

Acceptability of multiple injections during a single vaccination visit in South Africa and Tanzania

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On behalf of the investigators and sponsors

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Acceptability of 3 vaccine injections during a single clinic visit in South Africa

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Study sponsored by WHO

South African EPI guidelines

NEW EPI VACCINES GUIDELINES

REVISED : OCTOBER 2010





health

Department:
Health
REPUBLIC OF SOUTH AFRICA

South African EPI schedule

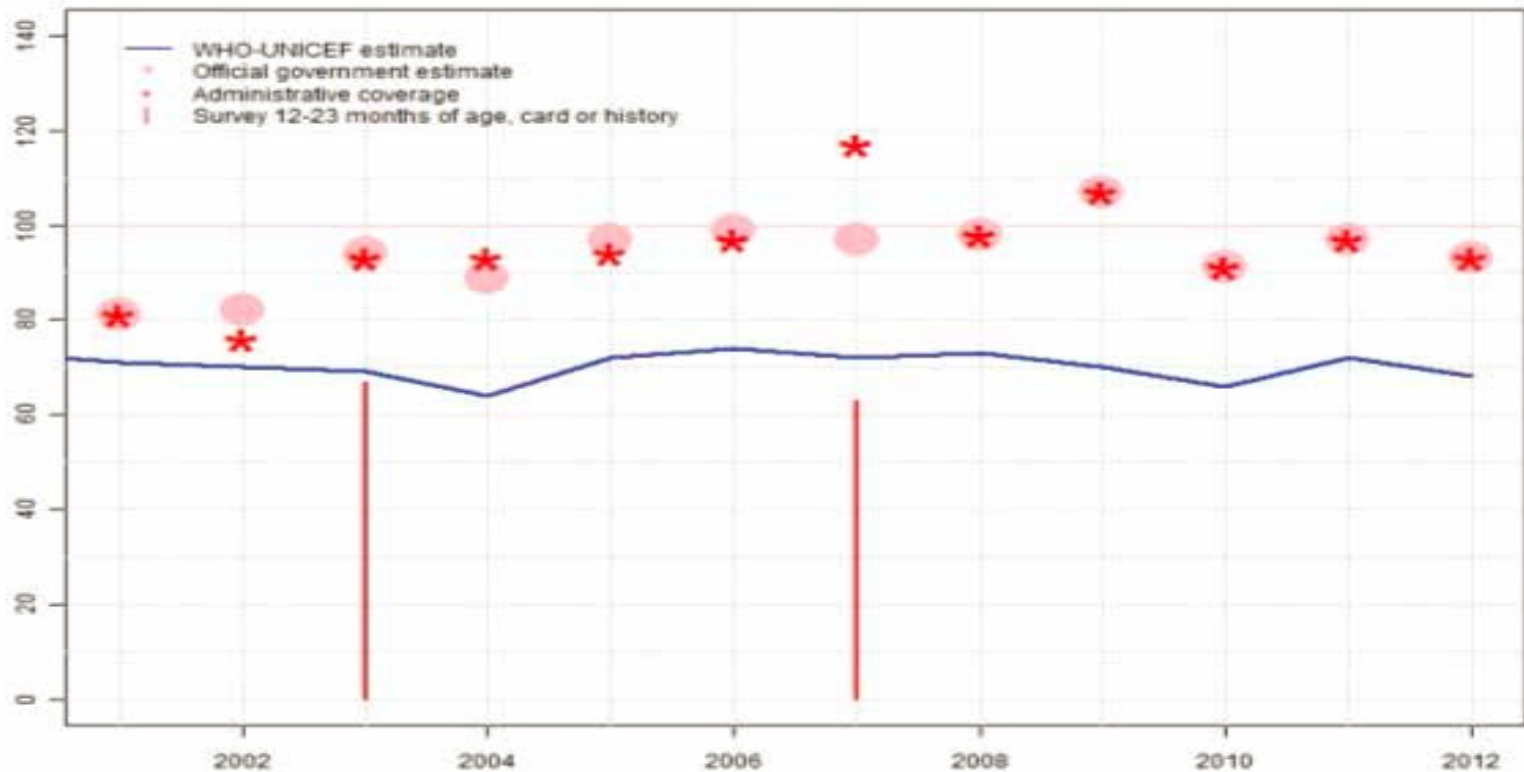
Expanded Programme on Immunisation – EPI (SA) Revised Childhood Immunisation Schedule from April 2009

