

# IMMUNIZATION: IMPLICATIONS FOR VACCINE UPTAKE AND DEVELOPMENT

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## OBJECTIVES

At the conclusion of this presentation, pharmacists will be able to:

- 1) Explain issues regarding patients missing routine vaccinations
- 2) Identify ways to assess for missed vaccines
- 3) List key vaccines for catchup
- 4) Discuss safe practices to provide immunizations

At the conclusion of this presentation, pharmacy technicians will be able to:

- 1) Identify issues regarding patients missing routine vaccinations
- 2) Identify ways to assess for missed vaccines
- 3) List key vaccines for catchup

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## DISCLOSURE

- Dr. Girotto has a relationship with Lexi-Comp as a consultant. There is no conflict of interest associated with this presentation.

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## HERD IMMUNITY

<https://www.cdc.gov/vaccines/vac-gen/whatifstop.htm>

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Disease	Threshold
Measles	83 – 94%
Mumps	75 – 86%
Rubella	83 – 85%
Pertussis	92 – 94%
Polio	80 – 86%
Diphtheria	85%

## HERD IMMUNITY THRESHOLD

CDC

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## BLUECROSS BLUE SHIELD OF AMERICA

- BCBSA Shared Data 11/18 Demonstrating Decreased Vaccinations
  - Estimates decline of 38% IPV, 36% MMR, 25% DTaP vaccine doses

Disease	CDC Herd Immunity Thresholds	BCBSA 2019 Vaccination Rate	BCBSA 2020 Vaccination Rate
Measles (MMR)	83-94%	92%	88%
Pertussis (DTaP)	92 - 94%	82%	79%
Polio	80 - 86%	93%	89%

<https://www.bcbs.com/the-health-of-america/infographics/missing-vaccinations-during-covid-19-puts-our-children-and-communities-at-risk>

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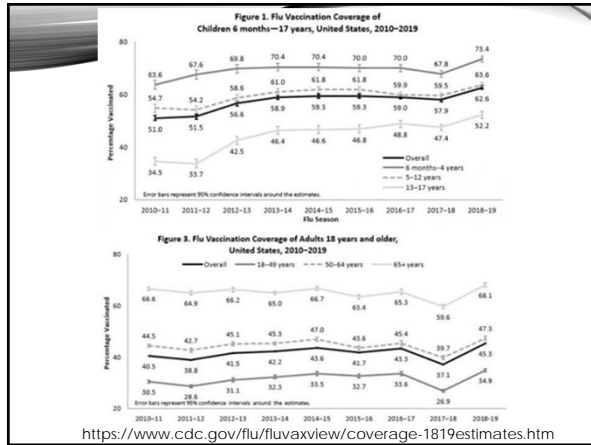
## NOT JUST A PEDIATRIC ISSUE...

- Pregnancy recommendations Flu & Tdap 2010-2019

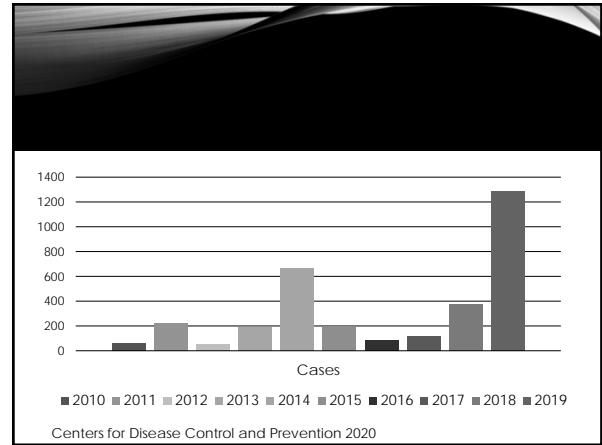
Population	Flu vaccinated	Tdap vaccinated	Both flu and Tdap
All pregnant	61%	57%	40%
Provider offer/referred	75%	72%	58%
Provider recommend but not offer/refer	50%	Not reported due to small sample size	14%
No recommend	21%	2%	0%

<https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm6939a2-H.pdf>

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## MEASLES IMPACT BEYOND MEASLES...

- Patients with measles infection had loss of 11-73% of total baseline antibodies after infection and only reestablished after being re-exposed to pathogens
  - Similar loss was NOT seen in MMR vaccinated children
- Data suggests this results in clinical susceptibility to infections that patients had prior immunity from prior infection or immunization

Mina MJ, et al. Science Nov 2019; Petrova VN, et al. Science Immunology Nov 2019

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## ASSESSMENT

- Which of the following is NOT true regarding measles and vaccinations?
  - Patients without MMR vaccines are more susceptible to measles
  - Measles community outbreaks more likely when communities dip below herd immunity thresholds
  - Patients who get measles disease are NOT more likely to get sick with other illnesses.

