Preparing for Fall Vaccination: Flu, COVID, and Catch Up

Michigan Physician Peer Education Project On Immunizations

October 28, 2022

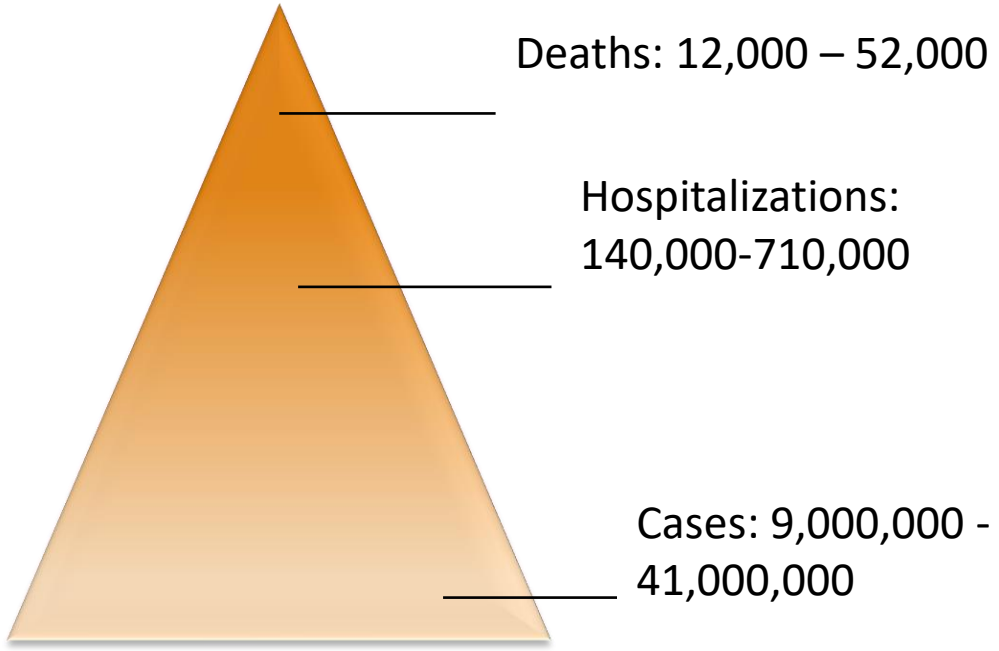
MDHHS Michigan Department of Health & Human Services

MICHIGAN STATE UNIVERSITY | Extension

Influenza Disease Burden

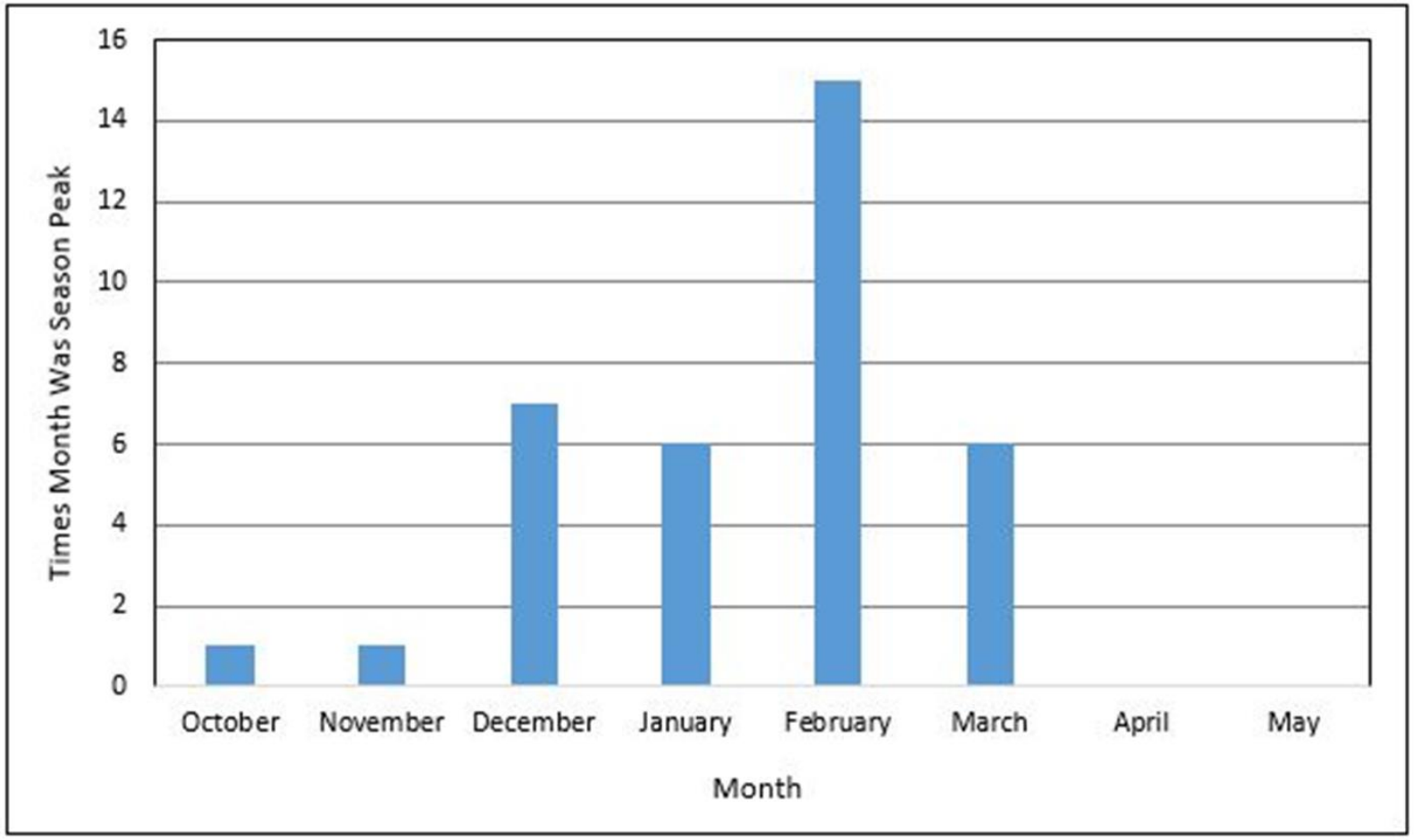
- Difficult to predict severity and timing
- Rates of serious illness and death greatest in:
  - Persons aged 65 years and older
  - Children <5 years, especially children less than 2 years of age
  - Persons with medical conditions that put them at high risk
- Only half develop classic clinical flu symptoms
- 5 categories of surveillance: viral, mortality, hospitalization, geographic spread, and outpatient influenza-like illness (ILINet)[2]
  - We need more ILINet providers!
  - For more information email, DoeblerM@michigan.gov

National Estimated Range of Annual Burden of Influenza- U.S 2010-2020[1]



1. www.cdc.gov/flu/about/burden/index.html
2. www.michigan.gov/flu/0,6720,7-321-101694-121722--,00.html

Flu Season Timing



Flu activity peak months in the U.S. from the 1982-1983 through 2019-2020 flu seasons

www.cdc.gov/flu/weekly/index.htm

Core Influenza Vaccine Recommendation

- Routine annual flu vaccination is recommended for ALL persons aged 6 months and older who do not have contraindications
- With the exception of vaccination for adults 65 years and older, no preferential recommendation is made for one flu vaccine product over another when more than one licensed, recommended, and age-appropriate product is available

Timing of Flu Vaccination

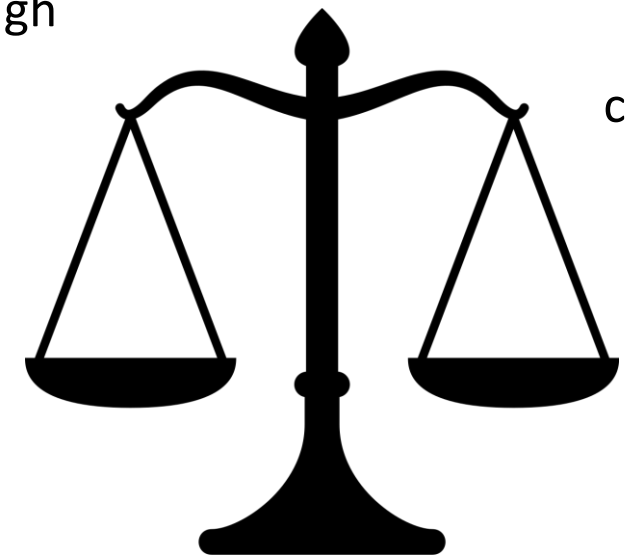
- ACIP recommends that flu vaccination be offered by the end of October
- Children aged 6 months through 8 years who need 2 doses should receive their 1st dose ASAP after vaccine becomes available to allow the 2nd dose to be received ideally by the end of October
  - Minimum interval: 4 weeks
  - If both doses haven't been received by the end of October, still complete the 2-dose series
- Children of any age needing 1 dose this season, should also ideally be vaccinated by the end of October. Vaccination of these children can occur as soon as vaccine is available, as there is less evidence to suggest waning immunity among children compared with adults
- For non-pregnant adults, influenza vaccination during July and August should be avoided unless there is concern that later vaccination might not be possible

Timing of Flu Vaccination, Cont.

- Pregnant Persons in First or Second Trimester
  - Waiting to vaccinate until September or October is preferable, unless there is concern that later vaccination might not be possible
- Pregnant Persons in Third Trimester
  - Vaccination soon after vaccine becomes available (July/August) can be considered for pregnant persons during the third trimester, as vaccination of pregnant persons has been shown to reduce risk of influenza illness of their infant during the first months of life

Timing of Flu Vaccination, Cont.

Likelihood of persistence of vaccine-induced protection through the season



Avoiding missed opportunities to vaccinate, or vaccinating after onset of flu circulation occurs

- Continue to vaccinate as long as flu viruses are circulating, and unexpired vaccine is available
- No recommendation is made for revaccination (i.e., providing a booster dose) later in the season for persons who have already been fully vaccinated

Types of Influenza Vaccine Available in 2022-23 Season

- Main Influenza vaccine types:
  - IIV4=inactivated influenza vaccine, quadrivalent
  - RIV4=recombinant influenza vaccine, quadrivalent
  - LAIV4=live attenuated influenza vaccine, quadrivalent
- Prefixes are used when necessary to refer to some specific IIVs
  - a=adjuvanted inactivated influenza vaccine quadrivalent (aIIV4)
  - cc=cell culture-based inactivated influenza vaccine quadrivalent (ccIIV4)
  - HD=high-dose inactivated influenza vaccine quadrivalent (HD-IIV4)
- Numerals following the letter abbreviations indicate the number of flu strains represented in the vaccine
  - All influenza vaccines available in the U.S. for the 2022-2023 season are quadrivalent

