

# **Vaccine hesitancy in South Africa: Why we need to adapt validated measures**

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








South African Medical Research Council



# health


Department:  
Health  
REPUBLIC OF SOUTH AFRICA

## 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 Guérin	 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
	PCV7 (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
	PCV7 (2) Pneumococcal Conjugated Vaccine	 Intramuscular / Right thigh
 9 Months	Measles Vaccine (1)	 Intramuscular / Left thigh
	PCV7 (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.

# Latest kid in block : HPV vaccine

 **PREVENT CERVICAL CANCER**

The government is introducing  
HPV\* vaccination for girls in **Grade 4**




Date of **1<sup>ST</sup> DOSE**  
March 2014

Date of **2<sup>ND</sup> DOSE**  
October 2014

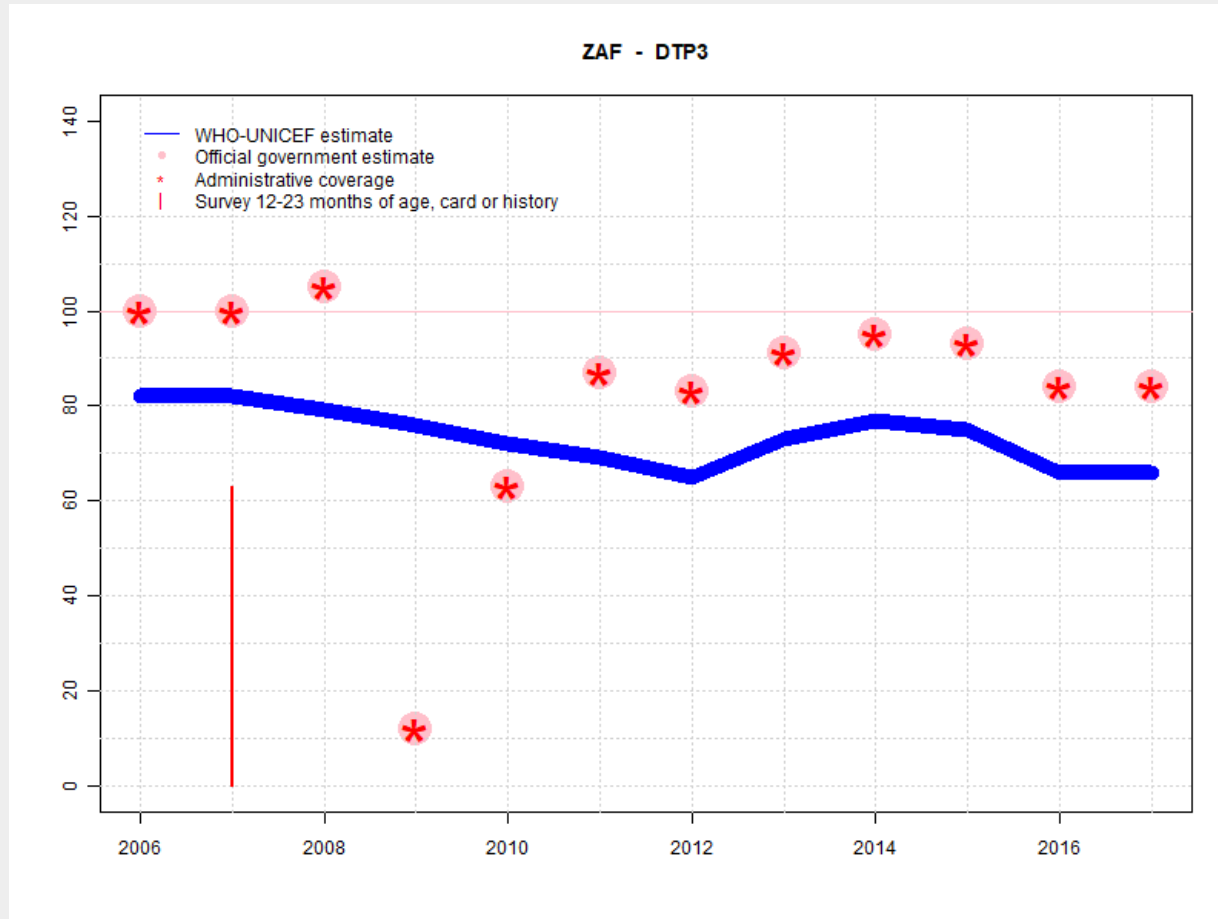
Remember to ask your parents/caregiver/guardian to sign  
and return the consent form to be vaccinated.

