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

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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

<table>
<thead>
<tr>
<th>Product</th>
<th>Official Abbreviation</th>
<th>Vaccine Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pediarix</td>
<td>DTaP-IPV-HepB</td>
<td>DTaP IPV HepB</td>
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Combination Vaccines and Minimum Intervals

- 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
  - Pediariix
    - 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:
  - 5th dose of DTaP
  - 4th 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\textsuperscript{th} dose of DTaP and 4\textsuperscript{th} 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.