Expert Teams – Vaccination

Case-Based Learning & Mentorship

Thursday, March 31, 2022

Facilitator: Julie A. Moss, ESRD National Coordinating Center

Meeting Logistics

- Call is being recorded
- Lines will be open for all high performing organizations
  - Please stay on mute unless you are speaking
  - Do not place the call on “hold”
- Everyone is encouraged to use the video and chat features

Meeting Guidelines

INTRODUCE YOURSELF BEFORE SPEAKING

KEEP PATIENT-SPECIFIC INFORMATION CONFIDENTIAL

BE WILLING TO SHARE SUCCESSES AND DIFFICULTIES

BE OPEN TO FEEDBACK

ASK THE DIFFICULT QUESTIONS

RESPECT OTHERS

USE "…AND" STATEMENTS

KEEP TO TIME LIMITS

Introductions

- Meeting Focus – Vaccination
- Guest Expert –
  - Rebecca Martinez, BSN, BA, RN, CIC, Nebraska ICAP Program
- High Performing Organizations
- ESRD Networks
- Centers for Medicare & Medicaid Services (CMS)

What are Expert Teams?

- A group made up of individuals from different high performing organizations, each with their own deep experience and knowledge
- Help others learn faster by sharing what worked (and what didn't work) in their organization
- Bring the best possible solutions to the table
- Continually learn and improve

Vaccination

- Increase the number of dialysis patients and staff receiving an influenza vaccination
- Increase the number of dialysis patients receiving a pneumococcal conjugate vaccination (PCV 13)
- Increase the number of dialysis patients that receive a full series of the pneumococcal polysaccharide vaccine (PPSV 23)
- Increase the number of dialysis patients and staff that receive the COVID-19 vaccination

Questions to Run On

How Might We …

- Get all eligible patients vaccinated?
- Improve communication about the importance of vaccination?
- Overcome vaccination hesitancy?

Presentation by Guest Expert

Rebecca Martinez, BSN, BA, RN, CIC
Infection Preventionist
Nebraska ICAP Program

Protecting Patients with ESRD via Vaccination

Rebecca Martinez, BA, BSN, RN, CIC
Infection Preventionist, NE ICAP

ICAP
Infection Control Assessment and Promotion Program

Advisory Committee on Immunization Practices for ESRD

Table 2 Recommended Adult Immunization Schedule by Medical Condition or Other Indication, United States, 2022

Vaccine	Pregnancy	Immuno-compromised (excluding HIV infection)	HIV infection CD4 percentage and count: <15% or <200 mm³	HIV infection CD4 percentage and count: ≥15% and ≥200 mm³	Asplenia, complement deficiencies	End-stage renal disease, or on hemodialysis	Heart or lung disease; alcoholism[1]	Chronic liver disease	Diabetes	Health care personnel[2]	Men who have sex with men
IIV4 or RIV4	1 dose annually										
or										or	
LAIV4	Contraindicated					Precaution				1 dose annually	
Tdap or Td	1 dose Tdap each pregnancy	1 dose Tdap, then Td or Tdap booster every 10 years									
MMR	Contraindicated*	Contraindicated	1 or 2 doses depending on indication								
VAR	Contraindicated*	Contraindicated			2 doses						
RZV		2 doses at age ≥19 years			2 doses at age ≥50 years						
HPV	Not Recommended*	3 doses through age 26 years			2 or 3 doses through age 26 years depending on age at initial vaccination or condition						
Pneumococcal (PCV15, PCV20, PPSV23)		1 dose PCV15 followed by PPSV23 OR 1 dose PCV20 (see notes)									
HepA					2 or 3 doses depending on vaccine						
HepB	3 doses (see notes)	2, 3, or 4 doses depending on vaccine or condition									
MenACWY	1 or 2 doses depending on indication, see notes for booster recommendations										
MenB	Precaution	2 or 3 doses depending on vaccine and indication, see notes for booster recommendations									
Hib		3 doses HSCT[3] recipients only			1 dose						

Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of past infection

Recommended vaccination for adults with an additional risk factor or another indication

Recommended vaccination based on shared clinical decision-making

Precaution—vaccination might be indicated if benefit of protection outweighs risk of adverse reaction

Contraindicated or not recommended—vaccine should not be administered.