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**Slide 7**

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**jg4**

jennifer giroto, 11/20/2020

- Estimated 90 percent of Americans lived within five miles of a community pharmacy.
- Pharmacies have extended hours and are convenient.
- "Pharmacists are trusted healthcare professionals with established relationships with their patients. Pharmacists also have strong relationships with local medical providers and hospitals to refer patients as appropriate."
- Pharmacists were estimated to have given ~ 1/3 of adult flu vaccines in 2018-19 season.

<https://www.hhs.gov/sites/default/files/licensed-pharmacists-and-pharmacy-interns-regarding-covid-19-vaccines-immunity.pdf>

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## PHARMACIST AS VACCINE PROVIDERS

- Amendment of PREP act August 19<sup>th</sup> authorizing pharmacists to order and administer FDA approved vaccines 3 through 18-year-olds as per ACIP immunization schedules (only as part of PREP act during Pandemic declaration)
- Further amendment of PREP act September 3<sup>rd</sup> authorizing pharmacists to administer, to persons ages three or older COVID-19 vaccinations that have been authorized or licensed by the Food and Drug Administration (FDA) and recommended per ACIP

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- The licensed pharmacist (or pharmacy intern being supervised) must
  1. Complete a practical training program of ≥20 hrs. & approved by ACPE (include hands-on injection technique, clinical evaluation of indications and contraindications of vaccines, and the recognition and treatment of emergency reactions to vaccines).
  2. Have a current certificate in basic cardiopulmonary resuscitation.
  3. Complete a minimum of **two hours of ACPE-approved**, immunization-related continuing pharmacy education during each State licensing period.
  4. Comply with recordkeeping and reporting requirements of the jurisdiction in which he or she administers vaccines, including informing the patient's PCP, submitting immunization information to the State vaccine registry, complying with requirements with respect to reporting adverse events, and complying with requirements whereby the person administering a vaccine must review the vaccine registry or other vaccination records prior to administering a vaccine.
  5. Inform childhood-vaccination patients and the adult caregivers accompanying the children of the **importance of a well-child visit** with a pediatrician or other licensed primary care provider and refer patients as appropriate.

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"COMMUNICATING THE IMPORTANCE OF VACCINATION TO PATIENTS AND PARENTS/CAREGIVERS AS WELL AS THE SAFETY PROTOCOLS AND PROCEDURES ... CAN HELP PROVIDE REASSURANCE TO THOSE WHO MAY OTHERWISE BE HESITANT TO PRESENT FOR VACCINATION VISITS."

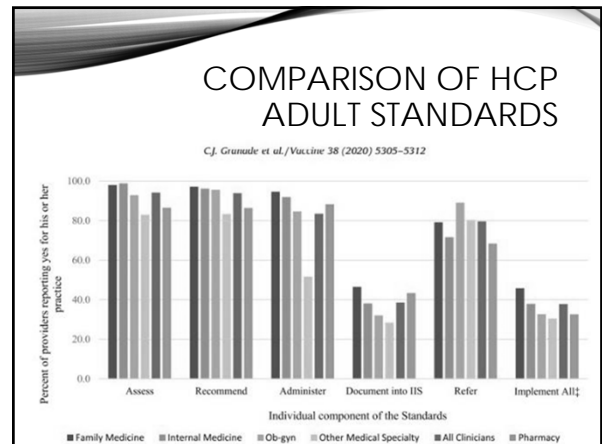
<https://www.cdc.gov/vaccines/pandemic-guidance/index.html>

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### Make Immunization a Standard of Patient Care In Your Practice:

1. **ASSESS the immunization status of all your patients at every clinical encounter.**
  - Stay informed about the latest CDC recommendations for immunization of adults.
  - Implement protocols in your office to ensure that patients' vaccine needs are routinely reviewed and patients get reminders about vaccines they need.
2. **Strongly RECOMMEND vaccines that your patients need.**
  - Address patient questions and concerns in clear and understandable language.
  - Highlight your positive experiences with vaccination (personal or in your practice).
3. **ADMINISTER needed vaccines or REFER your patients to a vaccination provider.**
  - For vaccines that you stock, make vaccination services as convenient as possible for your patients.
  - For vaccines that you don't stock, refer patients to providers in the area that offer vaccination services.
4. **DOCUMENT vaccines received by your patients.**
  - Participate in your state's immunization registry to help your office, your patients, and your patients' other providers know which vaccines your patients have had.
  - Follow up to confirm that patients received recommended vaccines that you referred them to get from other immunization providers.

