Immunization Update 2021- Focus on the Schedule

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National Association of Pediatric Nurse Practitioners 42nd National Conference on Pediatric Health Care

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- Dr. Mary Koslap-Petraco has nothing to declare

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Objectives

- At the end of this presentation participants will be able to analyze the changes in immunization recommendations for 2021
- At the end of this presentation participants will be able to appraise strategies to work with families to keep or bring children up to date with their vaccinations
- At the end of this presentation the participant will interpret the changes in *General Best Practices Guidelines for Immunizations*
- At the end of this presentation the participant will be able to analyze the interim guidance for immunization services during the COVID-19 pandemic

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HOT OFF THE PRESS!!!

- The National Association of Pediatric Nurse Practitioners now OFFICIALLY approves the ACIP schedule for the FIRST time!!
- Footnote on ACIP schedule:

'This schedule is recommended by the Advisory Committee on Immunization Practices (ACIP) and approved by the Centers for Disease Control and Prevention (CDC), American Academy of Pediatrics (AAP), American Academy of Family Physicians (AAFP), American College of Obstetricians and Gynecologists (ACOG), American College of Nurse-Midwives (ACNM), American Academy of Physician Assistants (AAPA), and **National Association of Pediatric Nurse Practitioners (NAPNAP).'**

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Immunization Schedules

- Two separate schedules
  - Child and adolescent schedule (age birth through 18 years)
  - Adult schedule (age 19 years or older)
- Updated each year
  - Represents current, approved ACIP policy
  - Designed for implementation of ACIP policy
- Published in February
  - *MMWR* Notice to Readers – announcement of availability on ACIP website
  - *Annals of Internal Medicine* – published in entirety (adult schedule only)
- Approved by CDC Director and the following professional societies:

Both schedules	Child and adolescent schedule only	Adult schedule only
• American Academy of Family Physicians (AAFP) • American Academy of Physician Assistants (AAPA) • American College of Obstetricians and Gynecologists (ACOG) • American College of Nurse-Midwives (ACNM)	• American Academy of Pediatrics (AAP) • National Association of Pediatric Nurse Practitioners (NAPNAP)	• American College of Physicians (ACP)

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Recommended Child and Adolescent Immunization Schedule UNITED STATES 2021

Updates in ACIP Recommendations Published after 2020 Schedule Approval

- Influenza vaccination
  - Grohskopf LA et al, *MMWR* Aug 2020; 69(No. RR-8); 1-24
  - 2020-21 influenza vaccination recommended for all persons 6 months and older who do not have contraindications
- Meningococcal A,C,W,Y vaccination
  - Mbaeyi SA et al, *MMWR* Sep 2020; 69(No. RR-9); 1-41
  - Summary of all recommendations from CDC's Advisory Committee on Immunization Practices (ACIP) for use of meningococcal vaccines in the United States
- COVID-19 vaccination
  - Pfizer-BioNTech COVID-19 vaccine
    - Oliver SE et al, *MMWR* Dec 2020;69:1922-1924
    - Interim recommendations for use of Pfizer-BioNTech COVID-19 vaccine, United States
  - Moderna COVID-19 vaccine
    - Oliver SE et al, *MMWR* Dec 2021;69:1653-1656
    - Interim recommendations for use of Moderna COVID-19 vaccine, United States
  - Janssen COVID-19 vaccine
    - Oliver SE et al, *MMWR* epub 02 March 2021
    - Interim recommendations for use of Janssen COVID-19 vaccine, United States

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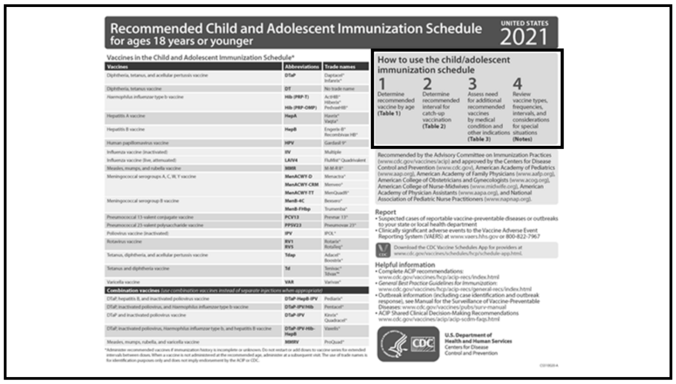
Recommended Child and Adolescent Immunization Schedule
for ages 18 years or younger
UNITED STATES
2021
How to use the child/adolescent immunization schedule
Report
Helpful information

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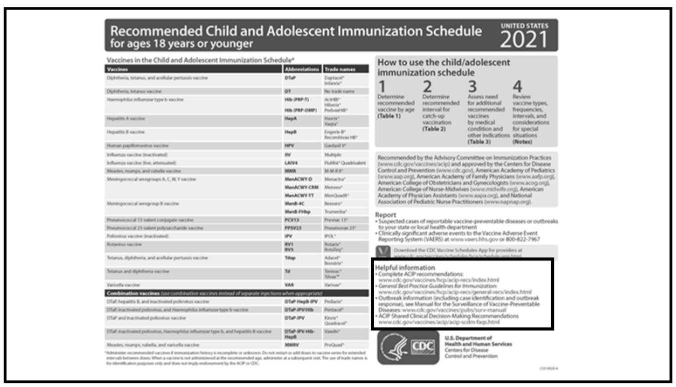
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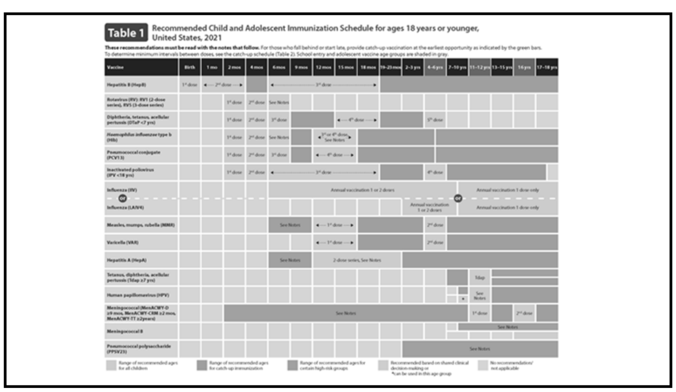
Table 1
Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2021

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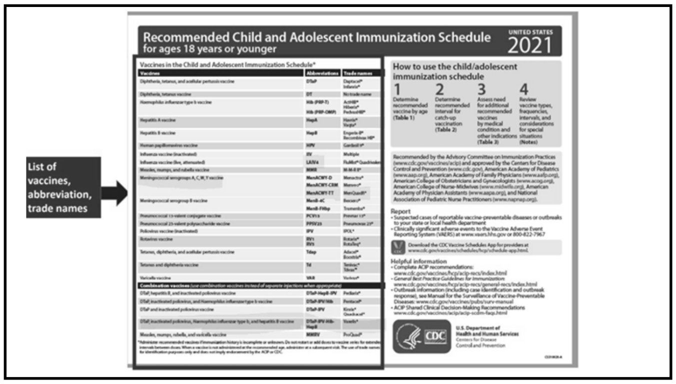
Recommended Child and Adolescent Immunization Schedule
for ages 18 years or younger
UNITED STATES
2021
Vaccines in the Child and Adolescent Immunization Schedule
How to use the child/adolescent immunization schedule
List of vaccines, abbreviation, trade names

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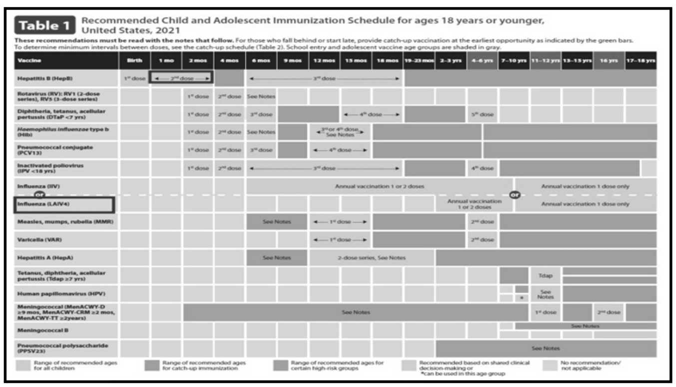
Table 1 Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2021

