



# Practice Modification in Vaccine Shortage Situation



By

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# The vaccines that may be at risk of shortage: Focus on...

- **DTaP containing vaccine: *tetra/Penta/Hexa(GSK temporary close the plant)***
- **MMR (*mump Jeryl Lynn short, Urabe will stop production*)**
- **VZV (*GSK produce Zoster vaccine, and increased demand with unmatched supply*)**
- **HAV (*GSK plant closed due to flooding, Crucell stop production*)**
- **Live JE (*due to unequal distribution of vaccine in EPI*)**

# Evidence-base for vaccine interchangeability recommendations

- **Ideally, as new vaccines become available, clinical trials should be conducted evaluating interchangeability with existing products.**
- **To date, the majority of information regarding interchangeability has been gathered as a result of situations of vaccine shortages and new product purchases with the negotiation of new contracts.**

*Abarca K, Ibanez I, Perret C et al. Int J Infect Dis 2008;12(3):270-77.*

*Centers for Disease Control and Prevention. MMWR Morb Mortal Wkly Rep 2011;60(2):1-61.*

*Halperin SA, Tapiero B, Law B et al. Vaccine 2006;24(18):4017-23.*

*Kwak GY, Kwon HJ, Kim JH et al. Vaccine 2012;30(31):4644-7.*

*National Advisory Committee on Immunization. Can Commun Dis Rep 2005;31(ACAS-1):1-10.*

# General principles of vaccine interchangeability

- **In general, use the same manufacturer's product for all doses in a vaccine series. However, routine immunization should not be deferred because of the lack of availability of a specific product.**
- To be considered interchangeable, the vaccines should:
  - be authorized with the same indications and with equally acceptable schedules,
  - be authorized for the same population,
  - contain comparable antigens,
  - similar in terms of safety, reactogenicity, immunogenicity and efficacy.
- The different manufacturers may use differing production methods, antigens or antigen concentrations, adjuvants, conjugating proteins, stabilizers and preservatives. These factors could affect the vaccine's potential for interchangeability.
- In general, vaccine diluents are not interchangeable, unless otherwise permitted by the manufacturer.

# ACIP Recommendation

## **Interchangeability of Formulations**

- FDA licensure also generally indicates that a combination vaccine may be used interchangeably with monovalent formulations and other combination products with similar component antigens produced by the same manufacturer to continue the vaccination series....if licensed and indicated for the patient's age

## **Interchangeability of Combination Vaccines from Different Manufacturers**

- Licensure of a vaccine by FDA does not necessarily indicate that the vaccine is interchangeable with products from other manufacturers. ACIP prefers that doses of vaccine in a series come from the same manufacturer; however, if this is not possible or if the manufacturer of doses given previously is unknown, providers should administer the vaccine that they have available.