

# VACCINE CASE STUDIES

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# Case Study: Logan (Male)

- 7 months old, no known medical problems, new to your practice
- In the office today (June) for well child visit and routine vaccinations
- Your office stocks:
  - DTaP
  - IPV
  - DTaP-IPV-HepB (Pediarix)
  - DTaP-IPV (Kinrix)
  - Hepatitis B
  - PCV13
  - RV1 (Rotarix)
  - Hib
  - TIV (Flu)

# Case Study: Logan (Male)

## Immunization History

- Immunization history available in your EMR or ImmPact Registry includes:
  - Birth dose of hepatitis B vaccine
  - 7 weeks of age
    - Pentacel (DTaP-IPV/Hib)
    - PCV13
    - RotaTeq (RV5)

# Case Study: Logan (Male)

## Question 1

- Your office does not have any Pentacel in stock due to a vaccine shortage. Can Logan receive Pediarix today?

A. Yes

B. No

# Interchangeability of DTaP Vaccines

- ACIP recommends that, whenever feasible, the same manufacturer's DTaP product should be used for the pertussis series
- However, vaccination should not be deferred if the specific DTaP vaccine brand previously administered is unavailable or unknown

# Case Study: Logan

- Today you administer Pediarix (DTaP #2, IPV #2, Hep B #2)
- You also administer PCV #2, Hib #2, TIV #2 and rotavirus vaccine

# Case Study: Logan

## Question 2

- Logan is behind schedule. You make an appointment for him to return in 4 weeks. Can Logan receive Pediarix with his other needed vaccines at that visit?
  - A. Yes
  - B. No

No wrong or right answer

# Key to Combination Vaccines

<b>Product</b>	<b>Official Abbreviation</b>	<b>Vaccine Components</b>
Pediarix	DTaP-IPV-HepB	DTaP IPV HepB



# Combination Vaccines and Minimum Intervals

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- The minimum interval between doses of a combination vaccine is determined by the component with the longest minimum interval

# Combination Vaccines and Minimum Intervals

- Minimum intervals for Pediarix components
  - Hepatitis B                      2 to 3 = 8 weeks
  - DTaP                                2 to 3 = 4 weeks
  - IPV                                    2 to 3 = 4 weeks
- Minimum interval between doses 2 and 3 of Hib and RV = 4 weeks

# Options for Logan's Next Visit (8 months of age)

- In addition to third dose of RV, PCV13, and Hib
- You can administer:
  - DTaP and IPV as separate injections and wait another month to administer hepatitis B vaccine or
  - Pediarix
    - DTaP, IPV valid
    - Hepatitis B invalid

# Uses of Combination Vaccines and Extra Doses of Vaccine Antigens

- Using combination vaccines containing certain antigens not indicated at the time of administration to a patient might be justified when:
  - the extra antigen is not contraindicated
  - Products that contain only the needed antigens are not readily available
  - Potential benefits to the patient outweigh the potential risk for adverse events associated with the extra antigens

# Extra Credit

- You have DTaP-IPV (Kinrix) in your inventory. Can you use it for the DTaP and IPV dose that Logan needs?

A. No

B. Yes

# DTaP – IPV (Kinrix)

- Administer DTaP-IPV for:
  - 5<sup>th</sup> dose of DTaP
  - 4<sup>th</sup> dose of IPV
  - Children 4 through 6 years of age
  
- Using DTaP-IPV in a child younger than age 4 or for other doses in the DTaP or IPV series is not recommended

# Case Study: Isabella (Female)

- 12 months old
- In the office to receive her 12 month vaccinations, including:
  - Hep B
  - Hib
  - DTaP
  - PCV13
  - IPV
  - MMR
  - Varicella
  - Hep A

# Case Study: Isabella

- Isabella's mother is concerned by the amount of shots she is receiving during this visit, so the provider suggests combination vaccinations, including ProQuad for the MMR & Varicella.

Is Isabella old enough to receive ProQuad?

- A. Yes, however it is not recommended for 12-15 month olds who have a history of febrile seizures.
- B. No



# Case Study: Jaxson (Male)

- 5 years old
- Returning to the office to receive his 5<sup>th</sup> dose of DTaP and 4<sup>th</sup> dose of Polio
- He also needs a dose of Hep B
- You have Pediarix, Pentacel, Kinrix and Hep B on hand, which vaccine(s) can Jaxson receive today?

# Case Study: Jaxson

(Choose all the apply)

A. Pediarix

B. Pentacel

C. Kinrix

D. Hep B

E. C&D

# Case Study: Jaxson

- **Pediarix** (DTaP-IPV-HepB) - can be given between the ages of 6 weeks up until 7 years of age.
- **Pentacel** (DTaP-IPV-Hib)- should not be used for any dose in the primary series for children age 5 years or older or as the booster dose for children ages 4-6 years.
- **Kinrix** (Dtap-IPV) - can be used as the fifth dose of DTaP and fourth dose of IPV at age 4 through 6 years.