

# What is the South African Immunisation coverage?

**Vaccinology, Hermanus  
15 – 17 October 2012**

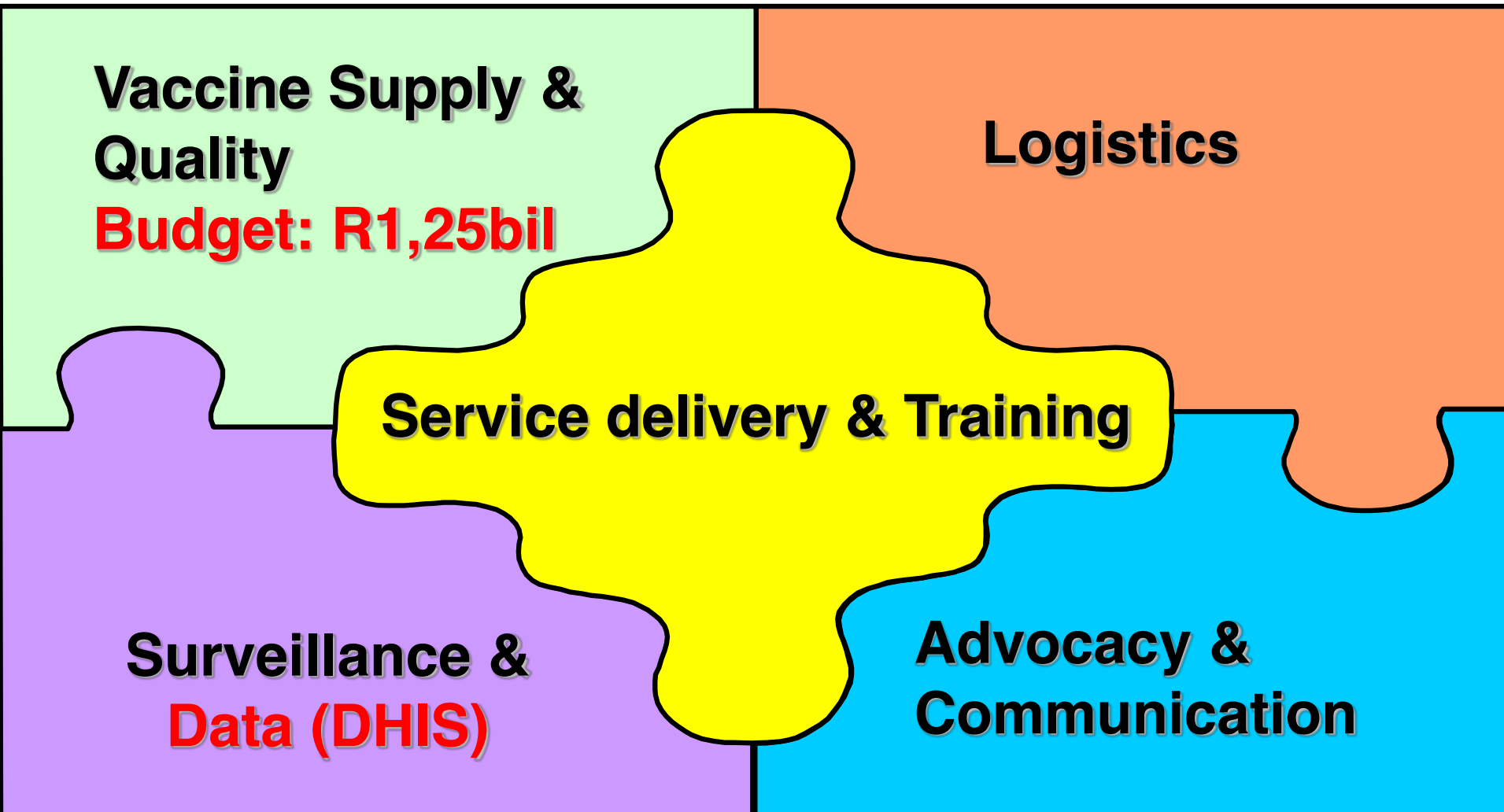
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- Immunisation coverage & indicators
- DHIS Data flow policy in South Africa
- DHIS, WHO and UNICEF immunisation coverage
- Actions taken to improve immunisation coverage
- Way forward