**Protecting young girls,  
future women of South Africa**

 Basic Education  
Health

\*Human Papillomavirus

# Vaccination coverage in South Africa in the last decade



Source: WHO 2018

# Top 10 countries with un-immunized children in the world

- Nigeria, India, Pakistan
- Indonesia, Ethiopia
- DRC
- Iraq
- Angola
- Brazil
- South Africa

Source: WHO 2018

# Reasons for the low vaccination coverage in South Africa

Wiysonge et al. *BMC Public Health* 2012, **12**:578  
<http://www.biomedcentral.com/1471-2458/12/578>



## RESEARCH ARTICLE

## Open Access

### Advances in childhood immunisation in South Africa: where to now? Programme managers' views and evidence from systematic reviews

Charles Shey Wiysonge<sup>1,2\*</sup>, Nthombenhle J Ngcobo<sup>3</sup>, Prakash M Jeena<sup>4</sup>, Shabir A Madhi<sup>5</sup>, Barry D Schoub<sup>5</sup>, Anthony Hawkrigde<sup>1</sup>, Muki S Shey<sup>6</sup> and Gregory D Hussey<sup>1,2</sup>

- Insufficient knowledge among HCWs
- Insufficient financial and human resources
- Anti-immunisation rumours and reluctance from parents

# Rise of vaccine hesitancy in SA?

Article	Sample	LoM / VH
van Turennot et al 2003	207	5
Corrigall et al 2008	3705	116
Simango 2012	240	24
Ndlovu et al 2015	161	0
Motlounq et al 2016	173	2
Montwedi et al 2018	276	1
le Roux et al 2017	470	15
Burnett et al 2018	214	7
<b>TOTAL:</b>	<b>5446</b>	<b>170</b>

Overall: **3%**

Courtesy: Rose Burnett (Sefako Makgatho Health Sciences University, South Africa)

# Why measure vaccine hesitancy?

REPORT OF THE SAGE  
WORKING GROUP ON  
VACCINE HESITANCY

01 October 2014



2017  
ASSESSMENT  
REPORT OF THE  
GLOBAL VACCINE  
ACTION PLAN

STRATEGIC  
ADVISORY  
GROUP OF  
EXPERTS ON  
IMMUNIZATION



# Current vaccine hesitancy measures



## Measuring Vaccine Confidence: Introducing a Global Vaccine Confidence Index

February 25, 2015 · Research Article

### Citation

Larson HJ, Schulz WS, Tucker JD, Smith DMD. Measuring Vaccine Confidence: Introducing a Global Vaccine Confidence Index. PLOS Currents Outbreaks. 2015 Feb 25. Edition 1. doi: 10.1371/currents.outbreaks.ce0f6177bc97332602a8e3fe7d7f7cc4.



ELSEVIER

Contents lists available at [ScienceDirect](#)

Vaccine

journal homepage: [www.elsevier.com/locate/vaccine](http://www.elsevier.com/locate/vaccine)

## The Vaccination Confidence Scale: A brief measure of parents' vaccination beliefs

Melissa B. Gilkey<sup>a</sup>, Brooke E. Magnus<sup>b</sup>, Paul L. Reiter<sup>c</sup>, Annie-Laurie McRee<sup>d</sup>,



ELSEVIER

Contents lists available at [ScienceDirect](#)

Preventive Medicine

journal homepage: [www.elsevier.com/locate/ypmed](http://www.elsevier.com/locate/ypmed)



## A survey instrument for measuring vaccine acceptance

Dilshani Sarathchandra<sup>a,\*</sup>, Mark C. Navin<sup>b</sup>, Mark A. Largent<sup>c</sup>, Aaron M. McCright<sup>d</sup>



