vaccine.”

Motivational interviewing techniques

Different frameworks to accomplish the same task

- Clarify concerns
- Validate feelings
- Provide confidence in your expertise
- Refute myths
- Offer a **strong recommendation**

3As Approach

- **Ask** – Don't just stop with a "no" response, dig deeper
  - "**Tell me** what worries you about this vaccine."
- **Acknowledge** – Acknowledge the patient's/parent's concerns
  - "Gosh, If that were true, I wouldn't want you getting the vaccine either. **May I share with you** what I know about that concern?"
- **Advise** – Advise the patient/parent of the facts about vaccines and provide a strong recommendation to vaccinate
  - "The flu shot is a killed virus vaccine. That means there is no active flu virus in it, and it cannot give you the flu. It does take a couple of weeks for the shot to actually work, so some have gotten the flu in that timeframe when they weren't yet protected. I **strongly recommend** this vaccine for all my patients to protect from the potentially serious outcomes of flu illness, to protect time at work or in school, and to avoid costly medical bills.

Vaccine updates – what's new?

Respiratory Syncytial Virus

What does the data show?

Children under 5

- 2.1 million outpatient visits
- 58,000-80,000 hospitalizations
- 100-300 deaths

Adults 65 and older

- 60-160,000 hospitalizations
- 6,000-10,000 deaths

- RSV is leading cause of hospitalization in infants <1 y/o
- The typical RSV season runs from ~September through April/May
- The pandemic disrupted the normal pattern of circulation – in 2021, RSV began rising in the spring and peaked in July
- RSV infection does not confer long-lasting immunity, one can be infected repeatedly over the years

https://www.cdc.gov/rsv/research/index.html

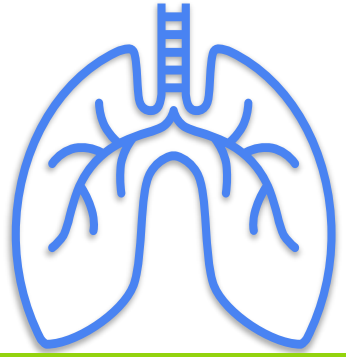
Prevention of RSV in adults

- Two vaccines are approved for prevention of RSV in those **60+ w/ "shared clinical decision making"**
  - Pfizer (Abrysvo) – Bivalent - one dose (0.5 mL) recombinant stabilized prefusion F vaccine - $295/dose
  - GSK (Arexvy) – Monovalent - one dose (0.5 mL) adjuvanted (ASO1E) recombinant stabilized prefusion F vaccine - $280/dose
- Efficacy
  - Pfizer - ~36,000 immune competent participants, avg 12 months of follow up, 1:1 vaccine:buffer ingredients w/o active components placebo
    - 88.9% efficacy in preventing symptomatic, lab-confirmed RSV-associated LRTD in first season
    - 78.6% efficacy in partial 2nd season
  - GSK - ~24,000 immune competent participants, avg 15 months of follow up, 1:1 vaccine:saline placebo
    - 82.6% efficacy in preventing symptomatic, lab-confirmed RSV-associated LRTD in first season
    - 56.1% efficacy in the 2nd season
- Safety
  - Pfizer –
    - Severe adverse *reactions* (grade 3+) occurred in 1.0% vaccine vs 0.7% control group
    - Serious adverse *events* (SAEs) occurred in 4.3% vaccine vs 4.1% control group
  - GSK –
    - Severe adverse *reactions* (grade 3+) occurred in 3.8% vaccine vs 0.9% control group
    - *SAEs* occurred in 4.4% vaccine vs 4.3% control group

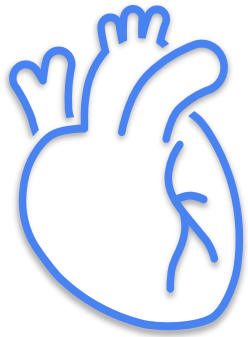
https://www.cdc.gov/mmwr/volumes/72/wr/mm7229a4.htm#:~:text=Recommendations%20for%20Use%20of%20RSV,using%20shared%20clinical%20decision%2Dmaking.

Who should get the RSV vaccine?

Underlying chronic medical conditions associated with increased risk of severe RSV disease

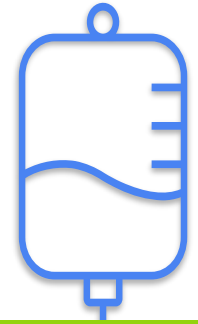


Lung diseases



Cardiovascular diseases

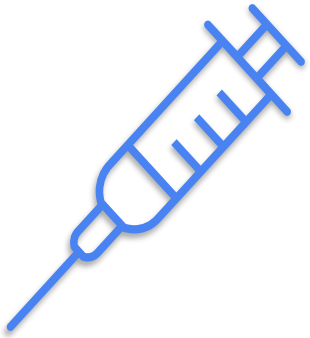
Moderate or severe immune compromise



Hematologic disorders

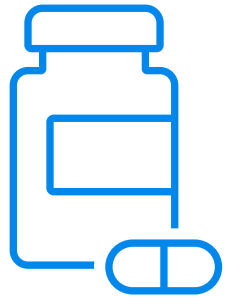
Other underlying conditions that the provider determines might increase the risk of severe respiratory illness

Neurologic or neuromuscular disorders



Diabetes

Kidney disorders

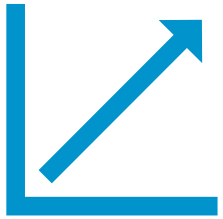


Liver disorders

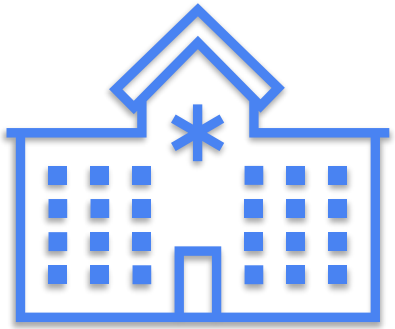
Shared by the ACIP RSV adult vaccine workgroup