# 5 Components of the EPI (SA)



# Immunisation Coverage & Indicators

**Immunisation programme performance can be expressed by different indicators, e.g.**

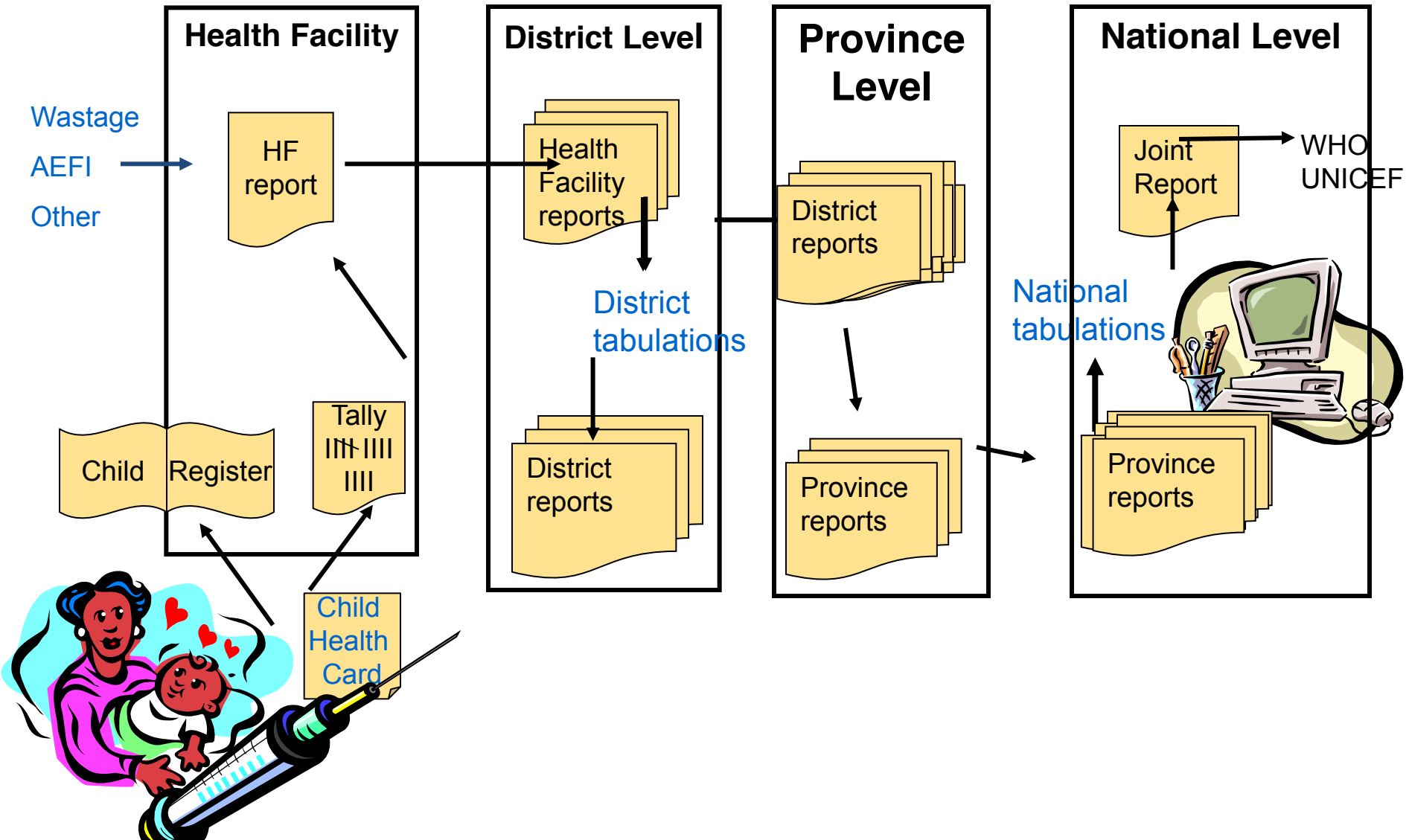
- **vaccine protection**
- **estimates of vaccine efficacy or effectiveness **directly** (i.e. reduction of vaccine preventable diseases (VPD) **in the target group**) or **indirectly** (i.e. reduction of incidence of VPD **in other groups**, the so-called herd-immunity effect)**

# Immunisation Coverage & Indicators...

- **Vaccines can prevent disease only if they reach the intended target populations**
- **Measures of vaccine coverage are used to address questions of **what proportion of the population has been reached with the vaccine****

# DHIS Data Flow Policy in South Africa:

## Routine:45 days



# Challenges

- Huge discrepancies between immunisation coverage figures used by the DOH and EPI unit and those published by UNICEF & WHO
- Results: WHO/ UNICEF figures are seen to be more authoritative, widely disseminated & subsequently used by researchers and writers
- EPI Coverage figures are monitored by EPI (SA) and also used in the HST District Barometer and other reports from the DHIS

# Challenges...

- Examples of discrepancies:
  - 2008 and 09 Fully Immunised coverage by UNICEF for DPT 3 is 69 % whilst DHIS is at 103%
- EPI disputes the WHO/UNICEF coverage figures, BUT also acknowledges that there are data quality issues with the DHIS
- Other challenges: UNICEF/WHO estimates quote separate & different coverages for DPT and Hib, in spite of SA since 1999 is using a combination vaccine DPT-Hib, administered in 1 injection