*Vaccinate after pregnancy.

No recommendation/ Not applicable

1. Precaution for LAIV4 does not apply to alcoholism. **2.** See notes for influenza; hepatitis B; measles, mumps, and rubella; and varicella vaccinations. **3.** Hematopoietic stem cell transplant.

ACIP - Adult Immunization Schedule

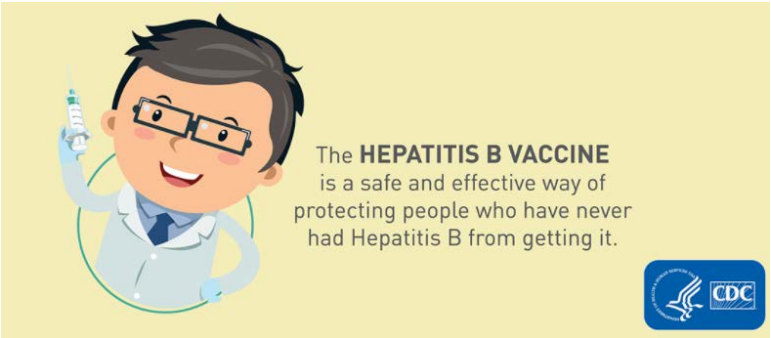
Pneumococcal Vaccine

- Updated Guidance from ACIP and MMWR Publication
- On October 20, 2021, ACIP recommended PCV15 or PCV20 for PCV–naïve adults who are either aged ≥65 years or aged 19–64 years with certain underlying conditions (which chronic renal disease is one).
  - –PCV20 can be used alone
  - –When PCV15 is used, it should be followed by a dose of PPSV23, typically ≥1 year later.

CDC - Pneumococcal Photos
CDC - MMWR - Pneumococcal Vaccine Updated Recommendations

Hepatitis B Vaccine & Testing

- Hepatitis B vaccine is recommended for ESRD patients
  - –Testing for anti-HBs is recommended 1-2 months after the primary series and annually.
  - –If anti-HBs levels are below 10mIU/mL then revaccinate
    - Complete new series if primary series did not yield seroprotection
    - If primary series was adequate but levels dropped, give booster dose



Immunization Action Coalition - Ask the Experts - Hepatitis B

CDC - Why Get Tested Hep B

Immunization Action Coalition (IAC) Hepatitis Vaccine Resource

Hepatitis B vaccines: Recommended dosages and schedules

VACCINE	AGE GROUP	VOLUME	# DOSES	SCHEDULES/DOSING INTERVALS
Engerix-B (GlaxoSmithKline)	0 through 19 yrs	0.5 mL	3	For newborns, give dose #1 within 24 hrs of birth; then at age 1–2 mos, 4 mos[2], 6–18 mos For older children who did not start HepB series at birth: 0, 1–2, 4–6 mos[3]
	20 yrs and older	1.0 mL[4]	3	0, 1–2, 4–6 mos[3]
Recombivax HB (Merck)	0 through 19 yrs	0.5 mL	3	For newborns, give dose #1 within 24 hrs of birth; then at age 1–2 mos, 4 mos[2], 6–18 mos For older children who did not start HepB series at birth: 0, 1–2, 4–6 mos[3]
	11 through 15 yrs	1.0 mL	2	0, 4–6 mos
	20 yrs and older	1.0 mL[4]	3	0, 1–2, 4–6 mos[3]
Heplisav-B (Dynavax)	18 yrs and older	0.5 mL[4]	2	0, 1 mo

1 Give one 0.5 mL dose to children age 6–11 months who will travel anywhere outside the U.S., except parts of Western Europe, New Zealand, Australia, Canada, or Japan. This dose does not count toward the routine 2-dose series given after the first birthday.