Age of Child	Vaccines needed	How and where is it given?
At Birth	BCG Bacilles Calmette Guerin	Right arm
	OPV (0) Oral Polio Vaccine	Drops by mouth
6 Weeks	OPV (1) Oral Polio Vaccine	Drops by mouth
	RV (1) Rotavirus Vaccine	Liquid by mouth
	DTaP-IPV//Hib (1) Diphtheria, Tetanus, acellular Pertussis, Inactivated Polio Vaccine and <i>Haemophilus influenzae</i> type b Combined	Intramuscular / Left thigh
	Hep B (1) Hepatitis B Vaccine	Intramuscular / Right thigh
	PCV ₇ (1) Pneumococcal Conjugated Vaccine	Intramuscular / Right thigh
10 Weeks	DTaP-IPV//Hib (2) Diphtheria, Tetanus, acellular Pertussis, Inactivated Polio Vaccine and <i>Haemophilus influenzae</i> type b Combined	Intramuscular / Left thigh
	Hep B (2) Hepatitis B Vaccine	Intramuscular / Right thigh
14 Weeks	RV (2) Rotavirus Vaccine*	Liquid by mouth
	DTaP-IPV//Hib (3) Diphtheria, Tetanus, acellular Pertussis, Inactivated Polio Vaccine and <i>Haemophilus influenzae</i> type b Combined	Intramuscular / Left thigh
	Hep B (3) Hepatitis B Vaccine	Intramuscular / Right thigh
	PCV ₇ (2) Pneumococcal Conjugated Vaccine	Intramuscular / Right thigh
9 Months	Measles Vaccine (1)	Intramuscular / Left thigh
	PCV ₇ (3) Pneumococcal Conjugated Vaccine	Intramuscular / Right thigh
18 Months	DTaP-IPV//Hib (4) Diphtheria, Tetanus, acellular Pertussis, Inactivated Polio Vaccine and <i>Haemophilus influenzae</i> type b Combined	Intramuscular / Left arm
	Measles Vaccine (2)	Intramuscular / Right arm
6 Years (Both boys and girls)	Td Vaccine Tetanus and reduced strength of diphtheria Vaccine	Intramuscular / Left arm
12 Years (Both boys and girls)	Td Vaccine Tetanus and reduced strength of diphtheria Vaccine	Intramuscular / Left arm

* Rotavirus Vaccine should NOT be administered after 24 weeks.

In 2009, South Africa introduced 3 injections at 6 and 14 weeks, with the introduction of the pneumococcal conjugate vaccine into the EPI schedule

DTP3 coverage in South Africa



According to the WHO-UNICEF Joint Reporting Form, the administrative vaccination coverage in South Africa increased steadily to 2009, then plateaued at 85-90% till 2012 ([WHO IVB website](#)).

Current information from the [South African National Advisory Group on Immunization](#), shows that the coverage remained steady at 85-90% from 2013 to 2015.

Objective

Summary of context:

Introduction of 3 injections at 6 and 14 weeks has not had an impact on vaccination coverage in South Africa.

However, with increasing use of 3 vaccine injections in other low and middle-income countries, we set out to document and share SA's experience

Objective:

To determine the acceptability and acceptance of 3 injections during a single vaccination visit, and the factors which influence these among care givers and vaccinators

Methods

Design: Descriptive cross sectional study from July to Nov 2014

Population: 229 caregivers and 98 vaccinators

Setting: Western Cape (WC) & KwaZulu-Natal (KZN) provinces of South Africa
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Sampling:

Sampling:

Convenience sampling of public and private as well as urban and rural vaccination clinics in the two provinces.