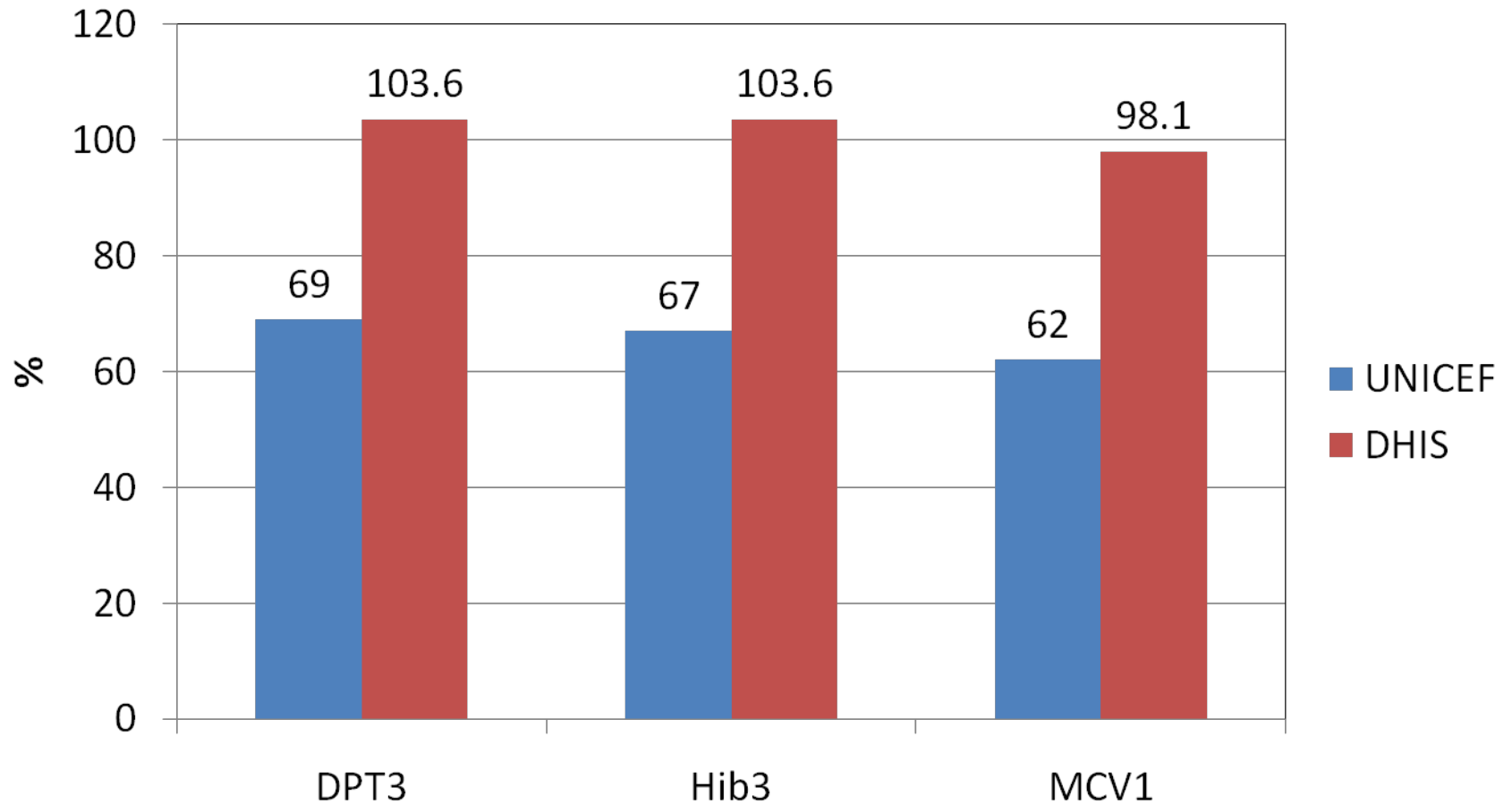


# Immunisation summary: UNICEF and WHO: MCV1 latest Coverage for South Africa is 2009

## National coverage rates (WHO/UNICEF estimates, 2009)

	2009	2008	2007	2006	2005	2000	1995	1990	1985	1980
BCG	81%	81%	81%	81%	81%	89%	95%	57%	70%	...
DTP1	77%	77%	77%	77%	77%	85%	89%	89%	91%	...
DTP3	69%	69%	69%	69%	69%	73%	72%	72%	75%	...
HepB3	67%	67%	67%	67%	67%	71%	...	...	...	...
Hib3	67%	67%	67%	67%	67%	71%	...	...	...	...
MCV	62%	62%	62%	62%	62%	72%	76%	79%	70%	...
Pol3	70%	70%	70%	70%	70%	71%	72%	76%	77%	...
PAB	75%	75%	72%	74%	59%	68%	29%	...	...	...