Influenza Vaccination for Persons 65 Years and Older

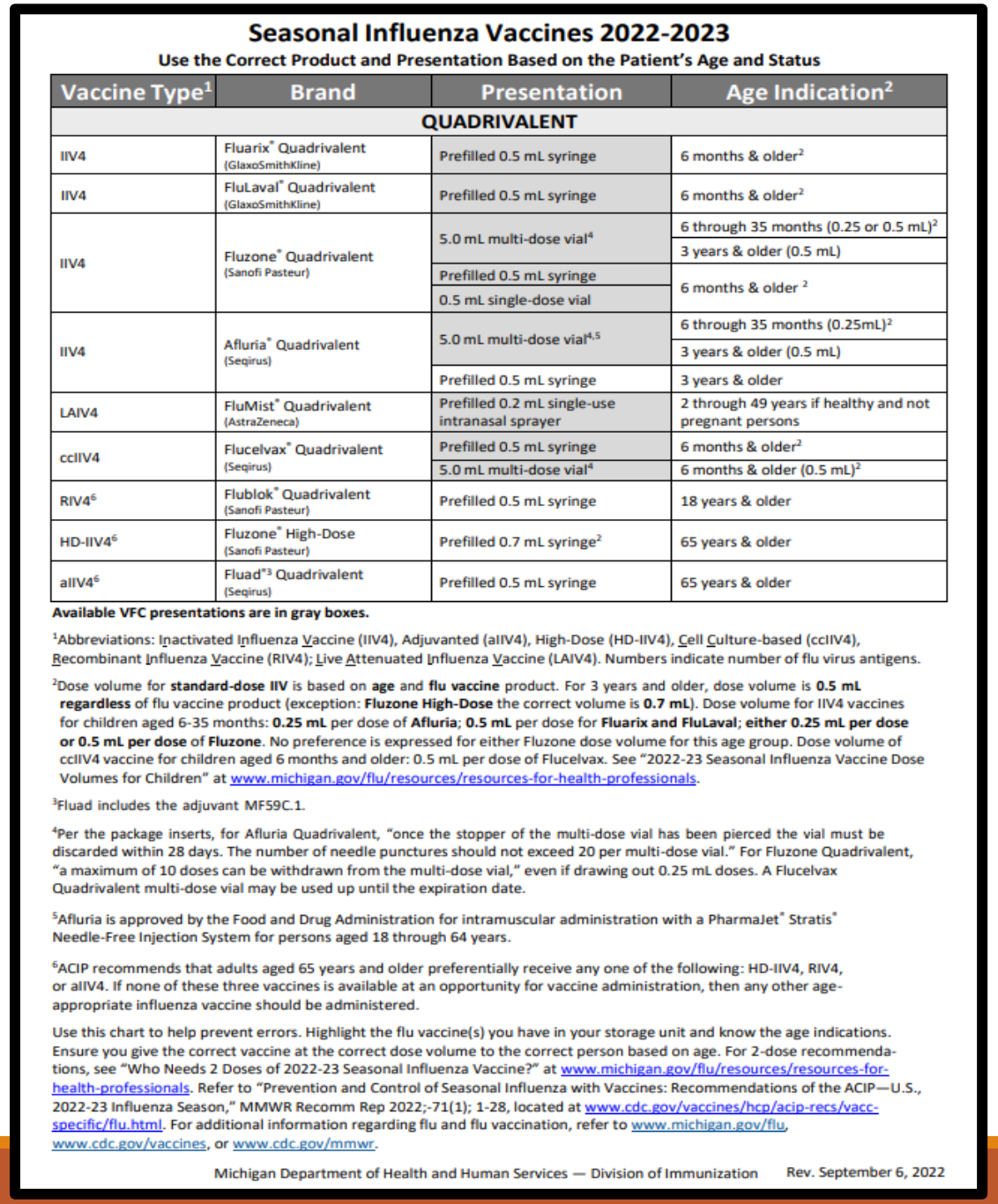
- **NEW!** ACIP recommends that adults aged 65 years and older preferentially receive any one of the following higher dose or adjuvanted influenza vaccines:
  - Quadrivalent high-dose inactivated influenza vaccine (HD-IIV4),
  - Quadrivalent recombinant influenza vaccine (RIV4), or
  - Quadrivalent adjuvanted inactivated influenza vaccine (aIIV4)
- If none of these three vaccines are available at an opportunity for vaccine administration, then any other age-appropriate influenza vaccine should be administered

Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices — United States, 2022–23 Influenza Season | MMWR (cdc.gov)

2022-23 Flu Vaccine Presentation Chart

- Lists flu vaccine products, brand names, age indications, product presentations
- Multi-dose vials:
  - Afluria: once stopper has been pierced, discard vial after 28 days or 20 needle punctures to the vial, whichever comes first
  - Fluzone: max 10 doses can be withdrawn (even if 0.25 mL doses)
  - Flucelvax: use up until exp. date

www.michigan.gov/flu → Resources → Resources for Health Professionals



Seasonal Influenza Vaccines 2022-2023

Use the Correct Product and Presentation Based on the Patient's Age and Status

Vaccine Type[1]	Brand	Presentation	Age Indication[2]
QUADRIVALENT			
IIV4	Fluarix® Quadrivalent (GlaxoSmithKline)	Prefilled 0.5 mL syringe	6 months & older[2]
IIV4	FluLaval® Quadrivalent (GlaxoSmithKline)	Prefilled 0.5 mL syringe	6 months & older[2]
IIV4	Fluzone® Quadrivalent (Sanofi Pasteur)	5.0 mL multi-dose vial[4]	6 through 35 months (0.25 or 0.5 mL)[2]
			3 years & older (0.5 mL)
		Prefilled 0.5 mL syringe	6 months & older [2]
		0.5 mL single-dose vial	
IIV4	Afluria® Quadrivalent (Seqirus)	5.0 mL multi-dose vial[4,5]	6 through 35 months (0.25mL)[2]
			3 years & older (0.5 mL)
		Prefilled 0.5 mL syringe	3 years & older
LAIV4	FluMist® Quadrivalent (AstraZeneca)	Prefilled 0.2 mL single-use intranasal sprayer	2 through 49 years if healthy and not pregnant persons
ccIIV4	Flucelvax® Quadrivalent (Seqirus)	Prefilled 0.5 mL syringe	6 months & older[2]
		5.0 mL multi-dose vial[4]	6 months & older (0.5 mL)[2]
RIV4[6]	Flublok® Quadrivalent (Sanofi Pasteur)	Prefilled 0.5 mL syringe	18 years & older
HD-IIV4[6]	Fluzone® High-Dose (Sanofi Pasteur)	Prefilled 0.7 mL syringe[2]	65 years & older
aIIV4[6]	Fluad®[3] Quadrivalent (Seqirus)	Prefilled 0.5 mL syringe	65 years & older

Available VFC presentations are in gray boxes.

[1]Abbreviations: Inactivated Influenza Vaccine (IIV4), Adjuvanted (aIIV4), High-Dose (HD-IIV4), Cell Culture-based (ccIIV4), Recombinant Influenza Vaccine (RIV4); Live Attenuated Influenza Vaccine (LAIV4). Numbers indicate number of flu virus antigens.

[2]Dose volume for **standard-dose IIV** is based on **age** and **flu vaccine** product. For 3 years and older, dose volume is **0.5 mL regardless** of flu vaccine product (exception: **Fluzone High-Dose** the correct volume is **0.7 mL**). Dose volume for IIV4 vaccines for children aged 6-35 months: **0.25 mL** per dose of **Afluria**; **0.5 mL** per dose for **Fluarix and FluLaval**; **either 0.25 mL per dose or 0.5 mL per dose** of **Fluzone**. No preference is expressed for either Fluzone dose volume for this age group. Dose volume of ccIIV4 vaccine for children aged 6 months and older: 0.5 mL per dose of Flucelvax. See "2022-23 Seasonal Influenza Vaccine Dose Volumes for Children" at www.michigan.gov/flu/resources/resources-for-health-professionals.

[3]Fluad includes the adjuvant MF59C.1.

[4]Per the package inserts, for Afluria Quadrivalent, "once the stopper of the multi-dose vial has been pierced the vial must be discarded within 28 days. The number of needle punctures should not exceed 20 per multi-dose vial." For Fluzone Quadrivalent, "a maximum of 10 doses can be withdrawn from the multi-dose vial," even if drawing out 0.25 mL doses. A Flucelvax Quadrivalent multi-dose vial may be used up until the expiration date.

[5]Afluria is approved by the Food and Drug Administration for intramuscular administration with a PharmaJet® Stratis® Needle-Free Injection System for persons aged 18 through 64 years.

[6]ACIP recommends that adults aged 65 years and older preferentially receive any one of the following: HD-IIV4, RIV4, or aIIV4. If none of these three vaccines is available at an opportunity for vaccine administration, then any other age-appropriate influenza vaccine should be administered.

Use this chart to help prevent errors. Highlight the flu vaccine(s) you have in your storage unit and know the age indications. Ensure you give the correct vaccine at the correct dose volume to the correct person based on age. For 2-dose recommendations, see "Who Needs 2 Doses of 2022-23 Seasonal Influenza Vaccine?" at www.michigan.gov/flu/resources/resources-for-health-professionals. Refer to "Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the ACIP—U.S., 2022-23 Influenza Season," MMWR Recomm Rep 2022;-71(1); 1-28, located at www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/flu.html. For additional information regarding flu and flu vaccination, refer to www.michigan.gov/flu, www.cdc.gov/vaccines, or www.cdc.gov/mmwr.

Michigan Department of Health and Human Services — Division of Immunization Rev. September 6, 2022

Influenza Vaccine Dose Volumes

- Five IIV4 products are approved for persons 6 months and older
- For 6-35 months, dose volume depends on the flu vaccine product that is administered

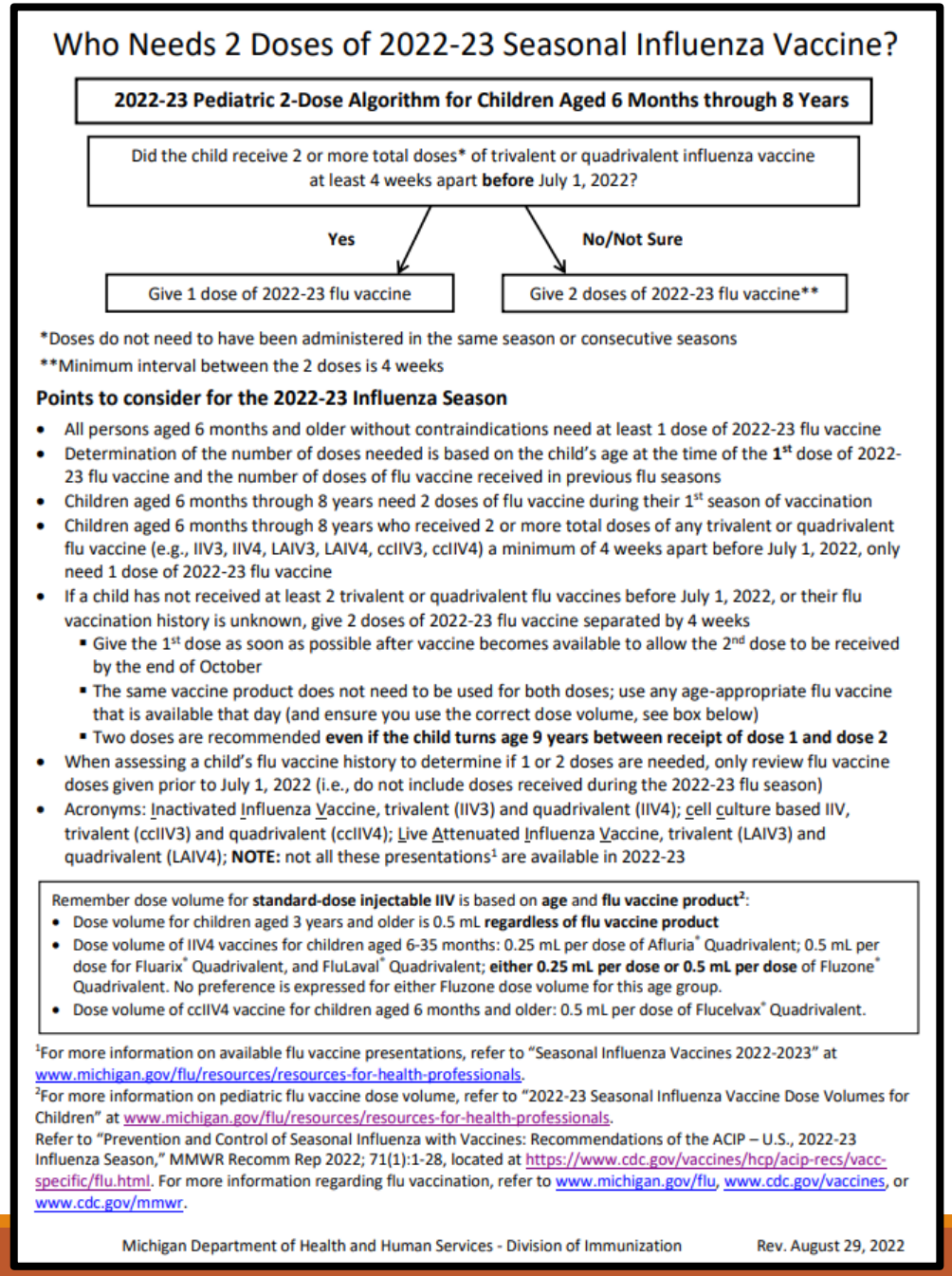
For children aged 3 years and older, dose volume for SD-IIV is **0.5 mL** regardless of the flu vaccine product being administered

If You're Using This Vaccine...	Dose Volume for Ages 6-35 Months
Afluria (Seqirus)	**0.25 mL** per dose
Fluarix, FluLaval (GSK), or Flucelvax (Sequirus),	**0.5 mL** per dose
Fluzone (Sanofi Pasteur)	**0.25 mL OR 0.5 mL** per dose *No preference is expressed for either dose volume

2-Dose Recommendation: 6 Months-8 Years

- Number of doses needed is based on child's age at time of 1st dose of 2022-23 flu vaccine and # of doses of flu vaccine received in previous seasons
- How many seasonal (i.e., trivalent, quadrivalent) flu vaccines received before 7/1/2022
  - If 2 or more doses: give 1 dose this season
  - If only 1 dose or has NEVER received flu vaccine: give 2 doses this season (separate by 4 weeks)
- 2 doses do not need to be from the same season or consecutive seasons, need to be spaced at least 4 weeks apart
- Give 1st dose as soon as possible after vaccine is available, 2nd dose by end of October
- If the child turns 9 years between dose 1 and dose 2, still give dose 2

MCIR is programmed for 2-dose assessment. Make sure to use MCIR!
www.michigan.gov/flu → Resources → Resources for Health Professionals



Who Needs 2 Doses of 2022-23 Seasonal Influenza Vaccine?