2 The 4-month HepB dose may not be needed depending on the brand of vaccine use.

3 There are minimum intervals between the doses of Engerix-B and Recombivax HB vaccine. There must be at least 4 weeks between doses #1 and #2, at least 8 weeks between doses #2 and #3, and at least 16 weeks between doses #1 and #3. The final dose in the infant series should not be given earlier than 24 weeks of age.

4 For adult dialysis patients, the Engerix-B dose required is 2.0 mL (use the adult formulation) on a schedule of 0, 1, 2, and 6 months. For Recombivax HB, a special formulation for dialysis patients is available. The dose for the dialysis formulation is 1.0 mL and it is given on a schedule of 0, 1, and 6 months. For Heplisav-B, use the standard dose (0.5 mL) and schedule (2 doses, 1 month apart).

5 When using HepB at birth and 3 doses of Pediarix, you will be administering 4 doses of HepB which is recommended by ACIP.

IAC - Hepatitis Vaccines

mRNA COVID-19 Vaccine Schedule Resources – Ages 5 Years and Older

Recipient Age	Product*†	Persons Who ARE NOT Moderately or Severely Immunocompromised		Persons Who ARE Moderately or Severely Immunocompromised	
		Primary Series‡§	Booster Dose‡¶	Primary Series‡§	Booster Dose‡¶
Type: mRNA vaccine					
5–11 years	Pfizer-BioNTech Ages: 5–11 years Orange cap	2 doses. Separate: Dose 1 and 2 by at least 3 weeks	Not recommended	3 doses. Separate: Dose 1 and 2 by at least 3 weeks. Dose 2 and 3 by at least 4 weeks.	Not recommended
12–17 years	Pfizer-BioNTech Ages: 12 years and older Gray cap or Purple cap	2 doses. Separate: Dose 1 and 2 by at least 3 - 8 weeks.**	At least 5 months after Dose 2	3 doses. Separate: Dose 1 and 2 by at least 3 weeks. Dose 2 and 3 by at least 4 weeks.	At least 12 weeks after Dose 3
18 years and older	Pfizer-BioNTech Ages: 12 years and older Gray cap or Purple cap	2 doses. Separate: Dose 1 and 2 by at least 3 - 8 weeks.**	At least 5 months after Dose 2	3 doses. Separate: Dose 1 and 2 by at least 3 weeks. Dose 2 and 3 by at least 4 weeks.	At least 12 weeks after Dose 3
	Moderna	2 doses. Separate: Dose 1 and 2 by at least 4 - 8 weeks.**	At least 5 months after Dose 2	3 doses. Separate: Dose 1 and 2 by at least 4 weeks. Dose 2 and 3 by at least 4 weeks.	At least 12 weeks after Dose 3

CDC - COVID-19 Vaccine Schedule

Janssen COVID-19 Vaccine Schedule & Footnotes – 18 Years and Older

Recipient Age	Product*†	Persons Who ARE NOT Moderately or Severely Immunocompromised		Persons Who ARE Moderately or Severely Immunocompromised	
		Primary Series†§	Booster Dose‡¶	Primary Series‡§	Booster Dose‡¶
Type: Viral vector vaccine					
18 years and older	Janssen††	1 dose	At least 8 weeks after Dose 1	2 doses. Separate: Dose 1 and 2 by at least 28 days‡‡ Dose 2 MUST be a mRNA vaccine	At least 8 weeks after Dose 2