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## Slide 16

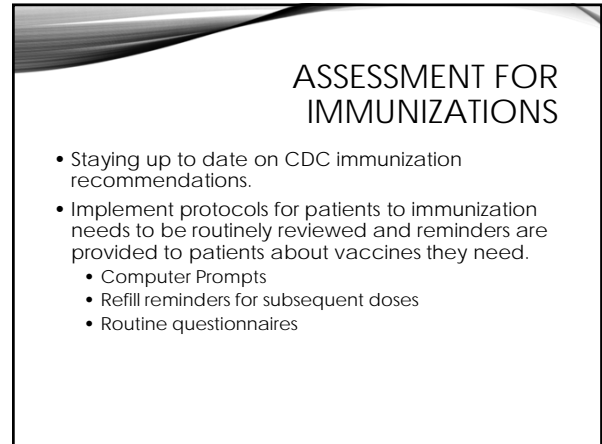
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**jg2**      jennifer girotto, 11/12/2020

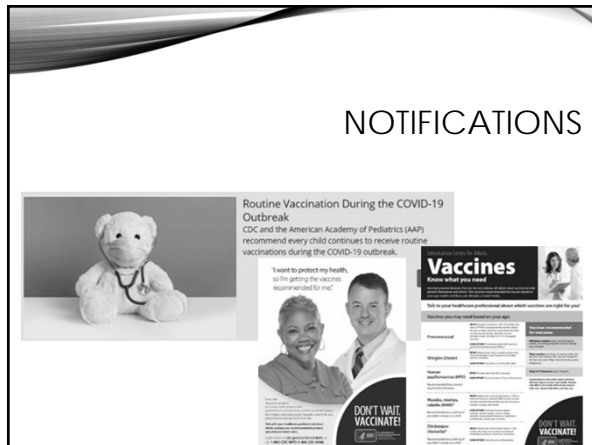
**jg3**      jennifer girotto, 11/12/2020



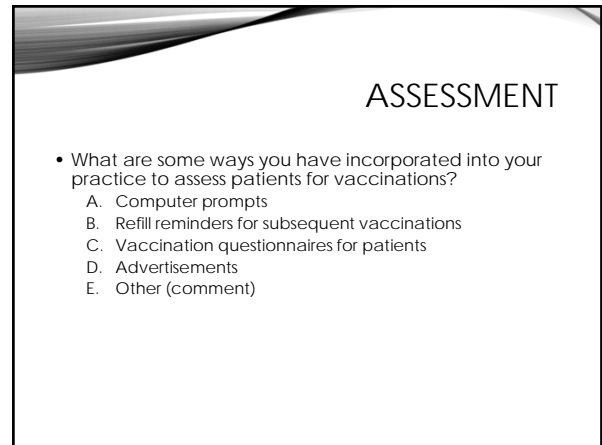
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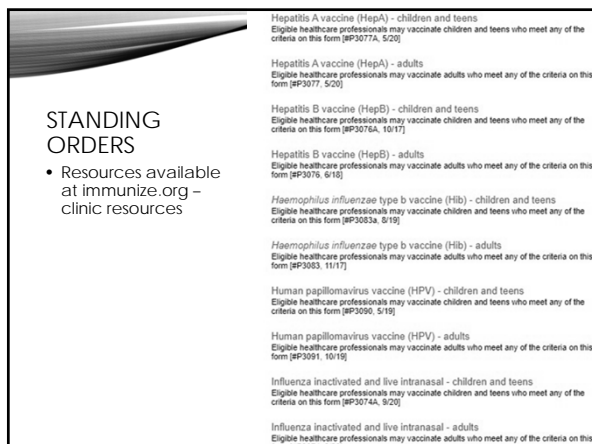
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## RECOMMENDATIONS FOR VACCINATION

- Make a clear and strong recommendation when they are indicated
- Explain why vaccines are indicated
- Address questions and concerns
- Highlight positive experiences with vaccination (personal or in your practice)

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## RESOURCES TO HELP ANSWERING QUESTIONS

- Common vaccine concerns
  - <https://www.cdc.gov/vaccinesafety/concerns/index.html>
- Help addressing parents' vaccine questions
  - <https://www.cdc.gov/vaccines/parents/FAQs.html>
  - <https://www.cdc.gov/vaccines/hcp/conversations/preparing-for-parent-vaccine-questions.html>

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## KEY VACCINES FOR CATCH-UP

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## KEY VACCINES FOR CATCH-UP

- Focus on information from CDC regarding vaccine focus areas during an emergency
- For pediatric patients focus on catch-up recommendations and high-risk conditions
- For adults focus on routine and high-risk conditions

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This is a thumbnail of a CDC table titled "Table 1 Recommended Child and Adolescent Immunization Schedule for ages 19 years or younger, 2020". The table lists various vaccines such as Hepatitis A, Hepatitis B, Diphtheria, Tetanus, Pertussis, Polio, Hib, Pneumococcal, Meningococcal, and HPV, along with their recommended ages and dosages.