2022-23 Pediatric 2-Dose Algorithm for Children Aged 6 Months through 8 Years

Did the child receive 2 or more total doses* of trivalent or quadrivalent influenza vaccine at least 4 weeks apart **before** July 1, 2022?

Yes → Give 1 dose of 2022-23 flu vaccine

No/Not Sure → Give 2 doses of 2022-23 flu vaccine**

*Doses do not need to have been administered in the same season or consecutive seasons

**Minimum interval between the 2 doses is 4 weeks

Points to consider for the 2022-23 Influenza Season

- All persons aged 6 months and older without contraindications need at least 1 dose of 2022-23 flu vaccine
- Determination of the number of doses needed is based on the child's age at the time of the 1st dose of 2022-23 flu vaccine and the number of doses of flu vaccine received in previous flu seasons
- Children aged 6 months through 8 years need 2 doses of flu vaccine during their 1st season of vaccination
- Children aged 6 months through 8 years who received 2 or more total doses of any trivalent or quadrivalent flu vaccine (e.g., IIV3, IIV4, LAIV3, LAIV4, ccIIV3, ccIIV4) a minimum of 4 weeks apart before July 1, 2022, only need 1 dose of 2022-23 flu vaccine
- If a child has not received at least 2 trivalent or quadrivalent flu vaccines before July 1, 2022, or their flu vaccination history is unknown, give 2 doses of 2022-23 flu vaccine separated by 4 weeks
  - Give the 1st dose as soon as possible after vaccine becomes available to allow the 2nd dose to be received by the end of October
  - The same vaccine product does not need to be used for both doses; use any age-appropriate flu vaccine that is available that day (and ensure you use the correct dose volume, see box below)
  - Two doses are recommended **even if the child turns age 9 years between receipt of dose 1 and dose 2**
- When assessing a child's flu vaccine history to determine if 1 or 2 doses are needed, only review flu vaccine doses given prior to July 1, 2022 (i.e., do not include doses received during the 2022-23 flu season)
- Acronyms: Inactivated Influenza Vaccine, trivalent (IIV3) and quadrivalent (IIV4); cell culture based IIV, trivalent (ccIIV3) and quadrivalent (ccIIV4); Live Attenuated Influenza Vaccine, trivalent (LAIV3) and quadrivalent (LAIV4); **NOTE:** not all these presentations[1] are available in 2022-23

Remember dose volume for **standard-dose injectable IIV** is based on **age** and **flu vaccine product**[2]:

- Dose volume for children aged 3 years and older is 0.5 mL **regardless of flu vaccine product**
- Dose volume of IIV4 vaccines for children aged 6-35 months: 0.25 mL per dose of Afluria® Quadrivalent; 0.5 mL per dose for Fluarix® Quadrivalent, and FluLaval® Quadrivalent; **either 0.25 mL per dose or 0.5 mL per dose** of Fluzone® Quadrivalent. No preference is expressed for either Fluzone dose volume for this age group.
- Dose volume of ccIIV4 vaccine for children aged 6 months and older: 0.5 mL per dose of Flucelvax® Quadrivalent.

[1]For more information on available flu vaccine presentations, refer to "Seasonal Influenza Vaccines 2022-2023" at www.michigan.gov/flu/resources/resources-for-health-professionals.
[2]For more information on pediatric flu vaccine dose volume, refer to "2022-23 Seasonal Influenza Vaccine Dose Volumes for Children" at www.michigan.gov/flu/resources/resources-for-health-professionals.
Refer to "Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the ACIP – U.S., 2022-23 Influenza Season," MMWR Recomm Rep 2022; 71(1):1-28, located at https://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/flu.html. For more information regarding flu vaccination, refer to www.michigan.gov/flu, www.cdc.gov/vaccines, or www.cdc.gov/mmwr.

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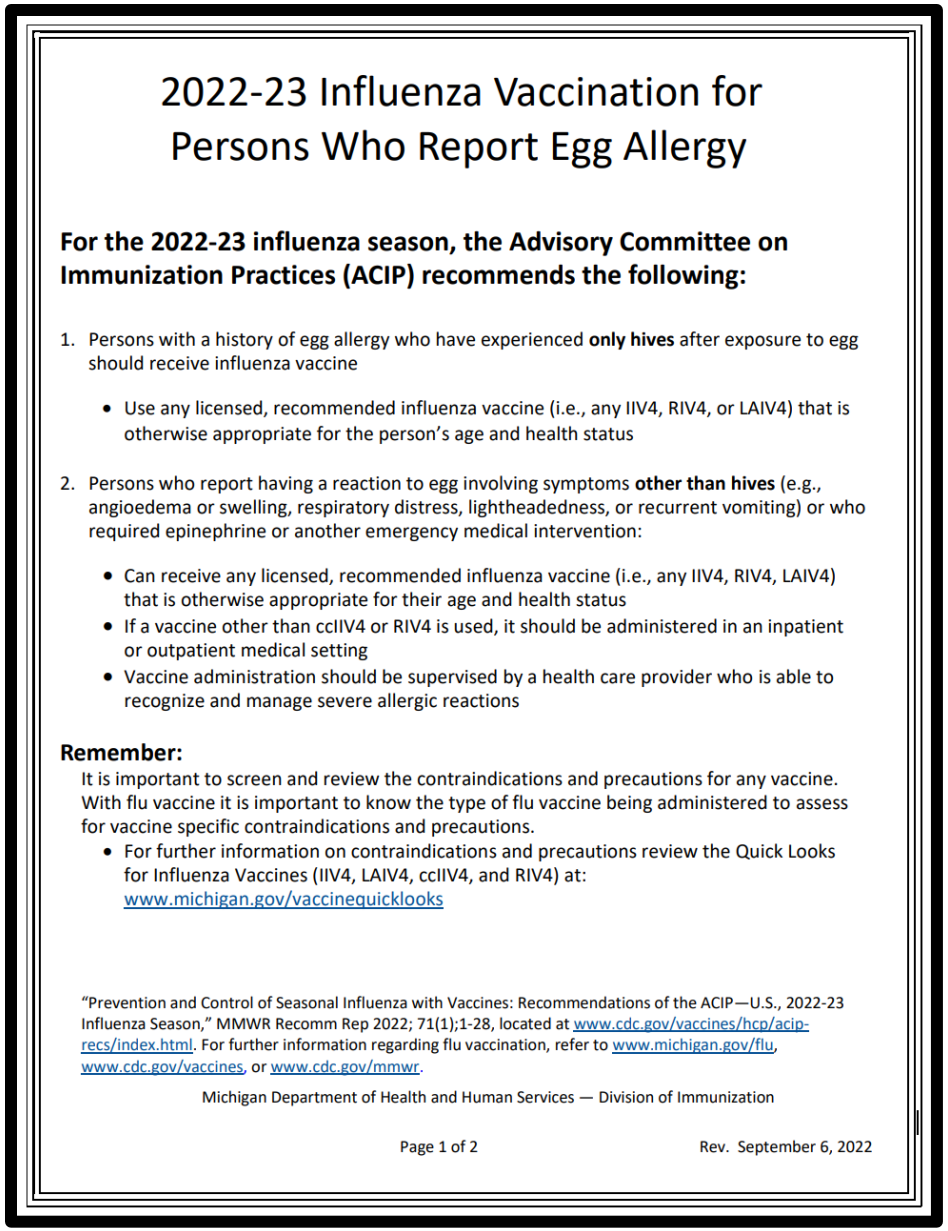
Flu Vaccination for Persons With Egg Allergy

- History of egg allergy and only hives after exposure to egg should receive flu vaccine
  - Use any licensed, recommended vaccine (i.e., any IIV4, RIV4, or LAIV4) otherwise appropriate for age/health status
- History of egg allergy and symptoms other than hives (e.g., angioedema or swelling, respiratory distress, lightheadedness, or recurrent vomiting) or required epinephrine/another emergency medical intervention:
  - Can receive any licensed, recommended vaccine (i.e., any IIV4, RIV4, LAIV4) otherwise appropriate for age/health status
  - If a vaccine other than ccIIV4 or RIV4 is used, administer it in an inpatient or outpatient medical setting
  - Supervised by health care provider able to recognize and manage severe allergic reactions

Flu Vaccine & Egg Allergy, Cont'd.

- For persons who report egg allergy, it is not recommended to administer divided doses of flu vaccine or to do skin testing with the vaccine before administration
- No post-vaccination observation period is recommended specifically for egg-allergic persons
- Reminder: Screen and review vaccine specific contraindications and precautions

www.michigan.gov/flu → Resources → Resources for Health Professionals



2022-23 Influenza Vaccination for Persons Who Report Egg Allergy

For the 2022-23 influenza season, the Advisory Committee on Immunization Practices (ACIP) recommends the following:

1. Persons with a history of egg allergy who have experienced **only hives** after exposure to egg should receive influenza vaccine
   - Use any licensed, recommended influenza vaccine (i.e., any IIV4, RIV4, or LAIV4) that is otherwise appropriate for the person's age and health status
2. Persons who report having a reaction to egg involving symptoms **other than hives** (e.g., angioedema or swelling, respiratory distress, lightheadedness, or recurrent vomiting) or who required epinephrine or another emergency medical intervention:
   - Can receive any licensed, recommended influenza vaccine (i.e., any IIV4, RIV4, LAIV4) that is otherwise appropriate for their age and health status
   - If a vaccine other than ccIIV4 or RIV4 is used, it should be administered in an inpatient or outpatient medical setting
   - Vaccine administration should be supervised by a health care provider who is able to recognize and manage severe allergic reactions

Remember:

It is important to screen and review the contraindications and precautions for any vaccine. With flu vaccine it is important to know the type of flu vaccine being administered to assess for vaccine specific contraindications and precautions.

- For further information on contraindications and precautions review the Quick Looks for Influenza Vaccines (IIV4, LAIV4, ccIIV4, and RIV4) at: www.michigan.gov/vaccinequicklooks

"Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the ACIP—U.S., 2022-23 Influenza Season," MMWR Recomm Rep 2022; 71(1);1-28, located at www.cdc.gov/vaccines/hcp/acip-recs/index.html. For further information regarding flu vaccination, refer to www.michigan.gov/flu, www.cdc.gov/vaccines, or www.cdc.gov/mmwr.

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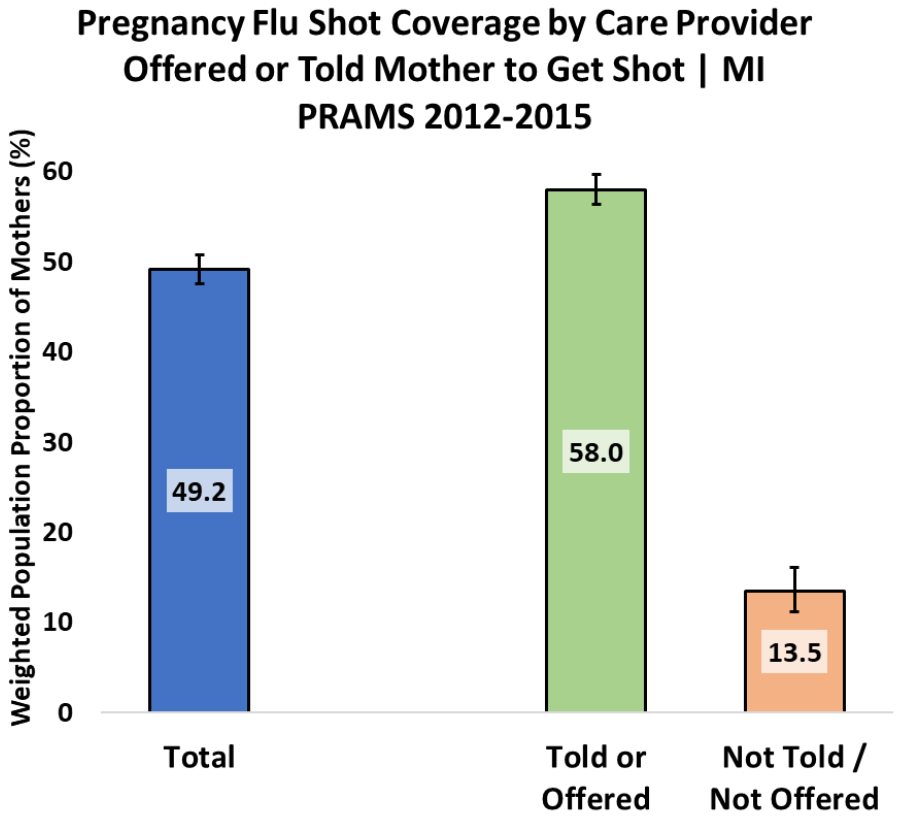
Methods to Improve Coverage in Pregnant People