Other factors associated with increased risk of severe RSV disease:

Frailty



Advanced age



Residence in a nursing home or other long-term care facility

Other underlying factors that the provider determines might increase the risk of severe respiratory illness

Shared by the ACIP RSV adult vaccine workgroup

Immunization vs vaccination

- The RSV monoclonal antibody will be listed on the CDC's pediatric vaccine schedule, but it is not a vaccine in the true sense of the word. It is an immunization.
  - What is a *vaccine**?
    - A substance used to stimulate immunity to a particular infectious disease or pathogen, typically prepared from an inactivated or weakened form of the causative agent, or from its constituents or products
  - What is the difference between *immunization* and *vaccination*?
    - *Immunization*: The process of making one immune or resistant to infection
    - *Vaccination*: The use of vaccines to stimulate the immune system to protect against infection or disease
    - While vaccination is the most common form of immunization, immunity can also be obtained through
      - Natural infection (but health risks are greater)
      - Use of monoclonal antibodies (passive immunity)

*From the *New Oxford American Dictionary*

Prevention of RSV in infants

- Nirsevimab (Beyfortus) - New long-acting monoclonal antibody for prevention of RSV infection
  - Given once yearly before or during RSV season
  - Indicated for all children younger than 8 months born during or entering their first RSV season
    - Dosage: < 5 kg - 50 mg by IM injection, 5 kg or more - 100 mg by IM injection
  - Indicated for children 8-19 months of age who are AI/AN or who remain vulnerable to severe disease through 2nd RSV season
    - Dosage: single 200 mg dose administered as two IM injections (2 x 100 mg)
  - 70-75% effective at preventing medically attended LRTI and 78% effective in preventing hospitalization
  - Can be given concomitantly with other injectable childhood vaccines – separate syringes and injection sites
  - Will be covered under VFC program and included in CDC's pediatric vaccine schedule
- Palivizumab (Synagis) - short-acting monoclonal antibody for prevention of RSV infection
  - Given once monthly during RSV season to high-risk infants
- Notes:
  - See indications for repeat dosing in children undergoing cardiac surgery with cardiopulmonary bypass
  - Ok to give Beyfortus to children who had Synagis in 1st season but who remain at risk in 2nd season

https://www.cdc.gov/mmwr/volumes/72/wr/mm7234a4.htm
https://www.accessdata.fda.gov/drugsatfda_docs/label/2023/761328s000lbl.pdf
https://www.astrazeneca.com/media-centre/press-releases/2023/beyfortus-approved-in-the-us-for-the-prevention-of-rsv-lower-respiratory-tract-disease-in-infants.html

Prevention of RSV in infants through maternal vaccination

- Pfizer product (Abrysvo) approved by the FDA for administration during 32-36 WGA, for prevention of infant RSV through 6 months of age
- 7000 participants in the trial
- 82% effective in preventing severe disease in infants whose mothers received vaccine
- Numerical imbalance in # of preterm births in vaccinated (5.7%) vs unvaccinated (4.7%).
  - People already at risk of preterm birth were not included in the study
  - Timing recommendation is made partly for this reason
- For moms – most common SE was pain at injection site, HA, muscle pain, nausea
- For infants – low birth weight and jaundice occurred at slightly higher rates in vaccine group (5.1%, 7.2%) vs placebo group (4.4%, 6.7%)
- If mom receives RSV vaccine in pregnancy, most often baby will not need Nirsevimab (exceptions exist)

https://www.fda.gov/media/168255/download

https://www.fda.gov/news-events/press-announcements/fda-approves-first-vaccine-pregnant-individuals-prevent-rsv-infants

COVID vaccines

Moving to a “once yearly” vaccination plan for most

COVID vaccines

- Monovalent XBB.1.5 lineage of the Omicron variant
- Pfizer, Moderna, and Novavax (12+) now recommended by ACIP
- Approved 12+, EUA 6 m/o to 11 y/o
  - 5y+ are eligible for single dose, regardless of prior vaccination history –at least 2 months from last dose of any COVID vax
  - 6m-4y who may be getting vaccines for 1st time, 2 doses of Moderna or 3 doses of Pfizer, at least one being updated 2023 vaccine
- COVID vaccines will now be commercial products
  - Will be covered by Medicare part B
  - For commercial insurers and Medicaid, will likely be covered without cost-sharing, **as long as provided by an in-network provider**
  - For uninsured, will be covered by Bridges Access Program
  - Vaccines will be covered for kids under the VFC program

https://www.fda.gov/news-events/press-announcements/fda-takes-action-updated-mrna-covid-19-vaccines-better-protect-against-currently-circulating

https://www.fda.gov/vaccines-blood-biologics/updated-covid-19-vaccines-use-united-states-beginning-fall-2023

Reframing our thinking on COVID vaccination

- With prior COVID vaccination campaigns, we were trying to keep people from getting sick in the first place
  - Public perception vs reality
- As we learn more about viral mutation and duration of immunity, our focus should be more on preventing severe outcomes of disease and long-term sequelae
- For those who get the yearly Flu shot but are declining COVID, try to get them to think about the COVID vaccine in the same way we do about Flu
  - It significantly reduces the chance of severe or deadly disease
  - It helps to decrease the chance of illness
  - It helps to safeguard our ability to do the things we want to do (travel, family gatherings, etc.)
  - Mitigation measures are still important

Thank you!

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Questions?