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This is a thumbnail of a CDC table titled "Table 2 Recommended Adult Immunization Schedule by Medical Condition and Other Indications, United States, 2020". The table is organized by medical conditions such as HIV, Hepatitis B, Hepatitis C, Influenza, Pneumococcal, Meningococcal, and HPV, detailing the specific vaccine recommendations for each condition.

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## VACCINATING SAFELY DURING EMERGENCIES

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## VACCINATING SAFELY

- Checking current guidance
  - <https://www.cdc.gov/vaccines/pandemic-guidance/index.html>

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## VACCINATING SAFELY: MINIMIZE CHANCE OF HCP EXPOSURE DURING EMERGENCIES

- Follow screening procedures
- Have barrier protection during triage and initial intake
- Ensure patients have appropriate PPE (e.g. cloth masks if over 2 years for COVID19)
- Ensure adherence to appropriate hand hygiene

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## VACCINATING SAFELY: FOLLOW INFECTION CONTROL

- Ensure standard precautions, or higher depending on the emergency and risk factor

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## VACCINATION RECOMMENDATIONS COVID-19

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## ASSESSMENT

- What precautions do you currently take with providing vaccines to your patients in Dec 2020? (check all that apply)
  - Wear mask
  - Wear face shield/ goggles
  - Wear gloves
  - Wash hands between patients
  - Wear gown
  - Other (comment)

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## ASSESSMENT

In addition to appropriate hand hygiene, what precautions do you believe the CDC is currently recommending you take with providing vaccines to your patients?


- A. Wear mask
- B. Wear face shield/goggles
- C. Wear mask and face shield/goggles
- D. Wear mask, face shield/goggles, and gowns

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## VACCINATING SAFELY: APPLICATIONS TO COVID-19

- Wear a medical face mask at all times
- Use eye protection especially in cases of moderate to high community transmission
- Gloves
  - Required when administering intranasal or oral vaccines due to risk of mucosal exposure
  - If used for IM/SQ they should be changed and appropriate hand hygiene performed between patients
- Limit exposure times
  - Use electronic communications to minimize face-to-face time
  - Ensure physical distancing for all stages of vaccination (check-in, checkout, screening, and post-vaccination monitoring)

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### Deliver vaccines safely during the COVID-19 pandemic

- Administration of vaccines is an essential medical service.
- 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 people).
- Delay vaccination for persons with suspected or confirmed COVID-19.
- Follow guidance to prevent the spread of COVID-19 in health care settings.
- Encourage vaccination at the patient's medical home.
- 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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## ASSESSMENT


• What changes, if any, to safety procedures during immunization will you be implementing based upon this information?

- A. Wear face shield / goggles
- B. Wash hands between patients
- C. Wear medical face mask
- D. Other enhanced procedure
- E. No changes, already implemented all recommended safety procedures

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## CDC CURRENT GUIDANCE INFLUENZA

- Additional focus on vaccinating against influenza recommended to limit severe disease and "twindemic"
- **All patients > 6 mos old without contraindications**
- Focus groups
  - Essential workers
  - > 65 years
  - 6 mos to < 5 years
  - Pregnant
  - Pts with neurologic conditions
  - Pts with other high-risk conditions



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## CDC CURRENT GUIDANCE PEDIATRICS

- "It is important to assess the vaccination status of all children and adolescents at each patient visit to avoid missed opportunities for vaccination and ensure timely vaccine catch-up. All vaccines due or overdue should be administered according to the recommended CDC immunization schedules during that visit, unless a specific contraindication exists..."

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

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## CDC CURRENT GUIDANCE ADULTS

- **Pregnant people:** If Tdap and Influenza have been delayed, these should be **received at the next in-person appointment.**
- **Adults:** Healthcare personnel, should ensure that their patients **continue to receive vaccines.** If vaccination is deferred, older adults and those with underlying medical conditions who subsequently become infected with a vaccine-preventable disease, are at increased risk for complications.

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## INFORMATION ABOUT COVID19 VACCINES

- Up to date information from the WHO  
<https://www.who.int/publications/m/item/draft-landscape-of-covid-19-candidate-vaccines>
- NYTimes Tracker:  
<https://www.nytimes.com/interactive/2020/science/coronavirus-vaccine-tracker.html>
- ACIP meeting information:  
<https://www.cdc.gov/vaccines/acip/meetings/index.html>
- Questions patients may ask:  
<https://www.cdc.gov/vaccines/hcp/covid-conversations/answering-questions.html>

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? QUESTIONS

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