- Assure you are giving a strong recommendation
- AIMS Method[2]:
  - Announce: vaccination will happen, assume they are ready to vaccinate
  - Inquire: seek to understand the person by asking about their concerns
  - Mirror: make sure they know you understand their concerns by mirroring but not repeating and asking questions
  - Secure: consolidate every conversation by securing their trust



1. PRAMS data provided by P.I for the study, Peterson Haak, MDHHS
2. Created by John Parrish-Sprowl- Professor of Communication Studies; Director, Global Health Communication Center, Indiana University

What you Say Matters

- Research shows a patient who receives a strong recommendation from a provider is 4-5 times more likely to be vaccinated
- Personalizing the message that vaccines are safe and effective can be powerful
  - Patients often are more likely to be persuaded by stories and anecdotes about the successes of vaccines

Strategies to Reinforce Vaccine Confidence

Reduce Errors and Build Trust Through:

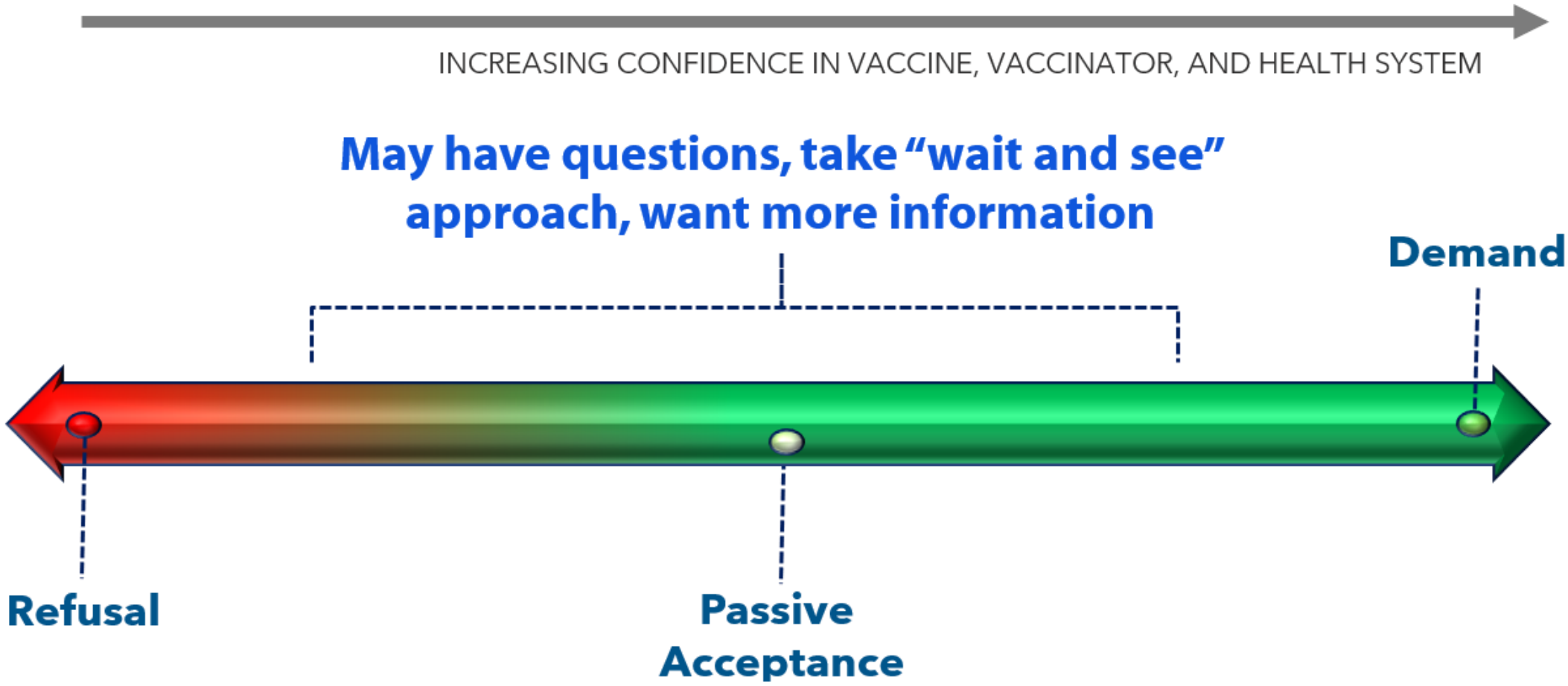
- **Effective Communication**-communicate transparently about the process for authorizing, approving, making recommendations for, monitoring the safety of, distributing, and administering vaccines.
- **Knowing the Recommendations**-provide regular updates on benefits, safety, side effects, and effectiveness; clearly communicate what is not known
- **Storing and Handling Vaccine Appropriately-**vaccines not handled properly can affect how well the vaccines work (efficacy)
- **Administering Vaccine Appropriately**

What is Vaccine Hesitancy

- Refers to the delay in acceptance or refusal of vaccines despite availability of vaccine services
- Is complex and context specific varying across time, place, and vaccines
- Is influenced by factors such as complacency, convenience, and confidence

Vaccine hesitancy: Definition, scope and determinants - ScienceDirect

Willingness to Accept a Vaccine Falls on a Continuum



Hesitancy Versus Refusal

- Those that fall in the middle are often referred to as Fence-sitters
  - They have questions and just want to know more about vaccines
- Fence-sitters versus anti-vaccinators
  - Not likely to convince the anti-vaccinator
- We need to remember
  - Questions do not equal opposition
  - Questions are an opportunity to educate
- A focus on educating fence-sitters will be more beneficial than trying to persuade those who completely oppose vaccines

What Influences Vaccine Confidence

- Parents/patients express concerns about the safety
  - Ingredients, too many vaccines at one visit, and not properly tested
- Parents/patients are strongly influenced by other parents/individuals and what they read
  - Often through social media and news sources
- Parents/patients consider vaccines to be ineffective
- Parents/patients don’t see disease as a risk
  - Susceptibility to disease and severity of disease

Resource: Ropeik, David, How Risky Is It, Really?: Why Our Fears Don't Always Match the Facts, 2010

Four Steps to Apply Motivational Interviewing

Rapid Encounters (1-5 minutes) During Patient Visit

STEP 1: Embrace an Attitude of Empathy and Collaboration

- Be compassionate, show empathy, and be genuinely curious about the reasons why the patient feels the way they do.
- Be sensitive to culture, family dynamics, and circumstances that may influence how patients view vaccines.
- Remember: Arguing and debating do not work. Taking a strong initial stand may also backfire, especially with people who have concerns about vaccines.

Talking with Patients about COVID-19 Vaccination | CDC

STEP 2: Ask Permission to Discuss Vaccines

Start by asking permission to discuss vaccines. Say something like, *"If it is okay with you, I would like to spend a few minutes talking about COVID-19 vaccines and your family."*

- **If the patient says no**, respect that.
  - **Option 1:** Move on and say, *"I respect that, and because I care about your overall health, maybe we could talk about the vaccines at a future time."*
  - **Option 2:** Based on the patient's demonstrated emotions and your assessment of the patient's worldview and values, you could spend several minutes curiously exploring why the patient doesn't want to talk about it. The goal is to understand, not to change their mind. Remember: These conversations may take time, and they may continue over multiple visits.
- **If the patient says yes** to talking about the vaccines, move to Step 3.
- **If the patient asks a question** about COVID-19 vaccine safety, vaccine risks, or their health or mental health, see potential responses in Step 4.

Talking with Patients about COVID-19 Vaccination | CDC

STEP 3: Motivational Interviewing

Ask the patient a scaled question. For example, *"On a scale of 1 to 10, how likely are you to get a COVID-19 vaccine?"* (1 = never; 10 = already have an appointment to get vaccinated). Then explore both sides of whatever number is given.

- **Example:** Let's assume someone says 4. This is where curiosity comes in. You can say, *"Okay, why 4? And why not a lower number?"* Let them answer, and ask a follow-up question like, *"What would help you move to a 5 or 6?"*

The goal is to help the patient become more open to moving toward higher numbers—in other words, getting vaccinated.

- You want them to **talk about this out loud** because talking changes how they process their choices and can develop forward momentum.
- People hesitant about vaccines usually have more practice explaining why they haven't gotten vaccinated, so it's good to reverse that. Ask them to express their vaccination benefits out loud.
- Be compassionate and curious about the patient's mixed feelings, both the part of them that wants to trust that getting a vaccine is important and safe and the other part that feels hesitant. It is important to show support for the patient to incorporate their personal values and the health needs of their family and community as they make their decision.

If a patient asks a question about vaccine safety, vaccine risks, or their health or mental health, respond within the boundaries of your competence, ethics, and scope of practice.

- **If you feel competent and aware of how to answer the patient's question**, respond with empathy and provide scientific information as needed. Refer the patient to resources on the CDC website, which is listed below.
- **If the patient's question is outside of your competence or awareness**, recommend that they speak with their medical or mental health provider or a knowledgeable expert, as needed.

Talking with Patients about COVID-19 Vaccination | CDC

STEP 4: Respond to Questions about Vaccines, Health, or Mental Health

Talking with Patients about COVID-19 Vaccination

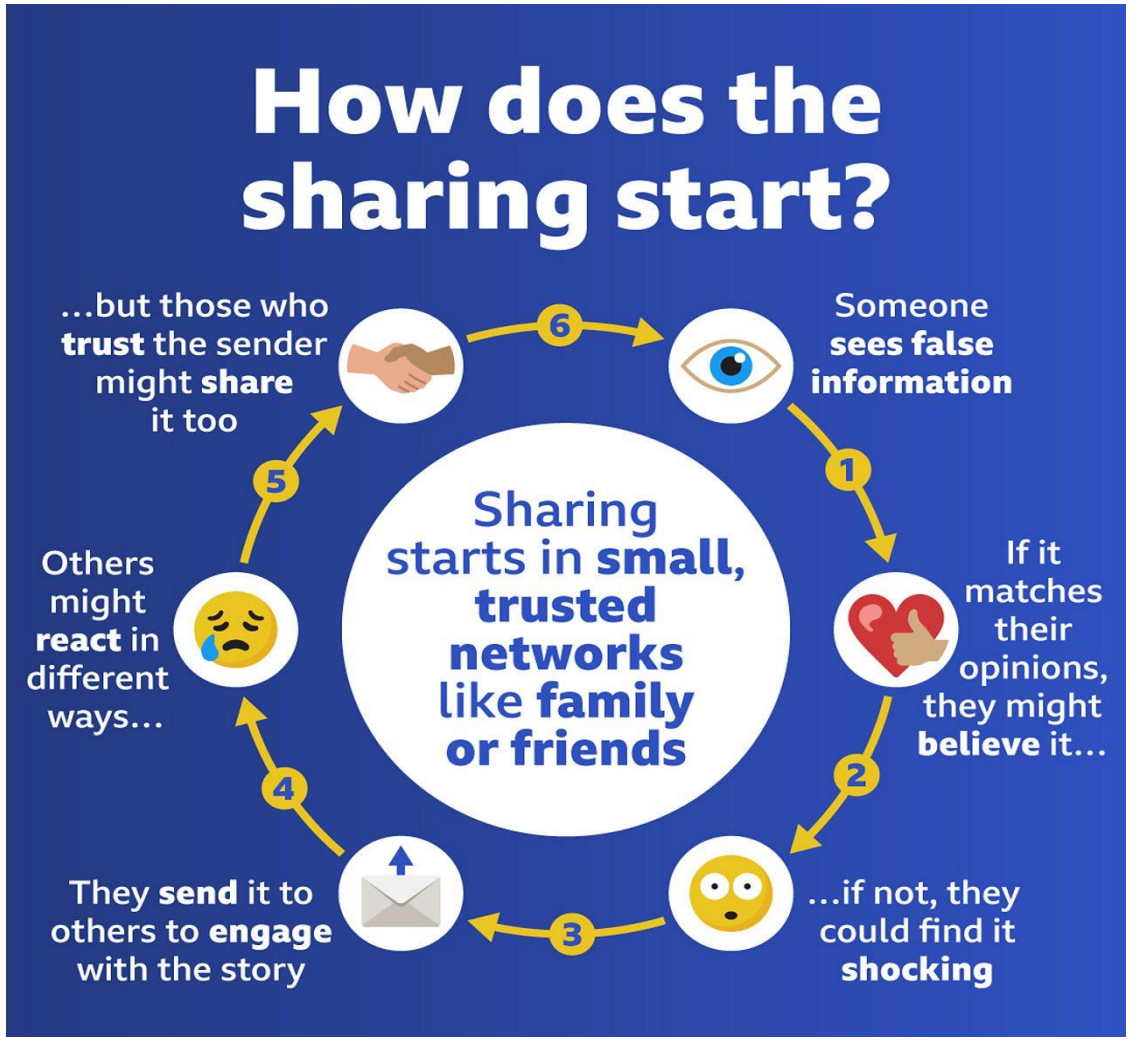
- Your approach to a conversation with patients and families who are hesitant about receiving COVID-19 vaccines can influence their willingness to consider vaccination
- Research shows a patient who receives a strong recommendation from a provider is 4-5 times more likely to be vaccinated[1]
- Motivational Interviewing is an evidence-based and culturally sensitive way to speak with unvaccinated patients about getting vaccinated
- The goal of motivational interviewing is to help people manage mixed feelings and move toward healthy behavior change that is consistent with their values and needs

