

# **Administering Multiple Vaccine Injections to Infants During a Single Visit**

## **Introduction**

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WHO SAGE, April 15, 2015

# Background

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- Recent increase in number of vaccine injections in infants
  - Primary Series: Pentavalent + PCV (SAGE 2007) + IPV (SAGE 2012)
  - 9 Month Visit: Measles + PCV (LIC/MIC from 2010) + MenA (SAGE 2014) + others
- Healthcare worker and parent concerns
  - Pain, potential risks, immune response
  - Method of administration
- Impact on vaccine programs
  - Country modifications to recommended schedules
    - Delayed/additional visits
    - Altered intervals between doses
  - Ad hoc deviations from recommended practices
    - Routes of injection
    - Foregoing some vaccines
    - “Vaccine hesitancy”

# Countries with Multiple Injection Visits by WHO Region (U2 years of age)

	Global	AFR	AMR	EMR	EUR	SEAR	WPR
# of countries with data	194	47	35	21	53	11	27
Median # of immunization visits	6	5	7	6	7	6	6
% with 2-shot visits	82%	74%	77%	95%	79%	73%	96%

# IPV Introduction

## Countries with a 3-shot Visit by mid-2016\*

- 55 countries recommending 3-injection visit for IPV introduction

IPV as 3 <sup>rd</sup> injection	AFR	AMR	EMR	EUR	SEAR	WPR
Yes	35	7	6	0	0	7
No	11	9	6	0	11	9
Undecided/ Unknown	0	13	0	12	0	0

\*Updated April 13th, 2015

# IPV Related WHO Recommendations

## Administration of multiple injections for infants

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- IM preferred over SC
  - IPV (non-adjuvanted) can be given intramuscularly (IM) or subcutaneously (SC)
  - IM recommended because of reduced reactogenicity and easier administration
- Avoid deltoid in infants < 15 months
  - For IM injections in infants below 15 months of age, the deltoid injection site (upper arm) should not be used due to its inadequate muscle mass
- 2 injections in same thigh acceptable
  - When three IM injections are scheduled simultaneously in children under 15 months of age, it is safe and acceptable to give 2 injections in the same thigh
  - WHO recommendation is
    - PCV+IPV, separated by 2.5 cm
    - DTP-HepB-Hib

# Structure of SAGE Session

## Simultaneous vs. Separate Injections

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### Can it be done?

- Provider and Caregiver Acceptability and Acceptance

**1. *Systematic Review of Evidence (Aaron Wallace)***

**2. *Field Assessments from South Africa and Tanzania (Charles Wiysonge)***

### Should it be done?

- Biologic Impact: do vaccines work as well?
  - Efficacy/impact is focus
  - Immunogenicity as proxy for efficacy/impact
- Safety: are there safety issues in giving vaccines simultaneously?

### How can it be done?

- Administration:
  - Location: Same limb/different limb, which limb?
  - Distance apart
  - Method of administration
- Vaccine Preparation/Programmatic

**3. *Systematic Review of Evidence on Immunogenicity/Safety/Admin/Program (Samantha Dolan)***

**4. *Conclusions and Recommendations (Kate O'Brien)***