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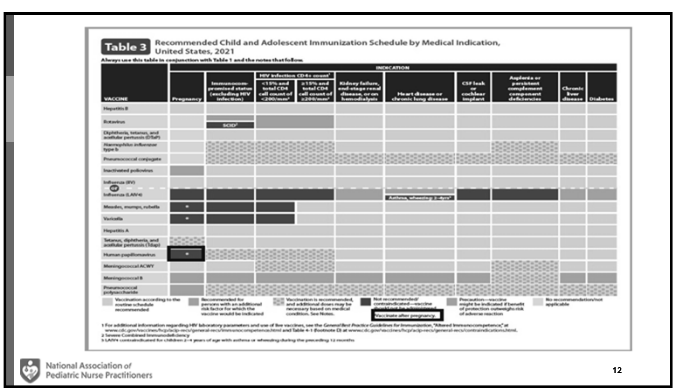
Table 3 Recommended Child and Adolescent Immunization Schedule by Medical Indication, United States, 2021
National Association of Pediatric Nurse Practitioners
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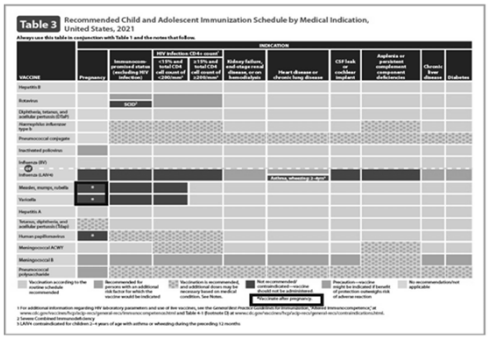

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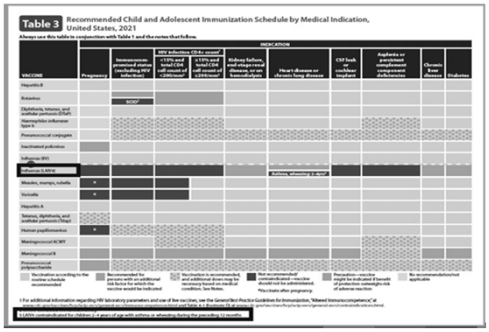

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Case Study

- A 5 year old comes to your office for an influenza vaccine. The 5 year old HATES needles and the mom had to run out of your office to catch the child last year when they came in for a flu shot. You have LAIV4 in your office, but this child has a history of asthma. What is your best course of action for this child?
- A. Give flu shot because child has asthma
- B. If the child has not wheezed in one year give LAIV4
- C. Ask the mother which vaccine they want
- D. Ask the child which vaccine they want
- Answer B

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DTaP (Diphtheria-Tetanus-Acellular Pertussis Vaccine)

- The DTaP note was revised to include a “special situations” section containing information about the recommendation for use of DTaP in wound management
- Wound management in children less than age 7 years with history of 3 or more doses of tetanus-toxoid-containing vaccine
  - For all wounds except clean and minor wounds, administer DTaP if more than 5 years since last dose of tetanus-toxoid-containing vaccine

www.cdc.gov/mmwr/volumes/67/rr/rr6702a1.htmwww.cdc.gov/mmwr/volumes/67/rr/rr6702a1.htm

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Case Study

- A 6 year 8 month old fell in the play ground and comes to your office needing sutures for a gaping 2 cm wound in the left knee. The wound is easily approximated and closed with 4 sutures and you check the immunization record. The child completed 4 dose primary series of DTaP at age 15 months. What is your course of action regarding DTaP for this child?
- A. Make an appointment for DTaP
- B. Give nothing
- C. Give DTaP at this visit
- D. Give Tdap at age 7 years
- Answer C

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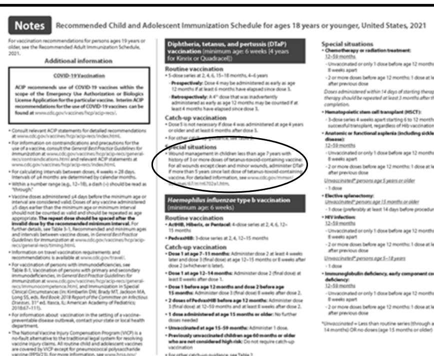

Notes Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2021

For vaccination recommendations for persons ages 19 years or older, see the Recommended Adult Immunization Schedule, 2021.

Additional information

COVID-19 Vaccination

ACIP recommends use of COVID-19 vaccines within the scope of the Emergency Use Authorization or Biologics License Application for the particular vaccine. Interim ACIP recommendations for the use of COVID-19 vaccines can be found at www.cdc.gov/vaccines/hcp/acip-recs/.

- Consult relevant ACIP statements for detailed recommendations at www.cdc.gov/vaccines/hcp/acip-recs/index.html.
- For information on contraindications and precautions for the use of a vaccine, consult the *General Best Practice Guidelines for Immunization* at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html and relevant ACIP statements at www.cdc.gov/vaccines/hcp/acip-recs/index.html.
- For calculating intervals between doses, 4 weeks = 28 days. Intervals of ≥4 months are determined by calendar months.
- Within a number range (e.g., 12–18), a dash (–) should be read as “through.”
- Vaccine doses administered ≤4 days before the minimum age or interval are considered valid. Doses of any vaccine administered ≥5 days earlier than the minimum age or minimum interval should not be counted as valid and should be repeated as age appropriate. **The repeat dose should be spaced after the invalid dose by the recommended minimum interval.** For further details, see Table 3-1, Recommended and minimum ages and intervals between vaccine doses, in *General Best Practice Guidelines for Immunization* at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/timing.html.
- Information on travel vaccination requirements and recommendations is available at www.cdc.gov/travel/.
- For vaccination of persons with immunodeficiencies, see Table 8-1, Vaccination of persons with primary and secondary immunodeficiencies, in *General Best Practice Guidelines for Immunization* at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/immunocompetence.html, and Immunization in Special Clinical Circumstances (In: Kimberlin DW, Brady MT, Jackson MA, Long SS, eds. *Red Book: 2018 Report of the Committee on Infectious Diseases*. 31st ed. Itasca, IL: American Academy of Pediatrics; 2018:67–111).
- For information about vaccination in the setting of a vaccine-preventable disease outbreak, contact your state or local health department.
- The National Vaccine Injury Compensation Program (VICP) is a no-fault alternative to the traditional legal system for resolving vaccine injury claims. All routine child and adolescent vaccines are covered by VICP except for pneumococcal polysaccharide vaccine (PPSV23). For more information, see www.hrsa.gov/vaccinecompensation/index.html.

Diphtheria, tetanus, and pertussis (DTaP) vaccination (minimum age: 6 weeks [4 years for Kinrix or Quadracel])

Routine vaccination

- 5-dose series at 2, 4, 6, 15–18 months, 4–6 years
  - **Prospectively:** Dose 4 may be administered as early as age 12 months if at least 6 months have elapsed since dose 3.
  - **Retrospectively:** A 4th dose that was inadvertently administered as early as age 12 months may be counted if at least 4 months have elapsed since dose 3.

Catch-up vaccination

- Dose 5 is not necessary if dose 4 was administered at age 4 years or older and at least 6 months after dose 3.
- For other catch-up guidance, see Table 2.

Special situations

- Wound management in children less than age 7 years with history of 3 or more doses of tetanus-toxoid-containing vaccine: For all wounds except clean and minor wounds, administer DTaP if more than 5 years since last dose of tetanus-toxoid-containing vaccine. For detailed information, see www.cdc.gov/mmwr/volumes/67/rr/rr6702a1.htm.