[1]Pinkbook: Vaccine Administration | CDC

Addressing COVID-19 Vaccine Misinformation

- **Listen to and analyze misinformation circulating** in your community through social and traditional media monitoring
- **Engage with and listen to your community** to identify and analyze perceptions, content gaps, information voids, and misinformation
- **Share accurate, clear, and easy-to-find information** that addresses common questions. This can be done through your website, social media, and other places your audience looks for health information
- **Use trusted messengers** to boost credibility and the likelihood of being seen and believed over misinformation
- **Monitoring misinformation through social listening** is a key strategy to quickly identify and address misinformation about COVID-19 vaccines. This includes identifying trending inaccurate information, which, if not addressed, can lead to the spread of misinformation

Defining Misinformation



- **Misinformation** is false information shared by people who do not intend to mislead others
- The spread of misinformation on social media and through other channels can affect COVID-19 vaccine confidence
- Misinformation often arises when there are information gaps or unsettled science, as human nature seeks to reason, better understand, and fill in the gaps

Answers to Common COVID-19 Vaccine Questions

Helping Patients/Parents Feel More Confident in Vaccination

Severity of COVID-19 Infection

COVID-19 isn't even really serious for kids, is it?

- COVID-19 can make children very sick
- Some children with COVID-19 need to be hospitalized and some children have died
- Children can also develop serious complications like multisystem inflammatory syndrome (MIS-C) —a condition where different body parts become inflamed, including the heart, lungs, kidneys, brain, skin, eyes, or gastrointestinal organs
- And some children can develop post-COVID complications (also called long-COVID)

For Parents: Multisystem Inflammatory Syndrome in Children (MIS-C) associated with COVID-19 | CDC
Post-COVID Conditions | CDC

Potential Side Effects

What is the risk of myocarditis or pericarditis?

- Reports of heart inflammation in adolescents and young adults are rare.
- Most adolescents who have developed this condition after vaccination have responded well to medicine and rest and felt better quickly.
- Myocarditis/pericarditis after an mRNA vaccine is **lower** than the risk of myocarditis associated with COVID-19 infection in adolescents and adults.
  - If 100,000 males between 16 and 29 years of age got the mRNA vaccine, about 5 would experience myocarditis. However, if 100,000 males between 16 and 29 years of age were infected with the virus that causes COVID-19, about 59 would experience myocarditis. These numbers are lower in females.

Myocarditis and Pericarditis After mRNA COVID-19 Vaccination | CDC; Questions and Answers about COVID-19 Vaccines | Children's Hospital of Philadelphia (chop.edu)

Potential Side Effects

Does the COVID-19 vaccine cause fertility issues?

- **NO!** The COVID-19 vaccine will not affect fertility.
- Confusion arose when a false report stated that the spike protein on the coronavirus was similar to the spike protein found on the placenta. Fortunately, the fact is that these two proteins share only a small stretch of amino acids, which means they aren't similar enough to be confused for one another. Our body's antibodies know what to look for.
- Additionally, the COVID-19 vaccine is processed near the injection site, so it cannot cause hormonal or other biological changes that would be expected to affect either male or female infertility.
- After a year and millions of doses we know that the vaccine is safe and effective and does not pose any fertility risk.

Questions and Answers about COVID-19 Vaccines | Children's Hospital of Philadelphia (chop.edu)

Vaccine Development Process

How were the vaccines developed so quickly?

- Scientists have been working for many years to develop vaccines against viruses like the one that causes COVID-19.
- Any COVID-19 vaccine that is available for children has gone through the same approval process that is required for other vaccines – including routine childhood vaccines.
- None of the clinical trial steps were skipped and no corners were cut when it comes to safety.
- The U.S. government has invested substantial resources to manufacture and distribute COVID-19 vaccines. This allowed vaccine distribution to begin as soon as FDA authorized each vaccine.
- COVID-19 vaccine safety monitoring has been the most intense and comprehensive in U.S. history. Through several monitoring systems, CDC and FDA continue to provide updated information on the safety of these vaccines.

Frequently Asked Questions about COVID-19 Vaccination | CDC

Previous COVID-19 Infection

My child already had COVID, does he/she need vaccine, or can we test for antibodies?

- Vaccination should be offered to individuals regardless of history of prior COVID-19 infection.
- People who are unvaccinated have a higher risk of reinfection than those who are fully vaccinated following natural infection.
- Antibody testing is not currently recommended to assess the need for vaccination in an unvaccinated person or to assess for immunity to COVID-19 following COVID-19 vaccination.
- Current antibody tests have variable sensitivity, specificity, as well as positive and negative predictive values, and are not authorized for the assessment of immune response in vaccinated people.
- Serologic correlates of protection have not been established, and antibody testing does not evaluate the cellular immune response, which may also play a role in vaccine-mediated protection.

Interim Clinical Considerations for Use of COVID-19 Vaccines | CDC

Interactive COVID–19 Vaccine Conversations Module for Healthcare Professionals

Talking with Patients about COVID-19 Vaccination

Welcome to the Interactive COVID-19 Vaccine Conversation Module for Healthcare Professionals (HCPs). This tool has been developed by Centers for Disease Control and Prevention in partnership with the U.S. Department of Veteran Affairs.

Whether in your office, hospital, or through a telehealth visit, building confidence in COVID-19 vaccination among your patients is critical to setting expectations, ensuring vaccine uptake, and helping protect our communities.

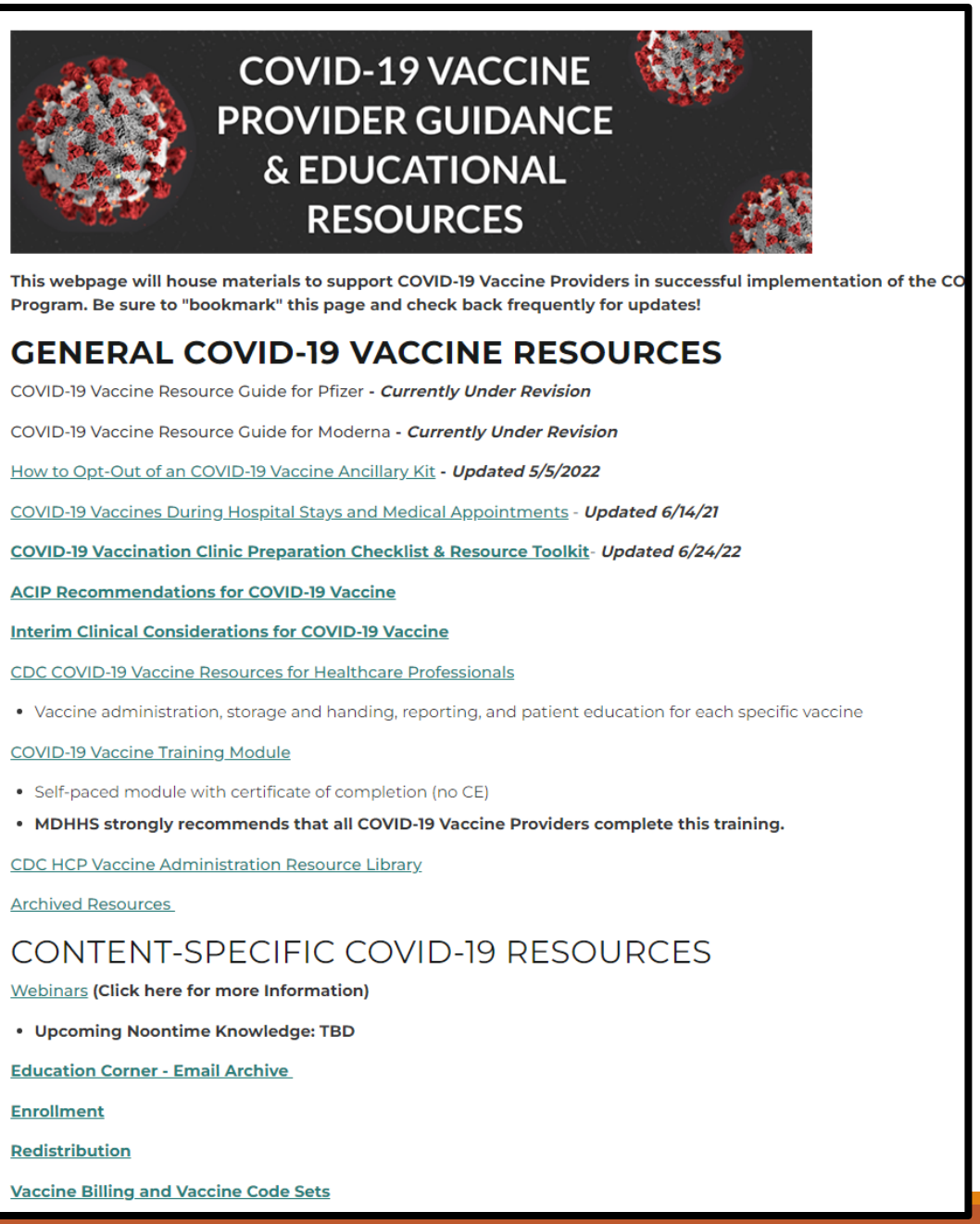
Before beginning the interactive module, please review the following background information about the importance of vaccine confidence.

The Role of Healthcare Providers in Building Vaccine Confidence

5 COVID-19 Vaccine Conversations in Practice: Case Scenarios

Now that we have covered the basics of vaccine confidence and some tips on how to have better conversations with patient in real healthc

COVID-19 Vaccine Conversations Tool for Healthcare Professionals | CDC



MDHHS COVID-19 Provider Guidance and Education Website

www.michigan.gov/covidvaccineprovider

Catch-Up on Vaccines

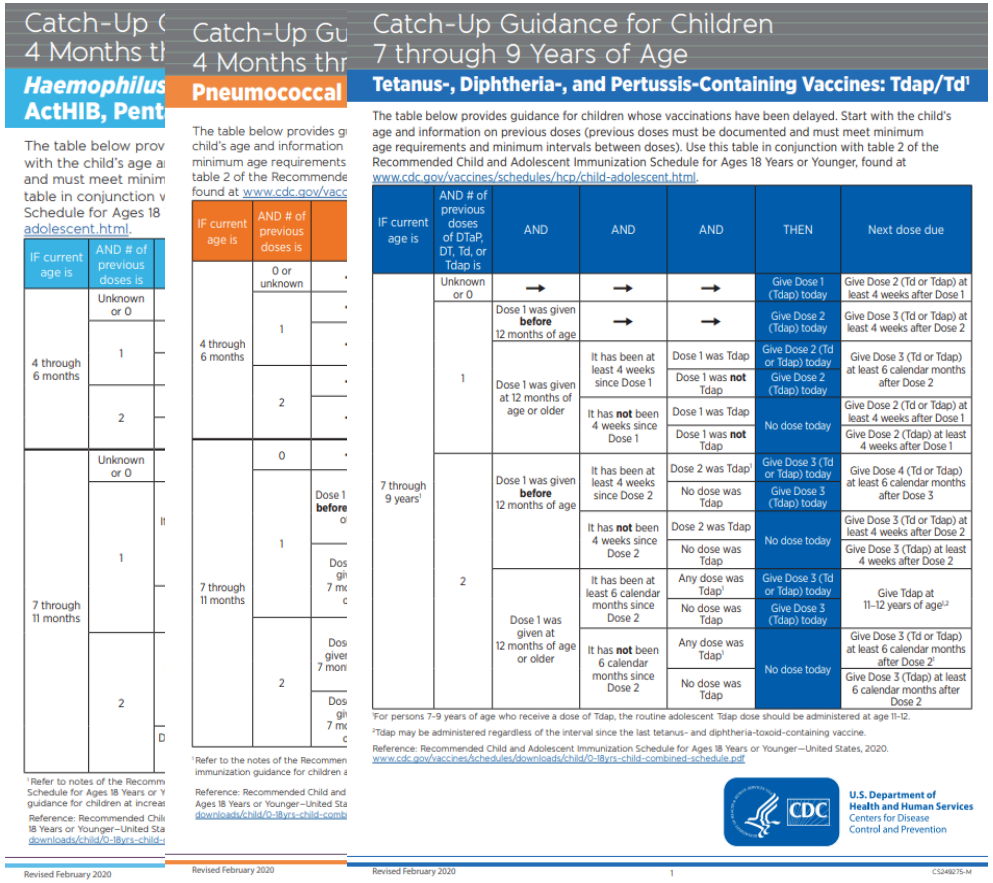
Ensure Your Patients are Up to Date

COVID-19 Shouldn’t be Our Only Focus

Image Courtesy of CDC

- After the COVID emergency declaration, routine pediatric vaccine ordering, and doses administered have declined
- To reduce the risk of Vaccine Preventable Disease (VPD) outbreaks, it is important to catch-up these children
- Remind parents of the vital need to protect their children against other serious VPD’s

Unsure of How to Catch a Child Up?