* Administer the appropriate COVID-19 vaccine product based on the recipient's age.
† COVID-19 vaccines may be administered on the same day as other vaccines. If multiple vaccines are administered at a single visit, administer each in a separate injection site.
‡ Administer doses as close as possible to the recommended interval. It is not necessary to restart the series if the dose is given after the recommended interval.
§ Complete the primary series using the same product. Every effort should be made to determine which vaccine product was received as the first dose. If the vaccine product previously administered cannot be determined or is no longer available, any age-appropriate mRNA COVID-19 vaccine product may be administered at least 28 days after the first dose.
¶ A different COVID-19 vaccine product than the primary series may be administered. An mRNA COVID-19 vaccine is preferred.
** An 8 week interval may be optimal for some people, including males 12-39 years of age because of the small risk of myocarditis associated with mRNA COVID-19 vaccines. Vaccine effectiveness may also be increased with an interval longer than 3 (or 4 depending on document) weeks. See Interim Clinical Considerations for COVID-19 Vaccines (link below) for detailed information.
†† mRNA COVID-19 vaccines are preferred over the Janssen COVID-19 Vaccine for all vaccine-eligible people. However, the Janssen COVID-19 Vaccine may be offered in some situations, see Interim Clinical Considerations for COVID-19 Vaccines (link below) for detailed information.
‡‡ Administer Moderna or Pfizer-BioNTech COVID-19 Vaccine only, which are allowed under Emergency Use Instructions (EUI) for this dose. Janssen COVID-19 Vaccine is not under EUI for this dose.

CDC - COVID-19 Vaccine Schedule

COVID-19 Vaccine Products Summary

Table 2. COVID-19 Vaccine Products Summary

Product	Age Indications	Diluent	Dosage (amount injected)	
Type: mRNA vaccine				
Pfizer-BioNTech Orange cap and bordered label	5 - 11 years	1.3 mL 0.9% sodium chloride (normal saline, preservative-free)	Doses 1 and 2	0.2 mL
			Dose 3*	0.2 mL
			Booster dose	Not recommended
Pfizer-BioNTech Gray cap and bordered label	12 years and older	NONE	Doses 1 and 2	0.3 mL
			Dose 3*	0.3 mL
			Booster dose	0.3 mL
Pfizer-BioNTech Purple cap	12 years and older	1.8 mL 0.9% sodium chloride (normal saline, preservative-free)	Doses 1 and 2	0.3 mL
			Dose 3*	0.3 mL
			Booster dose	0.3 mL
Moderna Red cap	18 years and older	NONE	Doses 1 and 2	0.5 mL
			Dose 3*	0.5 mL
			Booster dose	0.25 mL

Product	Age Indications	Diluent	Dosage (amount injected)	
Type:Viral Vector Vaccine				
Janssen† Blue Cap	18 years and older	NONE	Dose 1	0.5 mL
			Dose 2*	Dose 2 Administer mRNA vaccine only ‡
			Booster dose	0.5 mL

* For moderate or severely immunocompromised persons only
† mRNA vaccines are preferred.
‡ Additional dose for moderate or severely immunocompromised persons only: Administer Moderna or Pfizer-BioNTech COVID-19 Vaccine ONLY. Administer the correct product based on the recipient's age. If administering Moderna COVID-19 Vaccine, administer 0.5 mL.

CDC - COVID-19 Vaccine Schedule

"Vaccines don't save lives. Vaccinations save lives." – Dr. Walter Orenstein

- Vaccination vs. Immunization
  - Vaccination: The act of introducing a vaccine into the body to produce protection from a specific disease.
  - Immunization: The process of making you immune or resistant to an infectious disease by vaccination or through disease exposure.
- Promote **vaccine-induced immunity**
  - Put risk into perspective, inaction is a choice that carries risk
  - Vaccination is the safest way to help build protection
  - **Disease-induced immunity requires exposure and infection.**
  - Substantial immunologic evidence and a growing body of epidemiologic evidence indicate that vaccination after infection significantly enhances protection and further reduces risk of reinfection, which lays the foundation for CDC recommendations.