***Haemophilus influenzae* type b vaccination** (minimum age: 6 weeks)

Routine vaccination

- **ActHIB, Hiberix, or Pentacel:** 4-dose series at 2, 4, 6, 12–15 months
- **PedvaxHIB:** 3-dose series at 2, 4, 12–15 months

Catch-up vaccination

- **Dose 1 at age 7–11 months:** Administer dose 2 at least 4 weeks later and dose 3 (final dose) at age 12–15 months or 8 weeks after dose 2 (whichever is later).
- **Dose 1 at age 12–14 months:** Administer dose 2 (final dose) at least 8 weeks after dose 1.
- **Dose 1 before age 12 months and dose 2 before age 15 months:** Administer dose 3 (final dose) 8 weeks after dose 2.
- **2 doses of PedvaxHIB before age 12 months:** Administer dose 3 (final dose) at 12–59 months and at least 8 weeks after dose 2.
- **1 dose administered at age 15 months or older:** No further doses needed
- **Unvaccinated at age 15–59 months:** Administer 1 dose.
- **Previously unvaccinated children age 60 months or older who are not considered high risk:** Do not require catch-up vaccination
- For other catch-up guidance, see Table 2.

Special situations

- **Chemotherapy or radiation treatment:**
  12–59 months
  - Unvaccinated or only 1 dose before age 12 months: 2 doses, 8 weeks apart
  - 2 or more doses before age 12 months: 1 dose at least 8 weeks after previous dose

  Doses administered within 14 days of starting therapy or during therapy should be repeated at least 3 months after therapy completion.
- **Hematopoietic stem cell transplant (HSCT):**
  - 3-dose series 4 weeks apart starting 6 to 12 months after successful transplant, regardless of Hib vaccination history
- **Anatomic or functional asplenia (including sickle cell disease):**
  12–59 months
  - Unvaccinated or only 1 dose before age 12 months: 2 doses, 8 weeks apart
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  Unvaccinated persons age 5 years or older*
  - 1 dose
- **Elective splenectomy:**
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*Unvaccinated = Less than routine series (through age 14 months) OR no doses (age 15 months or older)

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Hib (Haemophilus Influenza Vaccine)

- **The Hib note was revised to indicate that for catch-up vaccination, no further doses are recommended if a previous dose was administered at age 15 months or older**
  - Dose 1 at age 7–11 months: Administer dose 2 at least 4 weeks later and dose 3 (final dose) at age 12–15 months or 8 weeks after dose 2 (whichever is later).
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  - Dose 1 before age 12 months and dose 2 before age 15 months: Administer dose 3 (final dose) 8 weeks after dose 2.
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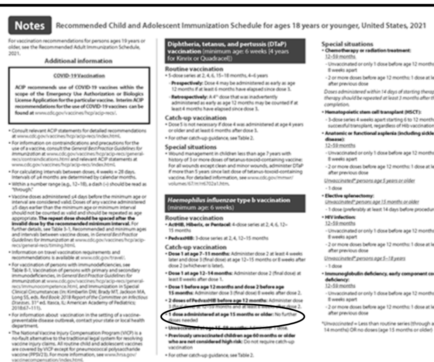
  - Previously unvaccinated children age 60 months or older who are not considered high risk: Do not require catch-up vaccination

https://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html#note-hib

Case Study

- You are seeing a 4 year old and notice the child only had one dose of Hib vaccine and it was administered at age 15 months. What is your course of action for this child?
- A. Give another booster dose of Hib since the series was not completed
- B. Give a dose of Hib today and make and appointment for the child to come back for the last dose in the series in 2 months
- C. Give a dose of Hib today and make an appointment for the child to come back in 1 month for the final dose in the series
- D. Give nothing since the child is up to date
- Answer D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**Unvaccinated* = Less than routine series (through age 14 months) OR no doses (age 15 months or older)

Case Study

- You are seeing a 2 month old preemie who was born of a Hepatitis b positive mom and weighted 1600 Gms. at birth. The baby received a birth dose of Hep b vaccine. How will you complete the Hep b vaccine series for this infant?
- A. Give a dose today and another dose at age 6 months
- B. Give a dose today and another dose at age 4 months and a dose at age 6 months
- C. Give a dose at age 6 months and 9 months
- D. Give a dose at 4 months
- Answer B

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Hepatitis b vaccine

- **The "birth dose" section of the HepB note contains additional text clarifying the recommendation for infants with birth weight of <2000 grams who have HBsAg-negative mothers**
  - **Mother is HBsAg-negative: 1 dose within 24 hours of birth for all medically stable infants ≥2,000 grams. Infants <2,000 grams: Administer 1 dose at chronological age 1 month or hospital discharge (whichever is earlier and even if weight is still <2,000 grams).**
  - Mother is HBsAg-positive:
  - Administer HepB vaccine and hepatitis B immune globulin (HBIG) (in separate limbs) within 12 hours of birth, regardless of birth weight. For infants <2,000 grams, administer 3 additional doses of vaccine (total of 4 doses) beginning at age 1 month.
  - Test for HBsAg and anti-HBs at age 9–12 months. If HepB series is delayed, test 1–2 months after final dose.
  - Mother's HBsAg status is unknown:
  - Administer HepB vaccine within 12 hours of birth, regardless of birth weight.
  - For infants <2,000 grams, administer HBIG in addition to HepB vaccine (in separate limbs) within 12 hours of birth. Administer 3 additional doses of vaccine (total of 4 doses) beginning at age 1 month.
  - Determine mother's HBsAg status as soon as possible. If mother is HBsAg-positive, administer HBIG to infants ≥2,000 grams as soon as possible, but no later than 7 days of age

https://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html#note-hepb

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Notes Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2021

Hepatitis A vaccination (minimum age: 12 months for routine vaccination)

Routine vaccination

Catch-up vaccination

International travel

Hepatitis B vaccination (minimum age: birth)

Birth dose (monovalent HepB vaccine only)

Routine series

Catch-up vaccination

Special situations

Human papillomavirus vaccination (minimum age: 9 years)

Routine and catch-up vaccination

Special situations

Influenza vaccination (minimum age: 6 months [IIV], 2 years [LAIV4], 18 years [recombinant influenza vaccine, RIV4])

Routine vaccination

Special situations

Case Study

- You are seeing an 18 year old adolescent who never received Hep A and Hep B vaccine. The parents were vaccine resistant and now the adolescent has chosen to be vaccinated. The adolescent is traveling on a mission to El Salvador in 4 weeks. How can you best protect this adolescent before the trip?
- A. Give one dose of Hep A and one dose of Hep B today and complete the series when the adolescent returns
- B. Give one dose of TwinRix today and another dose in 4 weeks right before the adolescent leaves
- C. Give one dose of TwinRix today, a 2nd dose in 7 days and a 3rd dose in 21 days. Give a booster dose in 12 months
- D. Give one dose of TwinRix today and another dose in 2 weeks
- Answer C

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Hepatitis A

- **Catch-up vaccination**
- Adolescents 18 years of age or older may receive the combined Hep A Hep B vaccine three dose series or(0, 1, 6 months) or 4 dose series (3 doses at 0, 7, 21-30 days followed by booster dose at 12 months.

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Notes Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2021

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Case Study

- You are seeing an 16 year old adolescent today. The adolescent had one dose of HPV vaccine at age 12 years. What is your course of action?
- A. Restart the series
- B. Give a 2nd dose today and 3rd dose in 4 months
- C. Give a 2nd dose today to complete the series
- D. Give a 2nd dose today and 3rd dose in 6 months
- Answer B

HPV (Human Papilloma Vaccine)

- The HPV note was revised to include recommendations for interrupted schedules
  - Interrupted schedules: If vaccination schedule is interrupted, the series does not need to be restarted
  - No additional dose recommended after completing series with recommended dosing intervals using any HPV vaccine
- 2- or 3-dose series depending on age at initial vaccination:
- Age 9 –14 years at initial vaccination: 2-dose series at 0, 6–12 months (minimum interval: 5 months; repeat dose if administered too soon)
- Age 15 years or older at initial vaccination: 3-dose series at 0, 1–2 months, 6 months (minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 12 weeks / dose 1 to dose 3: 5 months; repeat dose if administered too soon)
- https://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html#note-hpv

Notes Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2021

Hepatitis A vaccination (minimum age: 12 months for routine vaccination)

Routine vaccination

Catch-up vaccination

International travel

Hepatitis B vaccination (minimum age: birth)

Human papillomavirus vaccination (minimum age: 9 years)

Influenza vaccination (minimum age: 6 months [IIV], 2 years [LAIV4], 18 years [recombinant influenza vaccine, RIV4])

Special situations

Case Study

- You are seeing an 8 year old with a severe egg allergy and asthma who is due for a flu vaccine. The child was seen for a wheezing episode 3 months ago. What is your course of action?
- A. Give LAIV4
- B. Give Flublok
- C. Give IIV4
- D. Give Flucelvax
- Answer D