Catch-Up (
4 Months th

Haemophilus
ActHIB, Pent

The table below prov
with the child's age a
and must meet minim
table in conjunction v
Schedule for Ages 18
adolescent.html.

IF current age is	AND # of previous doses is
4 through 6 months	Unknown or 0
	1
	2
7 through 11 months	Unknown or 0
	1
	2

Refer to notes of the Recomm
Schedule for Ages 18 Years or Y
guidance for children at increas

Reference: Recommended Chil
18 Years or Younger–United Sta
downloads/child/0-18yrs-child-

Revised February 2020

Catch-Up Gu
4 Months thr

Pneumococcal

The table below provides g
child's age and information
minimum age requirements
table 2 of the Recommende
found at www.cdc.gov/vacc

IF current age is	AND # of previous doses is
4 through 6 months	0 or unknown
	1
	2
7 through 11 months	0
	1
	2

Refer to the notes of the Recommen
immunization guidance for children a

Reference: Recommended Child and
Ages 18 Years or Younger–United Sta
downloads/child/0-18yrs-child-comb

Revised February 2020

Catch-Up Guidance for Children 7 through 9 Years of Age

Tetanus-, Diphtheria-, and Pertussis-Containing Vaccines: Tdap/Td[1]

The table below provides guidance for children whose vaccinations have been delayed. Start with the child's age and information on previous doses (previous doses must be documented and must meet minimum age requirements and minimum intervals between doses). Use this table in conjunction with table 2 of the Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, found at www.cdc.gov/vaccines/schedules/hcp/child-adolescent.html.

IF current age is	AND # of previous doses of DTaP, DT, Td, or Tdap is	AND	AND	AND	THEN	Next dose due
7 through 9 years[1]	Unknown or 0	→	→	→	Give Dose 1 (Tdap) today	Give Dose 2 (Td or Tdap) at least 4 weeks after Dose 1
	1	Dose 1 was given **before** 12 months of age	→	→	Give Dose 2 (Tdap) today	Give Dose 3 (Td or Tdap) at least 4 weeks after Dose 2
		Dose 1 was given at 12 months of age or older	It has been at least 4 weeks since Dose 1	Dose 1 was Tdap	Give Dose 2 (Td or Tdap) today	Give Dose 3 (Td or Tdap) at least 6 calendar months after Dose 2
				Dose 1 was **not** Tdap	Give Dose 2 (Tdap) today	
			It has **not** been 4 weeks since Dose 1	Dose 1 was Tdap	No dose today	Give Dose 2 (Td or Tdap) at least 4 weeks after Dose 1
				Dose 1 was **not** Tdap		Give Dose 2 (Tdap) at least 4 weeks after Dose 1
	2	Dose 1 was given **before** 12 months of age	It has been at least 4 weeks since Dose 2	Dose 2 was Tdap[2]	Give Dose 3 (Td or Tdap) today	Give Dose 4 (Td or Tdap) at least 6 calendar months after Dose 3
				No dose was Tdap	Give Dose 3 (Tdap) today	
			It has **not** been 4 weeks since Dose 2	Dose 2 was Tdap	No dose today	Give Dose 3 (Td or Tdap) at least 4 weeks after Dose 2
				No dose was Tdap		Give Dose 3 (Tdap) at least 4 weeks after Dose 2
		Dose 1 was given at 12 months of age or older	It has been at least 6 calendar months since Dose 2	Any dose was Tdap[2]	Give Dose 3 (Td or Tdap) today	Give Tdap at 11–12 years of age[1,2]
				No dose was Tdap	Give Dose 3 (Tdap) today	
			It has **not** been 6 calendar months since Dose 2	Any dose was Tdap[2]	No dose today	Give Dose 3 (Td or Tdap) at least 6 calendar months after Dose 2[2]
				No dose was Tdap		Give Dose 3 (Tdap) at least 6 calendar months after Dose 2

[1]For persons 7–9 years of age who receive a dose of Tdap, the routine adolescent Tdap dose should be administered at age 11–12.

[2]Tdap may be administered regardless of the interval since the last tetanus- and diphtheria-toxoid-containing vaccine.

Reference: Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger—United States, 2020. www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Revised February 2020 1 CS248275-M

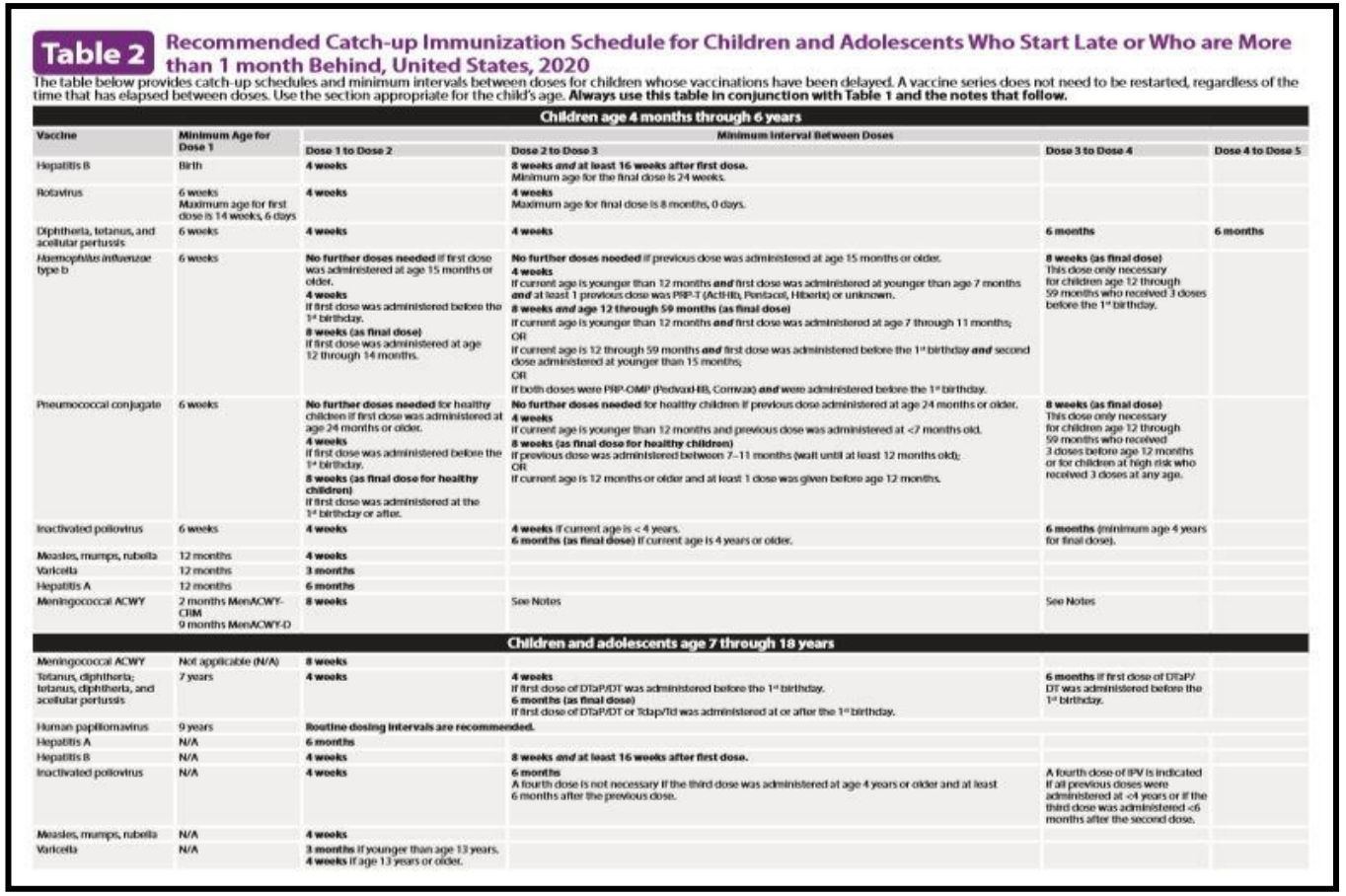


Table 2 Recommended Catch-up Immunization Schedule for Children and Adolescents Who Start Late or Who are More than 1 month Behind, United States, 2020

The table below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age. **Always use this table in conjunction with Table 1 and the notes that follow.**

Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses			
		Dose 1 to Dose 2	Dose 2 to Dose 3	Dose 3 to Dose 4	Dose 4 to Dose 5
Children age 4 months through 6 years					
Hepatitis B	Birth	**4 weeks**	**8 weeks** *and* at least **16 weeks after first dose.** Minimum age for the final dose is 24 weeks.		
Rotavirus	6 weeks Maximum age for first dose is 14 weeks, 6 days	**4 weeks**	**4 weeks** Maximum age for final dose is 8 months, 0 days.		
Diphtheria, tetanus, and acellular pertussis	6 weeks	**4 weeks**	**4 weeks**	**6 months**	**6 months**
Haemophilus influenzae type b	6 weeks	**No further doses needed** if first dose was administered at age 15 months or older. **4 weeks** If first dose was administered before the 1st birthday. **8 weeks (as final dose)** If first dose was administered at age 12 through 14 months.	**No further doses needed** if previous dose was administered at age 15 months or older. **4 weeks** If current age is younger than 12 months *and* first dose was administered at younger than age 7 months *and* at least 1 previous dose was PRP-T (ActHIB, Pentacel, Hiberix) or unknown. **8 weeks** *and* **age 12 through 59 months (as final dose)** If current age is younger than 12 months *and* first dose was administered at age 7 through 11 months; OR If current age is 12 through 59 months *and* first dose was administered before the 1st birthday *and* second dose administered at younger than 15 months; OR If both doses were PRP-OMP (PedvaxHIB, Comvax) *and* were administered before the 1st birthday.	**8 weeks (as final dose)** This dose only necessary for children age 12 through 59 months who received 3 doses before the 1st birthday.	
Pneumococcal conjugate	6 weeks	**No further doses needed** for healthy children if first dose was administered at age 24 months or older. **4 weeks** If first dose was administered before the 1st birthday. **8 weeks (as final dose for healthy children)** If first dose was administered at the 1st birthday or after.	**No further doses needed** for healthy children if previous dose administered at age 24 months or older. **4 weeks** If current age is younger than 12 months and previous dose was administered at <7 months old. **8 weeks (as final dose for healthy children)** If previous dose was administered between 7–11 months (wait until at least 12 months old); OR If current age is 12 months or older and at least 1 dose was given before age 12 months.	**8 weeks (as final dose)** This dose only necessary for children age 12 through 59 months who received 3 doses before age 12 months or for children at high risk who received 3 doses at any age.	
Inactivated poliovirus	6 weeks	**4 weeks**	**4 weeks** if current age is < 4 years. **6 months (as final dose)** if current age is 4 years or older.	**6 months** (minimum age 4 years for final dose).	
Measles, mumps, rubella	12 months	**4 weeks**			
Varicella	12 months	**3 months**			
Hepatitis A	12 months	**6 months**			
Meningococcal ACWY	2 months MenACWY-CRM 9 months MenACWY-D	**8 weeks**	See Notes	See Notes	
Children and adolescents age 7 through 18 years					
Meningococcal ACWY	Not applicable (N/A)	**8 weeks**			
Tetanus, diphtheria; tetanus, diphtheria, and acellular pertussis	7 years	**4 weeks**	**4 weeks** If first dose of DTaP/DT was administered before the 1st birthday. **6 months (as final dose)** If first dose of DTaP/DT or Tdap/Td was administered at or after the 1st birthday.	**6 months** if first dose of DTaP/DT was administered before the 1st birthday.	
Human papillomavirus	9 years	**Routine dosing intervals are recommended.**			
Hepatitis A	N/A	**6 months**			
Hepatitis B	N/A	**4 weeks**	**8 weeks** *and* at least **16 weeks after first dose.**		
Inactivated poliovirus	N/A	**4 weeks**	**6 months** A fourth dose is not necessary if the third dose was administered at age 4 years or older and at least 6 months after the previous dose.	A fourth dose of IPV is indicated if all previous doses were administered at <4 years or if the third dose was administered <6 months after the second dose.	
Measles, mumps, rubella	N/A	**4 weeks**			
Varicella	N/A	**3 months** if younger than age 13 years. **4 weeks** if age 13 years or older.			

