

Caregiver and healthcare provider attitudes and practices towards multiple injections in infant vaccination visits

STRATEGIC ADVISORY GROUP OF EXPERTS ON IMMUNIZATION

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Systematic Review Objectives and Methods

Objectives

- Synthesize provider, caregiver attitudes, practices about multiple injections in a routine infant vaccination visit

Methods

- Review of peer-reviewed and grey literature on programmatic experiences with multiple injection (MInj) visits
- Any country



Photo credit: Karen Wilkins, WHO/DRC

Summary of Findings

Study Settings

46 papers reviewed, 1970-2015

*Australia: n=3; Belgium: n=1; Germany: n=1; Netherlands: n=1; United Kingdom: n=2; multi-country: n=1;

Vaccine Introduction Context

Vaccine introductions assessed in 26 (59%) studies

Vaccine	Number of studies
Pneumococcal (PCV)	7
HepB	7
Inactivated Polio (IPV) (switch from OPV)	6
Meningococcal C (MenC)	3
PCV and IPV	1
Influenza and varicella	1
HepB and MenC	1
Hib	1
DTaP (switch from DTwP-containing vaccine)	1

Focus of reviewed studies

Study Focus	N
■ Caregiver attitudes, practices	15
■ Healthcare provider attitudes, practices	14
■ Provider and caregiver attitudes, practices	10
■ Healthcare record reviews	3
■ Intervention assessments	4

Factors associated with provider and caregiver attitudes and practices towards multiple injections

Attitude	Provider Factor/Belief	Caregiver Factor/Belief
Positive	<u>Disease importance</u> <u>High belief in vaccine effectiveness</u> Direct experience w/disease impact Comfort administering MI Fewer visits more convenient Young provider age Medical association, colleague recommendations	Positive provider recommendation <u>Disease importance</u> <u>High belief in vaccine effectiveness</u> Infants 'cannot fear' injections
Negative	<u>Child's pain</u> <u>Perceived reactogenicity</u> Caregiver objections/no return Concern about AEFI Previous AEFI experiences Low importance of disease, vaccine	<u>Child's pain</u> <u>Perceived reactogenicity</u> Immune system 'stress'

Caregivers: Weighing Many Concerns During Multiple Injection Visit

Disease severity, vaccine side effects outweigh concern with multiple injection visit

Notable evidence:

- | | |
|--|---|
| - OPV to IPV switch | 92% of parents preferred IPV to avoid VAPP risk (USA) |
| - DTwP to DTaP switch | 57% of mothers preferred DTaP option with more injections/visit to avoid higher reactogenicity of DTwP (Canada) |
| - Understanding disease risks | 14% increase in acceptance of MInj visits after parental education on disease risks (Europe) |
| - Avoidance of side effects, disease versus MInj | Parents prioritize disease and side effect concerns over concerns for MInj (USA) |

Potentially Negative Practices & Outcomes From Multiple Injections

Potentially negative practices due to multiple injection recommendations

- Defer ≥ 1 injection to new, unscheduled visit
- Defer ≥ 1 injection to later, scheduled visit
- Continue administration of oral version (USA OPV-IPV switch)
- Rearrange official country schedule

Inconsistent impact on vaccination outcomes

- Six studies: significant association between vaccine deferrals and higher likelihood of incomplete vaccination at 12-18 months of age
- Six studies: no association between caregiver multiple injection concerns and vaccination delay or lack of acceptance of multiple injection visits

Differences: Provider Versus Caregiver Attitudes and Practices

5 of 6 studies reported differences in provider and caregiver attitudes about MInj visits

- Providers often over-estimated or misunderstood caregiver concerns

Key evidence:

Location	Providers	Caregivers
Canada	60% - strong concerns	41% - strong concerns
Canada	81% - predicted strong parental concern	43% - strong concerns
Australia	86% - strong concerns	42% - strong concerns
USA	63% - predicted strong parental concern	37% - strong concerns
USA	80% - predicted the number of injections was most important caregiver factor	47% - disease prevention: most important factor

Conclusions (I)

Providers

- May overestimate caregiver concerns about multiple injections
- Weigh disease risk, vaccine effectiveness against increased pain, negative experience for caregivers

Caregivers

- Weigh disease risk against increased pain of multiple injections

Providers

- Can alleviate caregiver concerns by providing information on vaccination benefits, side effects

Providers &
Caregivers

- If concerns not addressed, may lead to vaccine deferrals and delayed vaccination status

Conclusions (2) & Next Steps

Conclusions

- Few studies from developing countries

Next Steps

- Proposed and ongoing field studies
 - Document provider and caregiver attitudes and practices
 - IPV introduction-related studies
 - Ongoing: Nepal, The Gambia, Albania, Yemen
 - Recently completed: South Africa, Tanzania
- Guidance during IPV Introduction
 - Healthcare provider training, documentation
 - Monitoring uptake of multiple injection visits to identify short and long-term challenges
 - Developing national schedules without avoiding multiple injection visits

Thank you

QUESTIONS?