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Influenza Vaccine

- The "special situations" section of the Influenza note has been revised for persons who have egg allergy with symptoms other than hives, and for situations where LAIV4 should not be used
  - **Egg allergy, hives only**: Any influenza vaccine appropriate for age and health status annually
  - **Egg allergy with symptoms other than hives** (e.g., angioedema, respiratory distress, need for emergency medical services or epinephrine): Any influenza vaccine appropriate for age and health status annually. If using an influenza vaccine other than Flublok or Flucelvax, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions.
  - Severe allergic reactions to vaccines can occur even in the absence of a history of previous allergic reaction. All vaccination providers should be familiar with the office emergency plan and certified in cardiopulmonary resuscitation.
  - A previous severe allergic reaction to influenza vaccine is a contraindication to future receipt of any influenza vaccine

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Influenza Vaccine

- LAIV4 should not be used in persons with the following conditions or situations:
- History of severe allergic reaction to a previous dose of any influenza vaccine or to any vaccine component (excluding egg, see details above)
- Receiving aspirin or salicylate-containing medications
- Age 2–4 years with history of asthma or wheezing
- Immunocompromised due to any cause (including medications and HIV infection)
- Anatomic or functional asplenia
- Close contacts or caregivers of severely immunosuppressed persons who require a protected environment
- Pregnancy
- Cochlear implant
- Cerebrospinal fluid-oropharyngeal communication
- Children less than age 2 years
- Received influenza antiviral medications oseltamivir or zanamivir within the previous 48 hours, peramivir within the previous 5 days, or baloxavir within the previous 17 days

https://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html#note-flu

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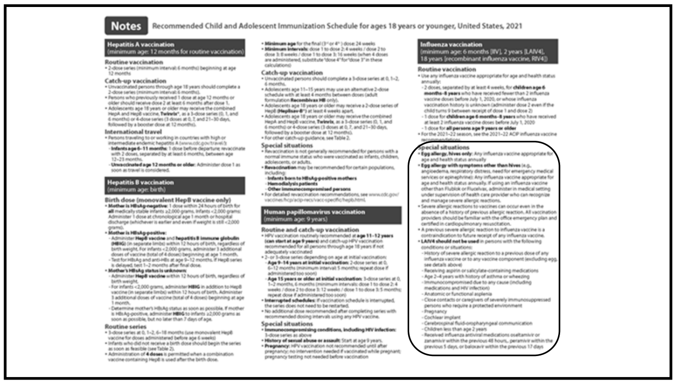

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Case Study

- You are seeing a 2 month old infant who will be traveling with missionary parents to the meningitis belt in Africa once the child is 12 months old. What is your course of action regarding meningitis vaccine for this infant?
- A. There is no vaccine licensed for children this age
- B. Give one dose of Menveo
- C. Give one dose today and another dose in 8 weeks, another dose at age 7 months and a final dose after 12 month birthday
- D. Give one dose today and another after the 12 month birthday
- Answer C

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MenACWY (Meningococcal ACWY Vaccine)

- The MenACWY note contains information about use of MenQuadfi, and the “special situations” section contains information about use of Menveo in infants who received dose 1 at age 3–6 months
  - **MenQuadfi** Dose 1 at age 24 months or older: 2-dose series at least 8 weeks apart

https://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html#note-mening

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MenACWY (Meningococcal ACWY Vaccine)

- **Special Situations**
- **Anatomic or functional asplenia (including sickle cell disease), HIV infection, persistent complement component deficiency, complement inhibitor (e.g., eculizumab, ravulizumab) use:**

- **Menveo**
  - Dose 1 at age 8 weeks: 4-dose series at 2, 4, 6, 12 months
  - **Dose 1 at age 3–6 months: 3- or 4- dose series (dose 2 [and dose 3 if applicable] at least 8 weeks after previous dose until a dose is received at age 7 months or older, followed by an additional dose at least 12 weeks later and after age 12 months)**
  - Dose 1 at age 7–23 months: 2-dose series (dose 2 at least 12 weeks after dose 1 and after age 12 months)
  - Dose 1 at age 24 months or older: 2-dose series at least 8 weeks apart

https://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html#note-mening

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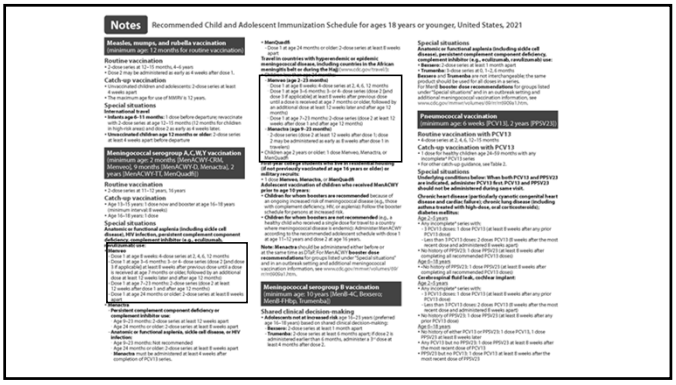

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Tdap (Tetanus diphtheria acellular pertussis)

- The Tdap note was revised to include a "special situations" section containing information about the recommendation for use of Tdap in wound management
- **Wound management** in persons age 7 years or older with history of 3 or more doses of tetanus-toxoid-containing vaccine
  - For clean and minor wounds, administer Tdap or Td if more than 10 years since last dose of tetanus-toxoid-containing vaccine
  - For all other wounds, administer Tdap or Td if more than 5 years since last dose of tetanus-toxoid-containing vaccine
  - Tdap is preferred for persons age 11 years or older who have not previously received Tdap or whose Tdap history is unknown
  - If a tetanus-toxoid-containing vaccine is indicated for a pregnant adolescent, use Tdap

https://www.cdc.gov/mmwr/volumes/69/wr/mm6903a5.htmhttps://www.cdc.
https://www.cdc.gov/mmwr/volumes/69/wr/mm6903a5.htmwr/volumes/69/wr/mm6903a5.htm

Notes Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2021

Sickle cell disease and other hemoglobinopathies; anatomic or functional asplenia; congenital or acquired immunodeficiency; HIV infection; chronic renal failure; nephrotic syndrome; malignant neoplasms, leukemias, lymphomas, Hodgkin disease, and other diseases associated with treatment with immunosuppressive drugs or radiation therapy; solid organ transplantation; multiple myeloma:

Age 2–5 years
- Any incomplete* series with:
  - 3 PCV13 doses: 1 dose PCV13 (at least 8 weeks after any prior PCV13 dose)
  - Less than 3 PCV13 doses: 2 doses PCV13 (8 weeks after the most recent dose and administered 8 weeks apart)
- No history of PPSV23: 1 dose PPSV23 (at least 8 weeks after any prior PCV13 dose) and a 2nd dose of PPSV23 5 years later

Age 6–18 years
- No history of either PCV13 or PPSV23: 1 dose PCV13, 2 doses PPSV23 (dose 1 of PPSV23 administered 8 weeks after PCV13 and dose 2 of PPSV23 administered at least 5 years after dose 1 of PPSV23)
- Any PCV13 but no PPSV23: 2 doses PPSV23 (dose 1 of PPSV23 administered 8 weeks after the most recent dose of PCV13 and dose 2 of PPSV23 administered at least 5 years after dose 1 of PPSV23)
- PPSV23 but no PCV13: 1 dose PCV13 at least 8 weeks after the most recent PPSV23 dose and a 2nd dose of PPSV23 administered 5 years after dose 1 of PPSV23 and at least 8 weeks after a dose of PCV13

Chronic liver disease, alcoholism:

Age 6–18 years
- No history of PPSV23: 1 dose PPSV23 (at least 8 weeks after any prior PCV13 dose)

*Incomplete series = Not having received all doses in either the recommended series or an age-appropriate catch-up series See Tables 8, 9, and 11 in the ACIP pneumococcal vaccine recommendations (www.cdc.gov/mmwr/pdf/rr/rr5911.pdf) for complete schedule details.