CDC Has Some Great Catch-Up Resources!

Immunization Resources: www.cdc.gov/vaccines/schedules/hcp/imz/catchup.html#guidance

2022 CDC Immunization Schedules

For Health Care Providers

Child and Adolescent Immunization Schedule (birth through 18 years)

Child immunization schedule.

Adult Immunization Schedule (19 years and older)

Adults immunization schedule.

Resources for Health Care Providers

Health care professionals on a tablet.

For Parents

Easy-to-read child schedule.

Parent-Friendly Schedule for Infants and Children (birth-6 years)

Easy-to-read teen schedule.

Parent-Friendly Schedule for Preteens and Teens (7-18 years)

COVID-19 Vaccination

- Up-to-date clinical information about the vaccines
- Information for patients and consumers

Related Pages

CDC Immunization Schedules

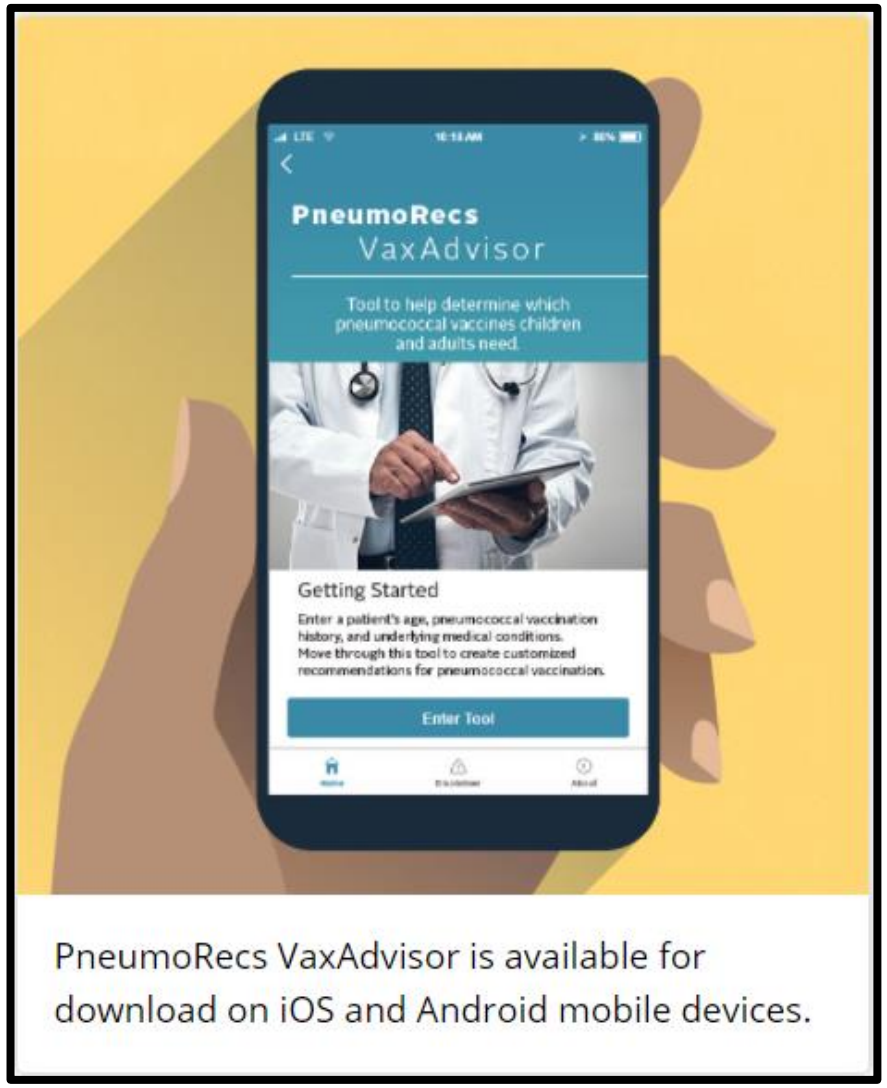
Herpes Zoster (HZ)

- RZV (Shingrix) is the vaccine for use in the prevention of herpes zoster
- **Routine Recommendation:**
  - Recommended for immunocompetent adults 50 years and older, including:
    - Adults with prior receipt of varicella vaccine, zoster vaccine live (ZVL), or herpes zoster episode
- **Special Situations-NEW:**
  - Recommended for use in persons 19 years and older who are or who will be immunodeficient or immunosuppressed because of disease or therapy

ACIP Zoster Vaccine Recommendations | Shingles | CDC

	RZV, Shingrix
Indication for Use:	Indicated for prevention of Herpes Zoster
Vaccine Type:	Inactivated Recombinant Vaccine
Age Indication:	50 years and older 19 years and older who are or will be immunodeficient or immunocompromised because of disease or therapy
Schedule:	2 doses given at 0 and 2-6 months Absolute minimum interval: 4 weeks
Administration:	IM (reconstitute prior to use)
Storage:	Store in Refrigerator
Vaccination and Disease History:	Give regardless of prior receipt of: • Varicella vaccine-wait 2 months from varicella dose • ZVL (Zoster Vaccine Live-Now Discontinued)-wait 2 months from ZVL dose • Herpes zoster episode

Pneumo Recs VaxAdvisor Mobile App for Providers



- Quickly and easily determine which pneumococcal vaccines a patient needs and when
- Incorporates recommendations for all ages so internists, family physicians, pediatricians, and pharmacists alike will find the tool beneficial
- Free download on IOS or Android Devices
- Desktop Version also available

PneumoRecs VaxAdvisor: Vaccine Provider App | CDC

Pneumococcal Vaccines

- There are 2 types of Pneumococcal Vaccines in the U.S.:
  - Pneumococcal Conjugate Vaccines (PCV13, PCV15, PCV20)
  - Pneumococcal Polysaccharide (PPSV23)
- Recommendations are based on age and medical condition
- **Children Younger Than 2 Years:**
  - Give 1 dose of either PCV13 or PCV15 at 2 months, 4 months, 6 months, and 12 through 15 months
- **Catch-Up Vaccination for Healthy 2 through 4 Year Old's:**
  - 1 dose of either PCV13 or PCV15 with any incomplete PCV series
  - For other catch-up guidance, see CDC's job aide: Pneumococcal Conjugate Vaccine (PCV)-Catch-up Guidance for Healthy Children 4 months through 4 years of Age (cdc.gov)

Pneumococcal Vaccines for 2 through 5 Year Olds With Certain Medical Conditions

Medical Condition	PCV	PPSV23
CSF Leak, Cochlear Implant, Chronic Heart, Chronic Lung, Diabetes	• 2 doses of either PCV13 or PCV15 if unvaccinated or received an incomplete PCV series with less than 3 doses (2nd dose at least 8 weeks after the first) **OR** • 1 dose of either PCV13 or PCV15 if they received 3 doses of PCV but none were given after 12 months of age	• 1 dose of PPSV23 at least 8 weeks after the PCV series is complete
Chronic Renal Failure, Nephrotic Syndrome, Congenital Immunodeficiency, Functional or Anatomic Asplenia, HIV, Sickle Cell, and Diseases treated with immunosuppressive drugs or radiation therapy		• 2 doses of PPSV23 after the PCV series is complete. Give the first dose at least 8 weeks after any prior PCV dose, then give the second dose of PPSV23 at least 5 years after the first PPSV23 dose

Recommended Child and Adolescent Immunization Schedule (cdc.gov)

Pneumococcal Vaccines for 6 through 18 Year Olds With Certain Medical Conditions

Medical Condition	PCV13	PPSV23
Chronic Heart, Chronic Lung, Diabetes		• Give 1 dose of PPSV23 (if not already given earlier in childhood)
CSF Leak, Cochlear Implant	• 1 dose of either PCV13 or PCV15 if they have not received any doses of PCV. Administer either PCV13 or PCV15 before giving any recommended doses of PPSV23	• 1 dose of PPSV23 (if not already given earlier in childhood) at least 8 weeks after PCV
Chronic Renal Failure, Nephrotic Syndrome, Congenital Immunodeficiency, Functional or Anatomic Asplenia, HIV, Sickle Cell, and Diseases treated with immunosuppressive drugs or radiation therapy		• Ensure the child receives 2 doses of PPSV23. The first dose of PPSV23 should be given at least 8 weeks after any prior PCV dose, then the second dose of PPSV23 should be given at least 5 years after the first dose of PPSV23

Recommended Child and Adolescent Immunization Schedule (cdc.gov)

Table 1

Recommendations for adults who have never received a pneumococcal conjugate vaccine, by underlying medical condition or other risk factor and age group

Underlying medical condition or other risk factor	19 through 64 years old	≥ 65 years old
None	Not recommended	Administer 1 dose of PCV20 OR 1 dose of PCV15 followed by 1 dose of PPSV23 at least 1 year later
Alcoholism	Administer 1 dose of PCV20 OR 1 dose of PCV15 followed by 1 dose of PPSV23 at least 1 year later *The minimum interval (8 weeks) can be considered in adults with an immunocompromising condition, cochlear implant, or cerebrospinal fluid leak.*	Administer 1 dose of PCV20 OR 1 dose of PCV15 followed by 1 dose of PPSV23 at least 1 year later *The minimum interval (8 weeks) can be considered in adults with an immunocompromising condition, cochlear implant, or cerebrospinal fluid leak.* *Reminder: No additional doses are indicated at this age if PCV15 or PCV20 were administered at a younger age.*
Chronic heart disease†		
Chronic liver disease		
Chronic lung disease§		
Cigarette smoking		
Diabetes mellitus		
Cochlear implant		
Cerebrospinal fluid leak		
Chronic renal failure*		
Congenital or acquired asplenia*		
Congenital or acquired immunodeficiency*¶		
Generalized malignancy*		
HIV infection*		
Hodgkin disease*		
Iatrogenic immunosuppression*‡		
Leukemia*		
Lymphoma*		
Multiple myeloma*		
Nephrotic syndrome*		
Sickle cell disease/other hemoglobinopathies*		
Solid organ transplant*		

* Considered an immunocompromising condition

† Includes congestive heart failure and cardiomyopathies

§ Includes chronic obstructive pulmonary disease, emphysema, and asthma

¶ Includes B- (humoral) or T-lymphocyte deficiency, complement deficiencies (particularly C1, C2, C3, and C4 deficiencies), and phagocytic disorders (excluding chronic granulomatous disease)

‡ Includes diseases requiring treatment with immunosuppressive drugs, including long-term systemic corticosteroids and radiation therapy

Table 2

Number and timing of PPSV23 doses for patients who previously received PCV13 but who have not received all recommended doses of PPSV23, by medical condition

Underlying medical condition or other risk factor	PPSV23** for 19 through 64 year		PPSV23** at ≥ 65 years
	Recommended	Revaccination	Recommended
None	Not recommended	Not recommended	✓ At least 1 year after PCV13 dose
Alcoholism Chronic heart disease† Chronic liver disease Chronic lung disease§ Cigarette smoking Diabetes mellitus	Not recommended	Not recommended	✓ At least 1 year after PCV13 dose and at least 5 years after any PPSV23 dose at < 65 years
Cochlear implant Cerebrospinal fluid leak	✓ At least 8 weeks after PCV13 dose	Not recommended	✓ At least 8 weeks after PCV13 dose and at least 5 years after last PPSV23 dose at < 65 years
Chronic renal failure* Congenital or acquired asplenia* Congenital or acquire immunodeficiency*¶ Generalized malignancy* HIV infection* Hodgkin disease* Iatrogenic immunosuppression*‡ Leukemia* Lymphoma* Multiple myeloma* Nephrotic syndrome* Sickle cell disease/other hemoglobinopathies* Solid organ transplant*	✓ At least 8 weeks after PCV13 dose	✓ At least 5 years after first PPSV23 dose	✓ At least 8 weeks after PCV13 dose and at least 5 years after last PPSV23 dose at < 65 years