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Contents lists available at [ScienceDirect](#)

Vaccine

journal homepage: [www.elsevier.com/locate/vaccine](http://www.elsevier.com/locate/vaccine)



## The vaccine hesitancy scale: Psychometric properties and validation

Gilla K. Shapiro<sup>a,b,\*</sup>, Ovidiu Tatar<sup>b</sup>, Eve Dube<sup>c</sup>, Rhonda Amsel<sup>a</sup>, Barbel Knauper<sup>a</sup>, Anila Naz<sup>b</sup>,

SHORT REPORT

Human Vaccines 7:4, 419-425; April 2011; © 2011 Landes Bioscience

## Development of a survey to identify vaccine-hesitant parents

The Parent Attitudes about Childhood Vaccines survey

Douglas J. Opel<sup>1,2,\*</sup>, Rita Mangione-Smith<sup>1,3</sup>, James A. Taylor<sup>1</sup>, Carolyn Korfiatis<sup>2</sup>, Cheryl Wiese<sup>4</sup>, Sheryl Catz<sup>4</sup>



ELSEVIER

Contents lists available at [ScienceDirect](#)

Vaccine

journal homepage: [www.elsevier.com/locate/vaccine](http://www.elsevier.com/locate/vaccine)

## Measuring vaccine hesitancy: The development of a survey tool

Heidi J. Larson<sup>a,\*</sup>, Caitlin Jarrett<sup>a</sup>, William S. Schulz<sup>a</sup>, Mohaya Chaudhuri<sup>b,1</sup>, Yuqing Zhou<sup>c,1</sup>, Eve Dube<sup>d,1</sup>, Melanie Schuster<sup>e</sup>, Noni E. MacDonald<sup>f,1</sup>, Rose Wilson<sup>a</sup>, the SAGE Working Group on Vaccine Hesitancy<sup>2</sup>

# Why do we need to adapt validated measures in South Africa?

HUMAN VACCINES & IMMUNOTHERAPEUTICS  
2018, VOL. 0, NO. 0, 1–3  
<https://doi.org/10.1080/21645515.2018.1460987>



Taylor & Francis  
Taylor & Francis Group

COMMENTARY

OPEN ACCESS



## Vaccine hesitancy – a potential threat to the achievements of vaccination programmes in Africa

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# Limitations of current measurement tools

- ❑ Designed for high-income countries
- ❑ None validated in South Africa
- ❑ Lengthy and contain numerous items
- ❑ Focus predominantly on confidence-related aspects of hesitancy

# Measurement tools for use in SA

- ❑ Concise to facilitate usage
- ❑ Comprehensive for assessment/differentiation of the multiple dimensions of vaccine hesitancy
- ❑ Based on multi-disciplinary knowledge and expertise

# What will these tools accomplish (1)?

- ❑ Detect concerns early
- ❑ Monitor vaccine hesitancy trends and changes
- ❑ Understand hesitancy levels and correlates
- ❑ Differentiate hesitancy from other reasons for sub-optimal vaccination

# What will these tools accomplish (2)?

- ❑ Enhance comparability of future research results
- ❑ Improve data quality over time
- ❑ Facilitate more evidence-based interventions

# VAXAFRICA

Building the scientific evidence-base for understanding, measuring and addressing vaccine hesitancy in sub-Saharan Africa (SSA)



## Status quo

Vaccine acceptance and demand is currently receiving unprecedented attention worldwide, stimulated by the WHO identifying it as a priority issue. However, very little is known about the causes of vaccine hesitancy and how to curtail it in Africa. There is thus an urgent need to test, validate, and adapt existing models and measures for application in the African region.

## Objectives

Develop valid measure of vaccine hesitancy in SSA

Develop capacity in SSA for research on vaccine hesitancy

Gain knowledge on vaccine hesitancy in SSA

Develop an intervention plan to reduce vaccine hesitancy in SSA

## Team

South African Medical Research Council

University of Erfurt, Germany

Research partners in:  
Cameroon, Democratic Republic of Congo, Kenya & Nigeria

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- Cornelia Betsch

**Thank you - Ngiyabonga – Dankie – Enkosi**