Human Vaccines & Immunotherapeutics - 2019; 15(12): 2786-2789
CDC - Immunization: The Basics
CDC - Science Brief: SARS-CoV-2 Infection-induced and Vaccine-induced Immunity

Prevention is Better than Cure

- The difference between vaccination and natural infection or perhaps better referred to as disease-induced immunity is the price paid for that immunity. Below are just a few examples:
  - Liver cancer from the hepatitis B virus
  - Pneumonia from the influenza virus
  - Pneumonia from the pneumococcus bacteria
  - Death, trouble breathing, or organ failure from the SARS-CoV-2 virus that causes COVID-19

"To cure is the voice of the past. To prevent, the divine whisper of today." – British Medical Journal, 1903

Children's Hospital of Philadelphia - Vaccine Safety: Immune System and Health

Image courtesy of rawpixel.com

Assess & Address Hesitancy

- What are the concerns, is there a main theme?
  - Safety and efficacy
    - The COVID-19 vaccine was created quickly, but was carefully tested for safety.
    - COVID vaccines are safe and effective. Hundreds of millions of people has safely received them.
    - Side effects are temporary and do not mean you're sick.
  - Desire for "natural immunity"
    - Put risk into perspective
    - Graphics say more than words sometimes. Does your state or hospital provide statistics of disease burden and vaccine status?

John Hopkins Medicine - COVID-19 Vaccine Hesitancy
CDC - Safety of COVID-19 Vaccines
Image courtesy of rawpixel.com

Assess & Address Hesitancy (continued)

- What are the concerns, is there a main theme?
  - General distrust in public health institutions or government
    - Be truthful, let them know how you chose to be vaccinated along with your family and you wouldn't recommend anything different for them
    - Promote a variety of reputable resources
    - Discuss how the COVID-19 vaccines were tested across a diverse population of races, ethnicities, ages, and medical conditions
  - Autonomy and Freedom of Choice
    - Reinforce personal choice and that getting the COVID-19 vaccine can protect them from getting sick so they can continue working and doing what they enjoy
    - Offer vaccine brand options

John Hopkins Medicine - COVID-19 Vaccine Hesitancy
AAFP - Four Reasons for COVID-19 Vaccine Hesitancy...

Decrease Barriers & Provide Access

- Tailor communication and actions to lead to desired outcome of effective vaccine in arms.
- Offer vaccinations on-site, on demand when possible.
- If you don't offer vaccinations on-site, have a strong established referral plan.

  –Could you partner with the nearby pharmacy?