* Considered an immunocompromising condition

† Includes congestive heart failure and cardiomyopathies

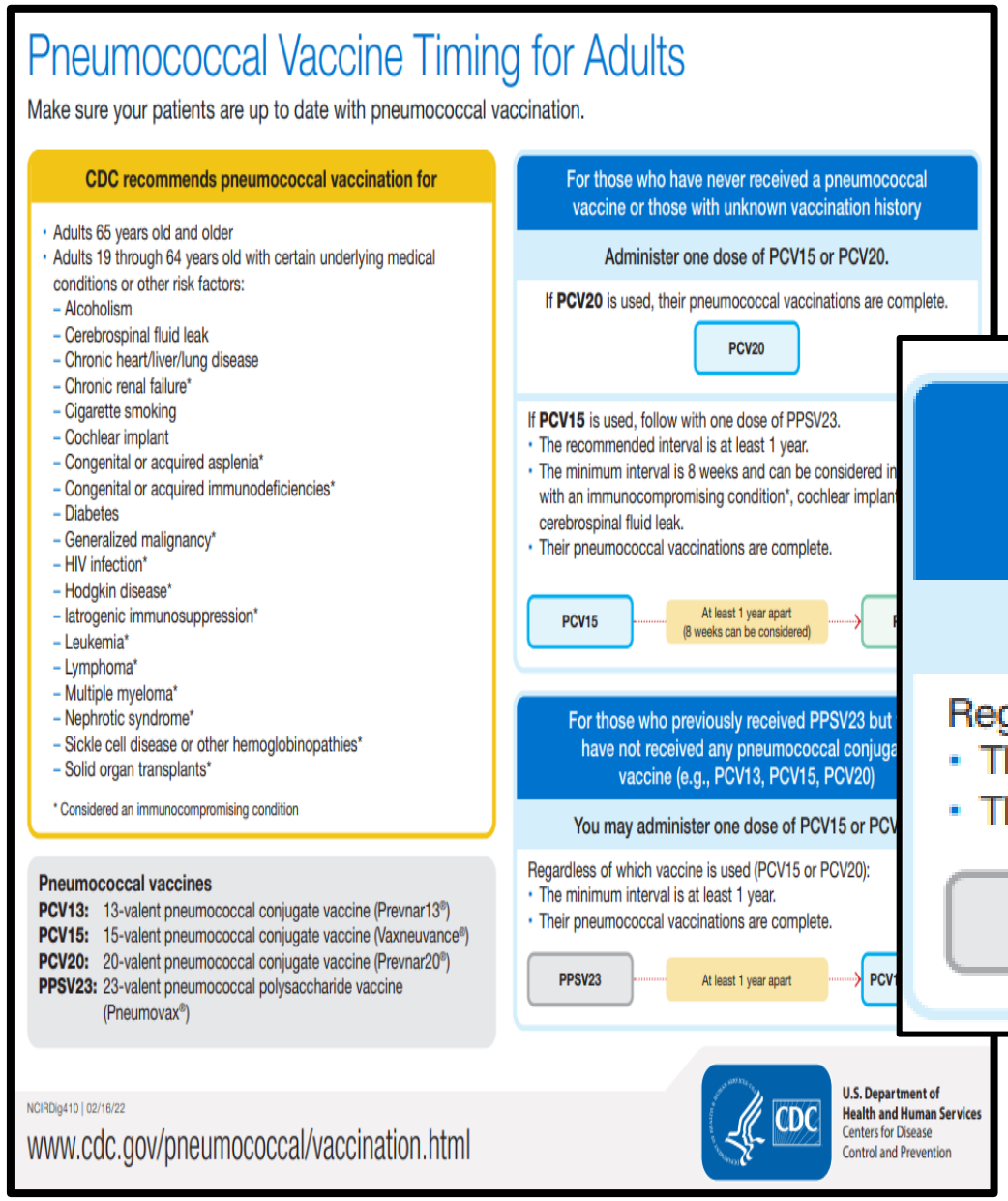
§ Includes chronic obstructive pulmonary disease, emphysema, and asthma

¶ Includes B- (humoral) or T-lymphocyte deficiency, complement deficiencies (particularly C1, C2, C3, and C4 deficiencies), and phagocytic disorders (excluding chronic granulomatous disease)

‡ Includes diseases requiring treatment with immunosuppressive drugs, including long-term systemic corticosteroids and radiation therapy

** For adults who have received PCV13 but have not completed their recommended pneumococcal vaccine series with PPSV23, one dose of PCV20 may be used if PPSV23 is not available. If PCV20 is used, their pneumococcal vaccinations are complete.

Pneumococcal Vaccine Timing for Adults



Pneumococcal Vaccine Timing for Adults

Make sure your patients are up to date with pneumococcal vaccination.

CDC recommends pneumococcal vaccination for

- Adults 65 years old and older
- Adults 19 through 64 years old with certain underlying medical conditions or other risk factors:
  - Alcoholism
  - Cerebrospinal fluid leak
  - Chronic heart/liver/lung disease
  - Chronic renal failure*
  - Cigarette smoking
  - Cochlear implant
  - Congenital or acquired asplenia*
  - Congenital or acquired immunodeficiencies*
  - Diabetes
  - Generalized malignancy*
  - HIV infection*
  - Hodgkin disease*
  - Iatrogenic immunosuppression*
  - Leukemia*
  - Lymphoma*
  - Multiple myeloma*
  - Nephrotic syndrome*
  - Sickle cell disease or other hemoglobinopathies*
  - Solid organ transplants*

* Considered an immunocompromising condition

Pneumococcal vaccines

PCV13: 13-valent pneumococcal conjugate vaccine (Prevnar13®)
PCV15: 15-valent pneumococcal conjugate vaccine (Vaxneuvance®)
PCV20: 20-valent pneumococcal conjugate vaccine (Prevnar20®)
PPSV23: 23-valent pneumococcal polysaccharide vaccine (Pneumovax®)

For those who have never received a pneumococcal vaccine or those with unknown vaccination history

Administer one dose of PCV15 or PCV20.

If **PCV20** is used, their pneumococcal vaccinations are complete.

PCV20

If **PCV15** is used, follow with one dose of PPSV23.
- The recommended interval is at least 1 year.
- The minimum interval is 8 weeks and can be considered in with an immunocompromising condition*, cochlear implant cerebrospinal fluid leak.
- Their pneumococcal vaccinations are complete.

PCV15 → At least 1 year apart (8 weeks can be considered) →

For those who previously received PPSV23 but have not received any pneumococcal conjuga vaccine (e.g., PCV13, PCV15, PCV20)

You may administer one dose of PCV15 or PCV

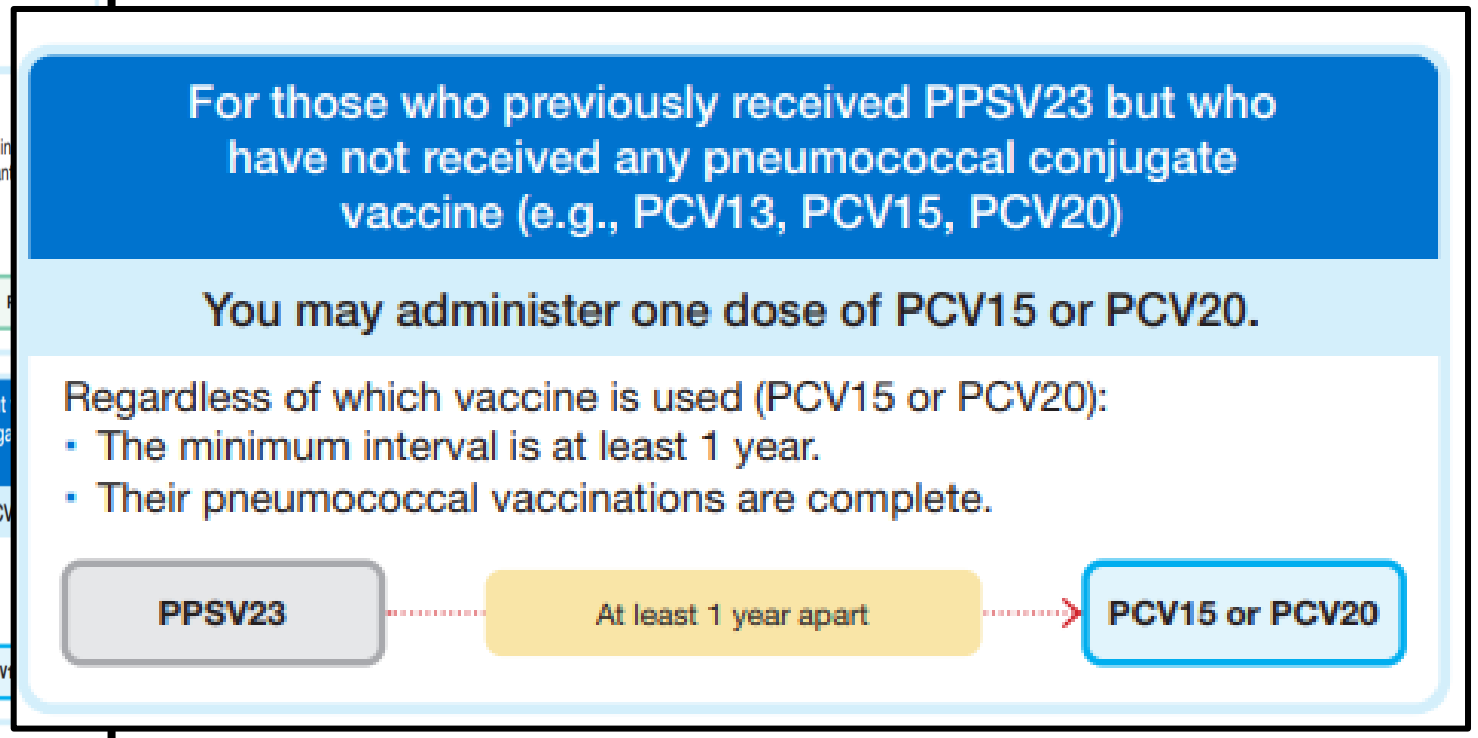
Regardless of which vaccine is used (PCV15 or PCV20):
- The minimum interval is at least 1 year.
- Their pneumococcal vaccinations are complete.

PPSV23 → At least 1 year apart → PCV

NCIRDig410 | 02/16/22

www.cdc.gov/pneumococcal/vaccination.html

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention



For those who previously received PPSV23 but who have not received any pneumococcal conjugate vaccine (e.g., PCV13, PCV15, PCV20)

You may administer one dose of PCV15 or PCV20.

Regardless of which vaccine is used (PCV15 or PCV20):
- The minimum interval is at least 1 year.
- Their pneumococcal vaccinations are complete.

PPSV23 → At least 1 year apart → **PCV15 or PCV20**

Pneumococcal Vaccine Timing for Adults-February 16, 2022 (cdc.gov)

Coadministration

- **COVID-19 vaccines and other vaccines (i.e., flu) may be administered without regard to timing**
  - Simultaneous administration of COVID-19 vaccines **on the same day** or at any time before or after another vaccine
- Applicable to **ALL** other vaccines
  - Non-live
  - Live, attenuated

https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html

Resources

CDC Resources on Building Vaccine Confidence

- What Is Vaccine Confidence? | CDC
- Vaccinate with Confidence COVID-19 Vaccines Strategy for Adults | CDC
- How to Address COVID-19 Vaccine Misinformation | CDC
- How to Tailor COVID-19 Vaccine Information to Your Specific Audience | CDC
- Resources to Promote COVID-19 Vaccines for Children & Teens | CDC
- Strategies for Reaching People with Limited Access to COVID-19 Vaccines | CDC
- 12 COVID-19 Vaccination Strategies for Your Community | CDC

Michigan's Annual Immunization Conferences

- The 2022 MDHHS Fall Immunization Conferences will be held in-person this year. Upcoming conferences include:
  - **October 31st-**8:00a.m.-4:00p.m.-Lansing
  - **November 1st-**8:00a.m.-4:00p.m.-Kalamazoo
  - **November 2nd-**8:00a.m.-4:00p.m.-Flint
- **Registration is Open! Register here:** https://register2022.mihealth.org

In Summary

- Despite the success of vaccines, vaccine hesitancy is a common barrier to vaccination
- Factors that affect vaccine confidence include concerns about safety, vaccine effectiveness, social media and news influences, and the perception of disease risk
- Focus on educating the Fence-sitters as opposed to focusing on those who completely oppose vaccinations
- Research shows a patient who receives a strong recommendation from a provider is 4-5 times more likely to be vaccinated
- Motivational Interviewing is an evidence-based and culturally sensitive way to speak with unvaccinated patients about getting vaccinated
- Help reduce errors and build trust through effective communication, being knowledgeable about vaccine recommendations, storing, handling, and administering vaccines appropriately
- **Catch-up children who are behind and strongly recommend Flu vaccine**

Remember…

They are counting on you!

Ensure that **ALL** your patients are protected against Vaccine Preventable Diseases