Poliovirus vaccination
(minimum age: 6 weeks)

Routine vaccination
- 4-dose series at ages 2, 4, 6–18 months, 4–6 years; administer the final dose on or after age 4 years and at least 6 months after the previous dose.
- 4 or more doses of IPV can be administered before age 4 years when a combination vaccine containing IPV is used. However, a dose is still recommended on or after age 4 years and at least 6 months after the previous dose.

Catch-up vaccination
- In the first 6 months of life, use minimum ages and intervals only for travel to a polio-endemic region or during an outbreak.
- IPV is not routinely recommended for U.S. residents age 18 years or older.

Series containing oral polio vaccine (OPV), either mixed OPV-IPV or OPV-only series:
- Total number of doses needed to complete the series is the same as that recommended for the U.S. IPV schedule. See www.cdc.gov/mmwr/volumes/66/wr/mm6601a6.htm?s_%20cid=mm6601a6_w.
- Only trivalent OPV (tOPV) counts toward the U.S. vaccination requirements.
  - Doses of OPV administered before April 1, 2016, should be counted (unless specifically noted as administered during a campaign).
  - Doses of OPV administered on or after April 1, 2016, should not be counted.
  - For guidance to assess doses documented as "OPV," see www.cdc.gov/mmwr/volumes/66/wr/mm6606a7.htm?s_cid=mm6606a7_w.
- For other catch-up guidance, see Table 2.

Rotavirus vaccination
(minimum age: 6 weeks)

Routine vaccination
- **Rotarix**: 2-dose series at 2 and 4 months
- **RotaTeq**: 3-dose series at 2, 4, and 6 months
- If any dose in the series is either **RotaTeq** or unknown, default to 3-dose series.

Catch-up vaccination
- Do not start the series on or after age 15 weeks, 0 days.
- The maximum age for the final dose is 8 months, 0 days.
- For other catch-up guidance, see Table 2.

Tetanus, diphtheria, and pertussis (Tdap) vaccination
(minimum age: 11 years for routine vaccination, 7 years for catch-up vaccination)

Routine vaccination
- **Adolescents age 11–12 years**: 1 dose Tdap
- **Pregnancy**: 1 dose Tdap during each pregnancy, preferably in early part of gestational weeks 27–36
- Tdap may be administered regardless of the interval since the last tetanus- and diphtheria-toxoid-containing vaccine.

Catch-up vaccination
- **Adolescents age 13–18 years who have not received Tdap**: 1 dose Tdap, then Td or Tdap booster every 10 years
- **Persons age 7–18 years not fully vaccinated* with DTaP**: 1 dose Tdap as part of the catch-up series (preferably the first dose); if additional doses are needed, use Td or Tdap.
- **Tdap administered at age 7–10 years**:
  - **Children age 7–9 years** who receive Tdap should receive the routine Tdap dose at age 11–12 years.
  - **Children age 10 years** who receive Tdap do not need the routine Tdap dose at age 11–12 years.
- **DTaP inadvertently administered on or after age 7 years**:
  - **Children age 7–9 years**: DTaP may count as part of catch-up series. Administer routine Tdap dose at age 11–12 years.
  - **Children age 10–18 years**: Count dose of DTaP as the adolescent Tdap booster.
- For other catch-up guidance, see Table 2.

Special situations
- **Wound management** in persons age 7 years or older with history of 3 or more doses of tetanus-toxoid-containing vaccine: For clean and minor wounds, administer Tdap or Td if more than 10 years since last dose of tetanus-toxoid-containing vaccine; for all other wounds, administer Tdap or Td if more than 5 years since last dose of tetanus-toxoid-containing vaccine. Tdap is preferred for persons age 11 years or older who have not previously received Tdap or whose Tdap history is unknown. If a tetanus-toxoid-containing vaccine is indicated for a pregnant adolescent, use Tdap.
- For detailed information, see www.cdc.gov/mmwr/volumes/69/wr/mm6903a5.htm.

*Fully vaccinated = 5 valid doses of DTaP OR 4 valid doses of DTaP if dose 4 was administered at age 4 years or older

Varicella vaccination
(minimum age: 12 months)

Routine vaccination
- 2-dose series at 12–15 months, 4–6 years
- Dose 2 may be administered as early as 3 months after dose 1 (a dose administered after a 4-week interval may be counted).

Catch-up vaccination
- Ensure persons age 7–18 years without evidence of immunity (see MMWR at www.cdc.gov/mmwr/pdf/rr/rr5604.pdf) have a 2-dose series:
  - **Age 7–12 years**: routine interval: 3 months (a dose administered after a 4-week interval may be counted)
  - **Age 13 years and older**: routine interval: 4–8 weeks (minimum interval: 4 weeks)
  - The maximum age for use of MMRV is 12 years.

2/11/2021 Centers for Disease Control and Prevention | Recommended Child and Adolescent Immunization Schedule, United States, 2021

Pneumococcal Vaccine

- **Special Situations**
  - When both PCV13 and PPSV23 are indicated administer PCV13 FIRST
  - PCV13 and PPSV23 should NEVER be administered at the same visit
- For ages **2-5 years** for whom PPSV23 is indicated and there is no history of this vaccine
  - Administer PPSV23 at least EIGHT WEEKS after completing all recommended doses of PCV13
- For ages **6-18 years** for whom PPSV23 is indicated and there is no history of this vaccine
  - Administer PPSV23 at least EIGHT WEEKS after completing all recommended doses of PCV13

Notes Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2021

Measles, mumps, and rubella vaccination (minimum age: 12 months for routine vaccination)

Routine vaccination

Catch-up vaccination

Special situations

Meningococcal serogroup A,C,W,Y vaccination (minimum age: 2 months [MenACWY-CRM, Menveo], 9 months [MenACWY-D, Menactra], 2 years [MenACWY-TT, MenQuadfi])

Routine vaccination

Catch-up vaccination

Special situations

Meningococcal serogroup B vaccination (minimum age: 10 years [MenB-4C, Bexsero; MenB-FHbp, Trumenba])

Shared clinical decision-making

Special situations

Pneumococcal vaccination (minimum age: 6 weeks [PCV13], 2 years [PPSV23])

Routine vaccination with PCV13

Catch-up vaccination with PCV13

Special situations

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Table 2 Recommended Catch-up Immunization Schedule for Children and Adolescents Who Start Late or Who Are More than 1 month Behind, United States, 2021

Children age 4 months through 6 years

Children and adolescents age 7 through 18 years

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Vaccine Catch-Up Guidance

Catch-up guidance job aids to assist health care providers in interpreting Table 2 in the childhood and adolescent immunization schedule.

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

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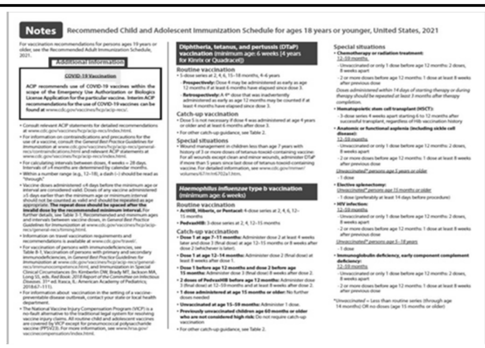
Vaccine Coadministration

- COVID-19 vaccines should be administered alone, with a minimum interval of 14 days before or after administration of any other vaccines
- Shorter period acceptable if:
  - The benefits of vaccination are deemed to outweigh the potential unknown risks of vaccine co-administration:
  - Tetanus-toxoid-containing vaccination as part of wound management
  - Rabies vaccination for post-exposure prophylaxis
  - Measles or hepatitis A vaccination during an outbreak OR
- To avoid vaccination barriers or delays to COVID-19 vaccination
  - In long-term care facility residents or healthcare personnel who received influenza or other vaccinations prior to/upon admission or onboarding
  - If COVID-19 vaccines are administered within 14 days of another vaccine, doses do not need to be repeated for either vaccine

https://www.cdc.gov/vaccines/pandemic-guidance/index.html



COVID Vaccines and Children

- We will not get to the end of the pandemic until we have a safe and effective vaccine for children
- Pfizer vaccine is approved for children from 16 years of age and older
  - Studies are underway for 12-15 years
  - Results are expected this summer
- Moderna is enrolling 30,000 children ages 12-15
  - Results are expected this summer
- Astra Zeneca is conducting trials in Great Britain for children 12-17
- Vaccine for these age groups is expected fall 2021
- 6-11 year olds will be next group to be studied
- Vaccine for children younger than age 6 years is not expected until 2022

https://www.clickondetroit.com/health/good-health/2021/03/03/covid-vaccine-trials-underway-in-older-children-what-to-know/