All caregivers of infants between 6 weeks and 6 months of age attending

Acceptability to caregivers of 3 injections

- ❖ 71% of caregivers informed about number of injections
More in WC than KZN, $P=0.005$
- ❖ 93% of caregivers satisfied with injections
Did not differ by province, sector (public vs private), or infant age
- ❖ 97% of caregivers satisfied with vaccinators' care
The older the infant the more satisfied the caregiver
- ❖ 73% of caregivers preferred one visit for 3 injections
More in WC than KZN ($P=0.004$)

However, some caregivers voiced concerns:

- ❖ 52% of caregivers felt 3 injections were too many during one visit
More in KZN than WC, $P=0.004$

Results:

Acceptance by caregivers of 3 injections

High acceptance by caregivers of 3 injections:

- 97% willing to bring their infant for 3 injections in future
Did not differ by province, sector, or infant age

- 99% willing to recommend 3 injections to others
Did not differ by province, sector, or infant age

- 96% of infants up-to-date for age with recommended vaccinations
Did not differ by province or sector

100% of 6-week infants and 95% of 4-6 month infants fully immunized

However, some caregivers voiced concerns

- 'Three injections given in one day is too much for the baby'



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Results:

Reasons for acceptance by caregivers of 3 injections

Benefit to baby's health:

Benefit to baby's health:

‘I only do it for the child's sake because I know that he'll be safe from getting sick’

‘I want my baby to be healthy’

Protection against disease:

‘To protect my child from infections and germs’

Results:

How can we increase acceptability to caregivers?

‘Teach and remind all the times about immunization ...’

- ❖ ‘Nurses must explain the types of injections that are given to our babies ...’

Supply more combination vaccines

- ❖ ‘If there is a way of making the three injections into one dose’
- ❖ ‘If they can administer one injection in one [a different] part of the body’

Change route of administration

- ❖ ‘Please change injections to oral drops if possible’
- ❖ ‘Perhaps get another way of administering vaccines other than injections’



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Results:

Acceptability and acceptance by vaccinators

per visit (more in KZN $P < 0.001$)

Results:

Why is acceptability of 3 injections low among vaccinators?

‘When the baby is premature’



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Conclusion

Introduction of 3 injections has not affected vaccination coverage in South Africa



would bring the child for 3 injections due to benefits of immunisation.

Caregivers expressed concern about infant's discomfort after injections, but



and the effects of multiple injections on them; rather than specific adverse events
Vaccinators voiced concerns related to underweight, premature and sick babies,
and the effects of multiple injections on them; rather than specific adverse events



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Recommendations

- ❖ Acceptability of 3 injections may be improved
 - ❖ through enhanced vaccinator-caregiver communication about multiple injections; and
 - ❖ Acceptability of 3 injections may be improved through enhanced vaccinator-caregiver communication about multiple injections; and
- ❖ through improved management of infant's pain

Vaccinator training should include evidence-informed ways of communicating with caregivers and reducing injection pain

Tanzania multiple injection study

Presented by CS Wiysonge
on behalf of investigators and sponsors

Study sponsored by UNICEF

Objectives and methods

To assess perceptions of national and district health managers, service providers, and community members on multiple injections for immunization

Methods:

Period of data collection: Late 2014 to early 2015

Location: 4 regions of mainland Tanzania and 2 regions of Zanzibar

Approach: Qualitative study

- ❖ 18 interviews with healthcare managers
- ❖ 36 in-depth interviews with healthcare workers
- ❖ 36 focus group discussions with 8-12 community members each

Acceptance by healthcare workers of 3 injections

- ❖ 82% comfortable with administering 3 injections
- ❖ 61% did not mention any disadvantage of 3 injections

Only 15% not comfortable with administering 3 injections

In addition, many healthcare workers have previous experience with administering 3 injections during a single vaccination visit:

- ❖ 44% healthcare workers had administered up to 3 injections before survey

of 3 injections

of reasons, including the following:

- ❖ There are cost and time savings with fewer vaccination visits
- ❖ A child receives the full dose, since injected vaccines cannot be vomited
- ❖ A child gets immunized at the youngest appropriate age

Pain was an expressed concern, but the study revealed multiple situations when 3 vaccine injections are given during a single visit, e.g.:

- ❖ When children receive the BCG vaccine late, with PCV1 and DTP1
When older, unvaccinated migrant children present for vaccinations

Recommendations

For successful IPV introduction, in the context of multiple injections, the study investigators recommend:

1. Comprehensive community education and mobilization
2. Building capacity of service managers to ensure awareness of IPV introduction
3. Training vaccinators to ensure that they are comfortable with giving 3 injections

vials to ensure no child is turned away from vaccination services.

Thank you

I acknowledge caregivers, vaccinators, health officials, collaborators, and sponsors who made these two studies possible.

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