CDC - Vaccinating Dialysis Patients and Healthcare Personnel

Image courtesy of rawpixel.com

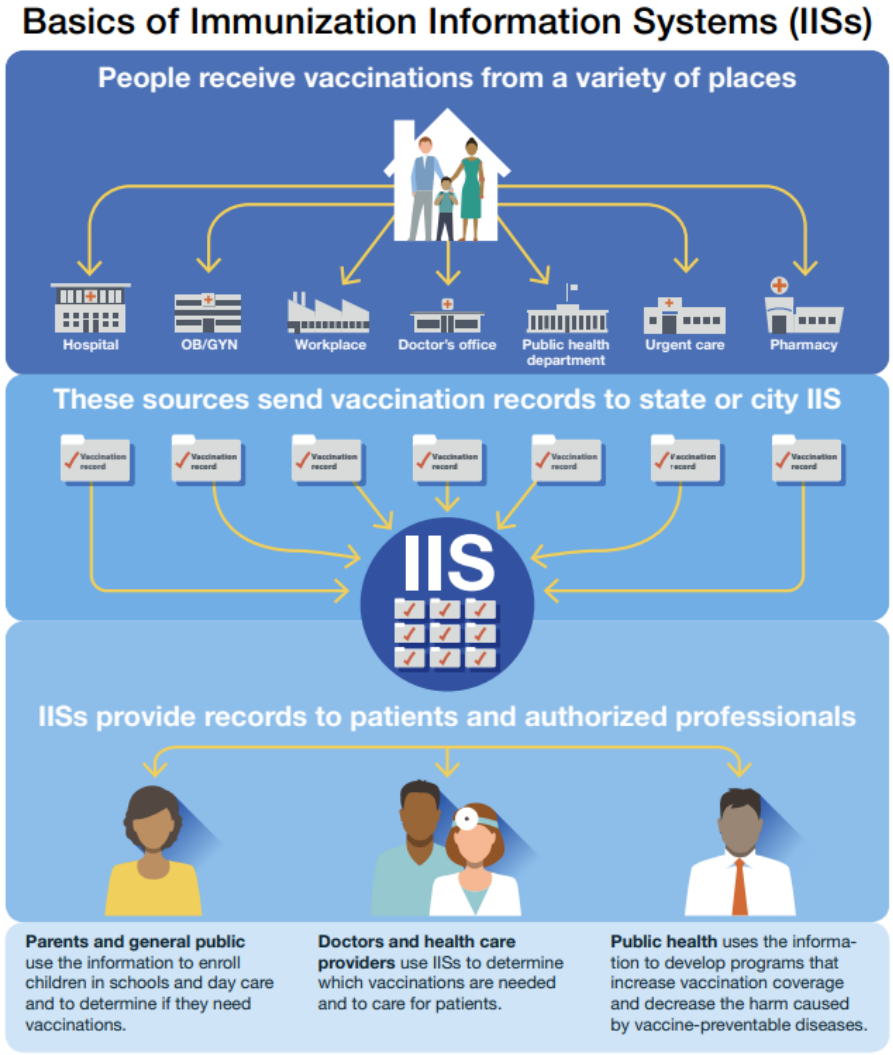
Safe Injection Practices

- Prepare injections using aseptic technique in a clean area away from the patient
- Avoid multi-dose vials whenever possible
- Disinfect the rubber septum on a medication vial with alcohol before piercing
- **Never** use needles or syringes for more than one patient
- Store vaccine at temperatures indicated by the manufacturer and discard when expired or indicated.

CDC - One & Only Campaign
CDC - Vaccine Administration

Documentation & Data Exchange

- Document vaccinations
- If not already required, highly consider exchanging data with your state's Immunization Information System (IIS)
- Utilize your state's IIS to look for vaccines already given



CDC - Basics of an IIS

Nebraska ICAP & ICAR Visits for Dialysis

Nebraska ICAP works with UNMC, Nebraska Medicine, and NE DHHS to build and strengthen general Infection Prevention and Control capacity in various healthcare facilities. *

- ✓ Perform **free** onsite and/or remote infection prevention and control (IPC) assessments (upon request) to identify improvement opportunities
- ✓ Develop strategies, tools, and resources to help with identified IPC gaps mitigation
- ✓ Serve as a just-in-time resource to address IPC questions for IPC program leaders
- ✓ Build basic IPC remote training program for staff responsible for IPC activities in their settings

** Supported by the NE DHHS HAI program.*

ICAP
Infection Control Assessment and Promotion Program

Visit us at:

icap.nebraskamed.com

Chris Cashatt, BSN, RN, CIC
Infection Preventionist
ccashatt@nebraskamed.com

Daniel Brailita, MD
Medical Director
dabrailita@unmc.edu

ICAP

Q&As

Case Study Presentation & Discussion

Influenza Vaccine & GBS Family History

- Employee “Jack” comes to the clinic along with a friend and says he is there to be forced to get his influenza vaccine but that it will probably give him Guillain-Barré syndrome (GBS) like his parent but his employer is requiring the vaccine.
  - Background is the employer had a policy to get vaccinated or wear a mask during high times of community influenza.
  - How would you handle this scenario?

CDC - GBS

Q&As

Questions to Run On -- Revisited

How Might We …

- Get all eligible patients and vaccinated?
- Improve communication about the importance of vaccination?
- Overcome vaccination hesitancy?

Recap & Next Steps

- Top take-aways
- I like, I wish, I will
- Additional pathways for learning
- Event evaluation

Social Media

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@esrd_ncc

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National Coordinating Center (NCC)

Thank You

Kelly M. Mayo
kmayo@hsag.com
813-865-3552

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