Interim Guidance for Immunization Services During the COVID-19 Pandemic

- CDC developed guidance to assist healthcare personnel in a variety of clinical and alternative settings for the safe administration of vaccines during the COVID-19 pandemic
- Guidance will be continually reassessed and updated based on the evolving epidemiology of COVID-19 in the United States
- Focuses primarily on reducing the transmission of SARS-CoV-2 in vaccination settings
- Outlines circumstances in which it is safest for people to come to a vaccination setting
  - Particularly since any time a person leaves home there is an increased potential for exposure or transmission of SARS-CoV-2
  - When it is safest for people who are already in healthcare or congregate settings to be vaccinated

the Advisory Committee on //www.cdc.gov/vaccines/pandemic-https://www.cdc.gov/vaccines/pandemic-guidance/index.htmlguidance/index.html (P)

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Interim Guidance for Immunization Services During the COVID-19 Pandemic

- When deciding when to vaccinate individual patients, healthcare personnel
  - Should consider factors, such as presence and severity of acute illness which might be a precaution for vaccination
    - Presence of underlying risk factors that might predispose a person to severe vaccine-preventable illness
    - Likelihood that the person can or will return for vaccination at a later date
    - Degree to which vaccine-preventable illnesses (such as influenza) are occurring in the community.
  - Healthcare personnel who administer vaccines should also consult guidance from state, local, tribal, and territorial health officials and the respective vaccination statements from ACIP

https://www.cdc.gov/vaccines/pandemic-guidance/index.html

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Vaccine Recommendations During COVID-19 Pandemic

- Routine vaccination is an **essential preventive care service** for children, adolescents, and adults (including pregnant people) that should not be delayed because of the COVID-19 pandemic
- Important to assess the vaccination status of all children and adolescents at each patient visit
- Avoid missed opportunities for vaccination and ensure timely vaccine catch-up
- All vaccines due or overdue should be administered according to the recommended ACIP schedules during that visit
  - Unless a specific contraindication exists
  - Provide protection as soon as possible
  - Minimizes the number of healthcare visits needed to complete vaccination

https://www.cdc.gov/vaccines/pandemic-guidance/index.html

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Considerations for Routine Vaccination

- Children and Adolescents
  - Identify children who have missed well-child visits and/or recommended vaccinations
  - Contact parents to schedule in-person appointments, starting with newborns, infants and children up to 24 months, young children, and extending through adolescence
- Pregnant people
  - If vaccines (tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap) and influenza) have been delayed because of reduced or deferred in-person prenatal care visits scheduled for follow-up and receive vaccination during the next in-person appointment

https://www.cdc.gov/vaccines/pandemic-guidance/index.html

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Deferring Vaccines Due to Confirmed or Suspected COVID Infections for Individuals in Isolation or Quarantine

- Routine vaccination should be deferred for asymptomatic and pre-symptomatic persons who have tested positive for SARS-CoV-2 for 10 days from their positive test result
- For symptomatic persons with suspected or confirmed COVID-19, visits for routine vaccination should be deferred
  - For at least 10 days after symptom onset
  - AND 24 hours with no fever without the use of fever-reducing medications
  - AND COVID-19 symptoms are improving
  - AND the person is no longer moderately to severely ill
  - Consider further deferring (postponing) the vaccination visit until full recovered from acute illness
- Known exposure should defer until **14-day quarantine** period has ended
- **Vaccination visits for all these individuals should be postponed to avoid exposing healthcare personnel and other patients in the vaccination setting to SARS-CoV-2**
- When scheduling or confirming appointments patients should be instructed to notify the provider's office in advance if they currently have or develop any symptoms of COVID-19
  - OR if they have had any known exposures to a person who has tested positive for COVID-19 in the past 14 days
- If patients with symptomatic COVID-19 seek care in a healthcare setting and are still under isolation criteria
  - Vaccine may be deferred depending upon the degree of illness and other individual factors
  - Moderate to severe illness with or without fever is a precaution to vaccination for all vaccines

https://www.cdc.gov/vaccines/pandemic-guidance/index.html

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Vaccine During COVID-19 Pandemic

- Vaccination in the medical home is ideal to ensure that patients receive other preventive services
- Vaccination at locations outside the medical home may help increase access to vaccines in some populations or situations
  - Especially when the patient does not have a primary care provider or when care in the medical home is not available or feasible
- Best practices for storage and handling of vaccines and vaccine administration should always be followed
- Information on administered vaccines should be documented
  - **Through the state-based immunization information system [IIS]**
  - Patient's electronic medical record
  - Patient-held paper immunization records)
- Ensures continuity of care in the setting of COVID-19-related disruptions to routine medical services

https://www.cdc.gov/vaccines/pandemic-guidance/index.html

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General Practices for Safe Delivery of Vaccine During Pandemic

- Minimize chances for exposures, including:
- Screen for symptoms of COVID-19 and contact with persons with possible COVID-19 prior to and upon arrival at the facility and isolate symptomatic patients as soon as possible
- Limit and monitor points of entry to the facility and install barriers, such as clear plastic sneeze guards, to limit physical contact with patients at triage
- Implement policies for the use of a cloth face covering in persons over the age of 2 years
- Ensure adherence to respiratory hygiene, cough etiquette, and hand hygiene

https://www.cdc.gov/vaccines/pandemic-guidance/index.html

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General Practices for Safe Delivery of Vaccine During Pandemic

- Ensure all staff follow standard precautions including hand washing (**for 20 seconds**) and cleaning environment between patients
- Wear face masks at all times
- Wear eye protection (face shields or goggles) depending on level of community transmission
  - **Moderate to substantial**: Healthcare personnel should wear eye protection given the increased likelihood of encountering asymptomatic COVID-19 patients.
  - **Minimal to none**: Universal eye protection is considered optional
- Wear gloves when administering intranasal or oral vaccines because of the increased likelihood of coming into contact with a patient's mucous membranes and body fluids

https://www.cdc.gov/vaccines/pandemic-guidance/index.html

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General Practices for Safe Delivery of Vaccine During Pandemic

- Administration of these vaccines is not considered an aerosol-generating procedure and thus, the use of an N95 or higher-level respirator is not recommended.
- Intramuscular or subcutaneous vaccines
  - If gloves are worn during vaccine administration, they should be changed between patients in addition to performing hand hygiene.
- Ensure physical distancing by implementing strategies, such as
  - Separating sick from well patients by scheduling these visits during different times of the day (e.g., well visits in the morning and sick visits in the afternoon)
  - Placing patients with sick visits in different areas of the facility
  - Scheduling patients with sick visits in a different location from well visits (when available).
- Reduce crowding in waiting areas by asking patients to remain outside (e.g., stay in their vehicles, if applicable) until they are called into the facility for their appointment.
- Ensure that physical distancing measures, with separation of at least 6 feet between patients and visitors, are maintained during all aspects of the visit, including check-in, checkout, screening procedures, and postvaccination monitoring using strategies such as physical barriers, signs, ropes, and floor markings.
- Utilize electronic communications as much as possible (e.g., filling out needed paperwork online in advance) to minimize time in the office as well as reuse of materials

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General Practices for Safe Delivery of Vaccine During Pandemic

- Reduce crowding in waiting areas by asking patients to remain outside (e.g., stay in their vehicles, if applicable) until they are called into the facility for their appointment.
- Ensure that physical distancing measures, with separation of at least 6 feet between patients and visitors, are maintained during all aspects of the visit, including check-in, checkout, screening procedures, and postvaccination monitoring using strategies such as physical barriers, signs, ropes, and floor markings.
- Utilize electronic communications as much as possible (e.g., filling out needed paperwork online in advance) to minimize time in the office as well as reuse of materials

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Strategies for Catch-up

- Due to pandemic undervaccinated patients are susceptible to preventable illness and communities are at risk for outbreaks
- Strategies to promote adherence to the vaccination schedule and ensure catch-up vaccination is important, especially for children
- Reminder and recall systems should be implemented to identify patients who are due for or who have missed vaccine doses
  - Immunization Information Systems and electronic health records may be able to support this work
- Vaccination status of all patients should be assessed at every healthcare visit to reduce missed opportunities for vaccination
- Use of standing orders may further improve efficiency of catch-up vaccination

https://www.cdc.gov/vaccines/pandemic-guidance/index.html

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General Information on Childhood Immunizations During Pandemic

- Stay-at-home and shelter-in-place orders have resulted in
  - Declines in outpatient pediatric visits
  - Fewer vaccine doses being administered
  - Children now at risk for vaccine-preventable diseases
- As states begin to open work with families to keep or bring children up to date with their vaccinations
  - Continue to use strategies to separate well visits from sick visits
  - Schedule sick visits and well-child visits during different times of the day
  - Reducing crowding in waiting rooms, ask patients to remain outside (e.g., stay in their vehicles, if applicable) until called into the facility for appointment
  - Set up triage booths to screen patients safely
  - Collaborating with healthcare providers in the community to identify separate locations for providing well visits for children

https://www.cdc.gov/vaccines/pandemic-guidance/index.html

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General Information on Childhood Immunizations During Pandemic

- **Identify children who have missed well-child visits and/or recommended vaccinations**
  - Schedule in person appointments
    - Start with newborns
    - Infants up to 24 months
    - Young children
    - Adolescents
- State-based immunization information systems and electronic health records may be able to support this work
- All newborns should be seen by a pediatric healthcare provider shortly after hospital discharge (3 to 5 days of age)
  - **Newborn visits should be done in person** during the COVID-19 pandemic in order to evaluate for dehydration and jaundice
  - Ensure all components of newborn screening were completed and appropriate confirmatory testing and follow-up is arranged
- Evaluate mothers for postpartum depression
- **Developmental surveillance and early childhood screenings**, including developmental and autism screening, **should continue** along with referrals for **Early Intervention** and further evaluation if concerns are identified

https://www.cdc.gov/vaccines/pandemic-guidance/index.html

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General Information on Childhood Immunizations During Pandemic

- As COVID-19 continues to spread globally, over 114 million children in 38 countries may miss out on receiving life-saving **measles** vaccine
- Measles immunization campaigns in 23 countries have already been delayed and more will be postponed.
- Measles & Rubella Initiative (M&RI) expresses solidarity with
  - Families, governments, emergency responders, partners, Gavi, the Vaccine Alliance, the Global Polio Eradication Initiative (GPEI) and other global immunization and health partners in the world's focus and fight against the threat of COVID-19
- The pandemic sweeping the globe requires a coordinated effort and commitment of resources
  - Ensures staff and frontline health workers around the world are protected, as they face and respond to this new threat
  - Must also champion efforts to protect essential immunization services, now and for the future

https://www.cdc.gov/vaccines/pandemic-guidance/index.html

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Delivering Vaccines Safely During COVID Pandemic

- Assess the vaccination status of all patients across the life span at every health care visit
- Administer routinely recommended vaccines to children, adolescents, and adults (including pregnant women)
- Delay vaccination for persons with suspected or confirmed COVID-19
- Follow CDC guidance to prevent the spread of COVID-19 in health care settings
- Implement effective strategies for catch-up vaccination
- Communicate with patients/families about how they can be safely vaccinated during the pandemic

https://www.cdc.gov/vaccines/pandemic-guidance/index.html

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An 1802 caricature imagines outlandish side effects from the use of cow pox to vaccinate against smallpox. Credit: James Gillray/British Cartoon Prints Collection/Library of Congress

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COVID Vaccine Push Back

- In 3/20 26% of French adults stated that they would not use a COVID vaccine if it became available
- In the United States in 5/20 14% of adults stated they would also refuse COVID vaccine
- Data finds Americans are becoming increasingly resistant to COVID vaccine
  - NPR Marist poll 35% stated they would refuse 8/17/20

The COCONEL Group. *Lancet Infect. Dis.* 20, 769–770; 2020

P. L. Reiter *et al. Vaccine* https://doi.org/d8wr; 2020

https://khn.org/morning-breakout/poll-35-of-americans-wont-get-covid-vaccine/

https://www.prnewswire.com/news-releases/bdo-survey-58-of-african-americans-say-they-wont-take-covid-19-vaccine-301113496.html

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Results of Medscape Poll Among Physicians

- 17% of physicians said they would order or use the vaccine **if full trials were not completed**
- 63% said they would not use it
- 20% said they were unsure
- Younger doctors were more likely to say they would not get a vaccine under such circumstances
  - 68% of those younger than 55 years said no
  - 61% of those ages 55 years and older also said no
- Government regulators and the pharmaceutical companies developing vaccines have assured the public that they will be guided by only science and will release vaccine that is safe

https://www.newsweek.com/less-20-percent-americans-would-take-covid-vaccine-if-trump-said-it-was-safe-1534901?emci=b9700b5e-5c02-eb11-96f5-00155d03affc&emdi=0a4fa222-5e02-eb11-96f5-00155d03affc&ceid=4111873

https://www.webmd.com/lung/news/20200928/doctors-wary-of-rushed-covid-vaccine?emci=b9700b5e-5c02-eb11-96f5-00155d03affc&emdi=0a4fa222-5e02-eb11-96f5-00155d03affc&ceid=4111873

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Results of Medscape Poll Among Nurses

- Nurses were less likely than physicians to say yes (11%)
- 69% of the nurses said no
- 20% said they were unsure
- Answers did not vary substantially by age
- Why the push back from health care providers
  - Health Care workers want safe and effective vaccine
  - No evidence that vaccines with shortened or deleted phases of trials will have enough data to determine safety and effectiveness

- https://www.webmd.com/lung/news/20200928/doctors-wary-of-rushed-covid-vaccine?emci=b9700b5e-5c02-eb11-96f5-00155d03affc&emdi=0a4fa222-5e02-eb11-96f5-00155d03affc&ceid=4111873#1

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Kaiser Permanente Study Tests New Ways to Reduce Vaccine Hesitancy

- Immunity Community
  - Program that mobilizes parents who value vaccination to be advocates
  - To have positive conversations with other parents at their children's childcare centers, preschools and schools
  - In person and through social media
- Parents who were "vaccine hesitant" fell from 23 percent to 14 percent
- Interventions that worked
  - Using social media and networking to offer information from trusted sources such as doctors and other medical professionals.
  - Tailoring engagement about vaccines to specific communities where vaccine hesitancy is high because of cultural, religious, or other factors
  - Working to rebuild public trust in science in general to protect people against false information about vaccines

https://www.kpwashingtonresearch.org/news-and-events/recent-news/news-2017/kaiser-permanente-study-tests-new-way-reduce-vaccine-hesitancy

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Vaccine Hesitancy in African Americans

- COVID vaccine refusal is higher in African Americans
  - 58% said they would not take the vaccine
  - 22% said they would take the vaccine but had concerns
  - Little to no trust in health care system
- Black Americans represent a disproportionate number of positive cases and deaths due to COVID-19
- Black Americans across all socioeconomic levels do not use medical care as frequently as mainstream Americans

https://www.prnewswire.com/news-releases/bdo-survey-58-of-african-americans-say-they-wont-take-covid-19-vaccine-301113496.html

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Strategies to Overcome Vaccine Hesitancy in Black Americans

- Information must appear on a trusted platform
- Messaging must be authentic, and the experts should look like them
- Content must also be based on Black Americans' truths

https://www.prnewswire.com/news-releases/bdo-survey-58-of-african-americans-say-they-wont-take-covid-19-vaccine-301113496.html

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Responding to arguments against immunization with facts and evidence in a respectful manner

- We need to establish trust
- Use paradigms that do not belittle or harass parents
- Keep the conversation going even if patients refuse or delay

https://www.kpwashingtonresearch.org/news-and-events/blog/2020/vaccine-hesitancy-time-covid-19?emci=b9700b5e-5c02-eb11-96f5-00155d03affc&emdi=0a4fa222-5e02-eb11-96f5-00155d03affc&ceid=4111873

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1918: A demonstration against mandatory smallpox vaccination in Toronto, Canada. Credit: Ts/Keystone USA/Shutterstock

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COVID Vaccines and Children & Lesson Learned From Measles

- Vaccinating children is likely to have benefits both direct
  - protecting children against rare severe pediatric cases of Covid-19
  - postinfectious conditions such as multisystem inflammatory syndrome in children [MIS-C]
  - indirect (protecting others by reducing spread)
- Measles vaccine story reminds us that we have an obligation to provide equitable access and clear information
- Coordinated, federally supported efforts are essential
- Doubt, distrust, and disinformation can undermine safe, effective vaccines and worthy public health initiatives
- Planning for the implementation of SARS-CoV-2 vaccination **requires** not only working out details of distribution, priority, and cold chains, but also **strategies for reaching people who are distrustful, hesitant, dubious, or frankly opposed**

Klaus, P., & Ratner, A. (2020, February 18). Vaccinating Children against Covid-19 — The Lessons of Measles. N Engl J Med 2021; 384:589-591
DOI: 10.1056/NEJMp2034765

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So What Is the Solution to Vaccine Hesitancy

- It's the **Nurse Practitioners and NURSES**!
- Nurses are the most trusted of the professions and vaccine acceptance is all about trust
- '*Nurses own vaccines.*' (December, 2010). Mary Koslap-Petraco, DNP upon receiving ANA Bringing Immunity to Every Community Award, Washington, DC
- '*You cannot have a vaccine program unless you get buy in from the nurses,'* (March 1993).William Atkinson MD, Medical Epidemiologist (retired) National Center for Respiratory and Infectious Diseases (CDC)
- *Nurses Who Vaccinate.* Nurse advocacy organization founded by Melody Butler, BSN, RN, CIC in 2011.
- Nurses have the skills and abilities to treat vaccine hesitancy and provide emotional support to ensure that most individuals accept immunizations
  - *Vaccines are an emotional issue*

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So How Will Nurse Practitioners and Nurses Counter Vaccine Hesitancy

- By ***caring*** enough to use successful communication strategies
- By being good listeners
- By being nonjudgmental
- CASE Method
- Motivational Interviewing

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COVID Vaccine Hesitancy

- Vaccine confidence seems to be rising
- Recent polling suggests that about 31% of Americans wish to take a wait-and-see approach
- About 20% remain quite reluctant

Vaccine hesitancy. KFF COVID-19 Vaccine Monitor, January 27, 2021 (https://www.kff.org/report-section/kff-covid-19-vaccine-monitor-january-2021-vaccine-hesitancy/

Steel Fisher, G., Blendon, R., & Caporello, H. (3/3/2021).An Uncertain Public — Encouraging Acceptance of Covid-19 Vaccines. NEJM DOI: 10.1056/NEJMp2100351. published online https://www.nejm.org/doi/full/10.1056/NEJMp2100351?query=TOC&emci=172e698e-e97c-eb11-85aa-00155d43c992&emdi=b15436f6-f57c-eb11-85aa-00155d43c992&ceid=4111873

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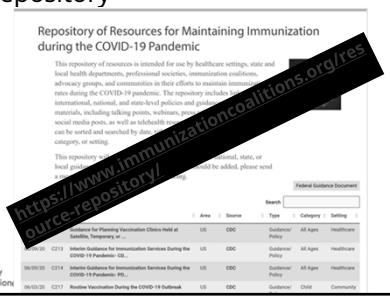
Immunization Action Coalition/Coalitions Resource Repository



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IAC has developed a Mass Immunization Clinic Resource Repository

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IAC has developed a COVID-19 Resource

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Visit IAC/Summit Resources!

- Read our publications!
  - http://www.immunize.org/publications/
- Visit our websites!
  - www.immunize.org
  - www.vaccineinformation.org
  - www.standingorders.org
  - www.izcoalitions.org
  - www.izsummitpartners.org (Summit)
- Stay ahead of the game! Subscribe to our updates!
  - http://www.immunize.org/subscribe/

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Peer-to-Peer Vaccine Advocacy

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Voices for Vaccines does:

- Social media, family engagement, first-person vaccine stories, and vaccine selfie-galleries
- A monthly podcast (Vax Talk)
- A Friday newsletter debunking the latest myths
- Grassroots family organizing
- Secret things

Find us at VoicesForVaccines.org or email Karen Ernst any time at kernst@voicesforvaccines.org.

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Reach out:
info@vaccinateyourfamily.org

VACCINATE YOUR FAMILY
The Next Generation of Every Child By Two

Website: Vaccinateyourfamily.org
Blog: Shotofprevention.com
Facebook: Vaccinate Your Family
Twitter: @Vaxyourfam
Instagram: Vaccinate Your Family
YouTube: Vaccinate Your Family

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OUR MISSION

VYF protects people of all ages from vaccine-preventable diseases by:

- Raising awareness of the critical need for timely immunizations
- Increasing the public's understanding of the benefits of vaccines
- Increasing confidence in the safety of vaccines
- Ensuring that all families have access to lifesaving vaccines
- Advocating for policies that support timely vaccination

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What We Do…

LEAD

We guide the national conversation on key immunization issues in the United States.

FIGHT

We dispel disinformation about vaccines and vaccine-preventable diseases and cancers.

INFORM

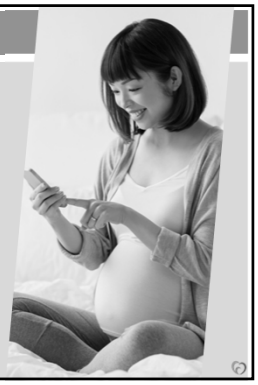
We educate communities who care for them about the safety and importance of vaccination.

EMPOWER

We give state and local immunization coalitions the tools and resources they need to protect vaccination coverage rates in their communities.

CHAMPION

We advocate for equitable, science-based policies that expand and protect vaccination access.



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Information and Resources on COVID-19 and COVID-19 Vaccines

- COVID-19 Vaccines
- COVID-19 Vaccines Q&A
- VYF's COVID-19 Vaccine Updates Zoom Series: Featuring FDA and CDC
- Vaccine Education Center at CHOP - Questions and Answers about COVID-19 Vaccines
- CDC's Up-to-Date Information & Guidance on COVID-19 and COVID-19 Vaccines FOR HEALTHCARE PROVIDERS

Vaccinateyourfamily.org/covid19

This webpage includes links to COVID-19 resources from Vaccinate Your Family and immunization partners.

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VYF'S STATE OF THE IMMUNION REPORTS

In response to the COVID-19 pandemic, VYF published key steps Congress should take ASAP to ensure any COVID-19 vaccine is distributed quickly and equitably once available.

Every year, VYF publishes its annual *State of the ImmUnion* report, outlining:

- **HOW** we're doing in terms of vaccinating key U.S. populations.
- **WHO** isn't getting vaccinated and why
- **WHAT** Congress should do to address disparities and barriers to vaccination
- **WHERE** resources should be directed to improve and protect vaccination rates

Find the report @ State of the ImmUnion Report | Vaccinate Your Family

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Additional Immunization Resources

- CDC National Center for Immunizations and Respiratory Diseases (NCIRD) www.cdc.gov/vaccines
- Children's Hospital of Philadelphia Vaccine Education Center https://www.chop.edu/centers-programs/vaccine-education-center
- Families Fighting Flu https://www.familiesfightingflu.org/
- Nurses Who Vaccinate https://nurseswhovaccinate.org/
- Voices for Vaccines https://www.voicesforvaccines.org/
- Parents of Kids with Infectious Diseases (PKIDS) http://www.pkids.org/
- Vaccinate Your Family www.vaccinateyourfamily.org

Additional Immunization Resources

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- Thank you so much for listening to our Grandma!

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- From Polio Pioneer to COVID Vaccine Pioneer!

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Bramer CA et al. Decline in Child Vaccination Coverage During the COVID-19 Pandemic — Michigan Care Improvement Registry, May 2016–May 2020. MMWR Morb Mortal Wkly Rep 2020;69:630–631. https://www.cdc.gov/mmwr/volumes/69/wr/mm6920e1.htm#contribAff2.

Interim Guidance for Routine and Influenza Immunization Services During the COVID-19 Pandemic https://www.cdc.gov/vaccines/pandemic-guidance/index.html

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