# UNICEF vs. DHIS Coverage 2009



# EPI (SA) Coverage

- Administrative: 96% fully immunised
- WHO/UNICEF estimates: 64% fully immunised

What are the correct/true coverages??

Is it denominators? /numerators? / both?

# The DHIS

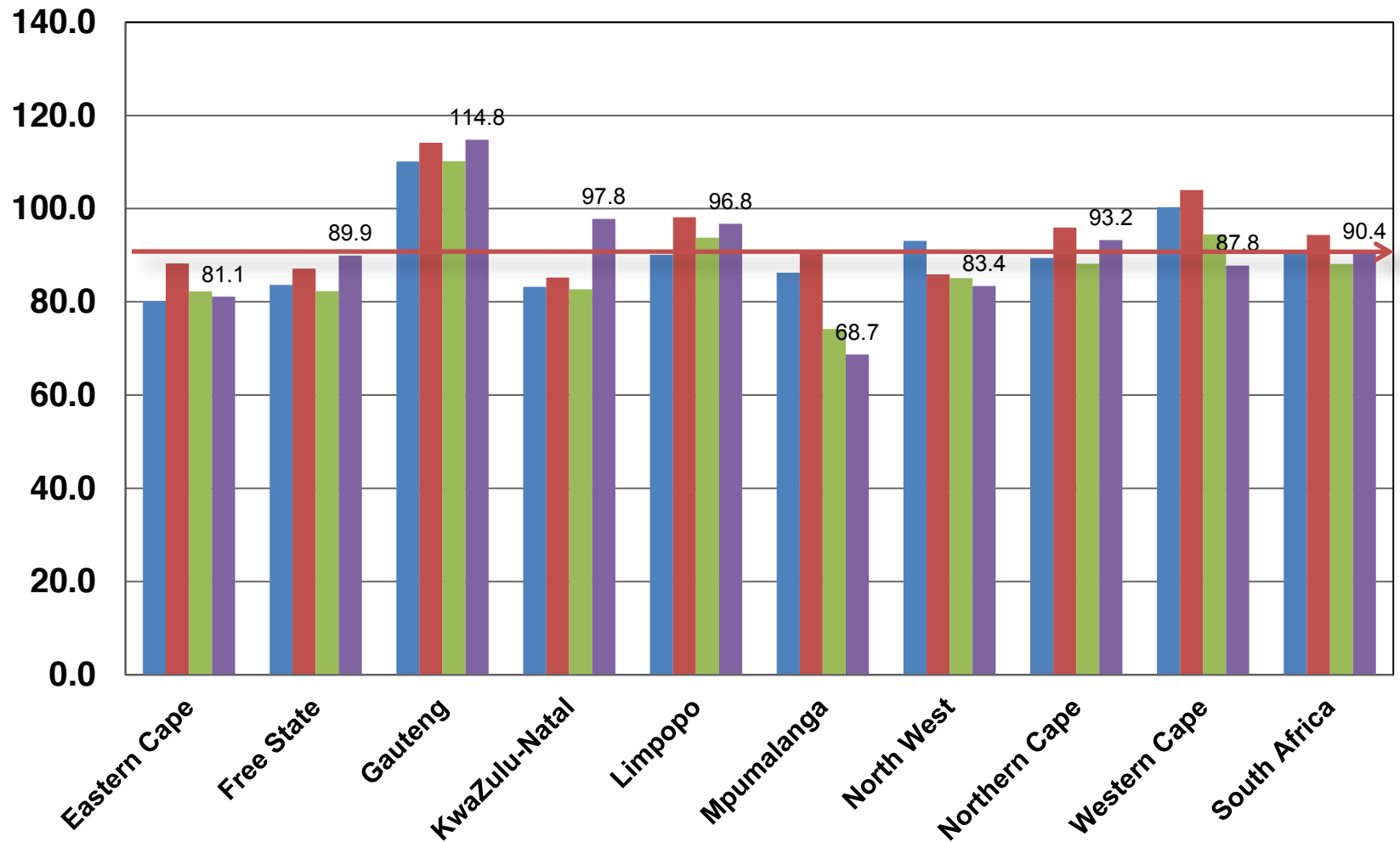
- The District based health information system: used for many other indicators - not just for EPI
- Data is routinely collected from facility through all levels to National into DHIS via HISP
- Denominators are provided by STATS SA, the official source
- Regular Data Quality audits between different levels - provinces and nationally: mainly Desk Reviews
- Data quality problems: some coverage figures >120%

# DHIS...

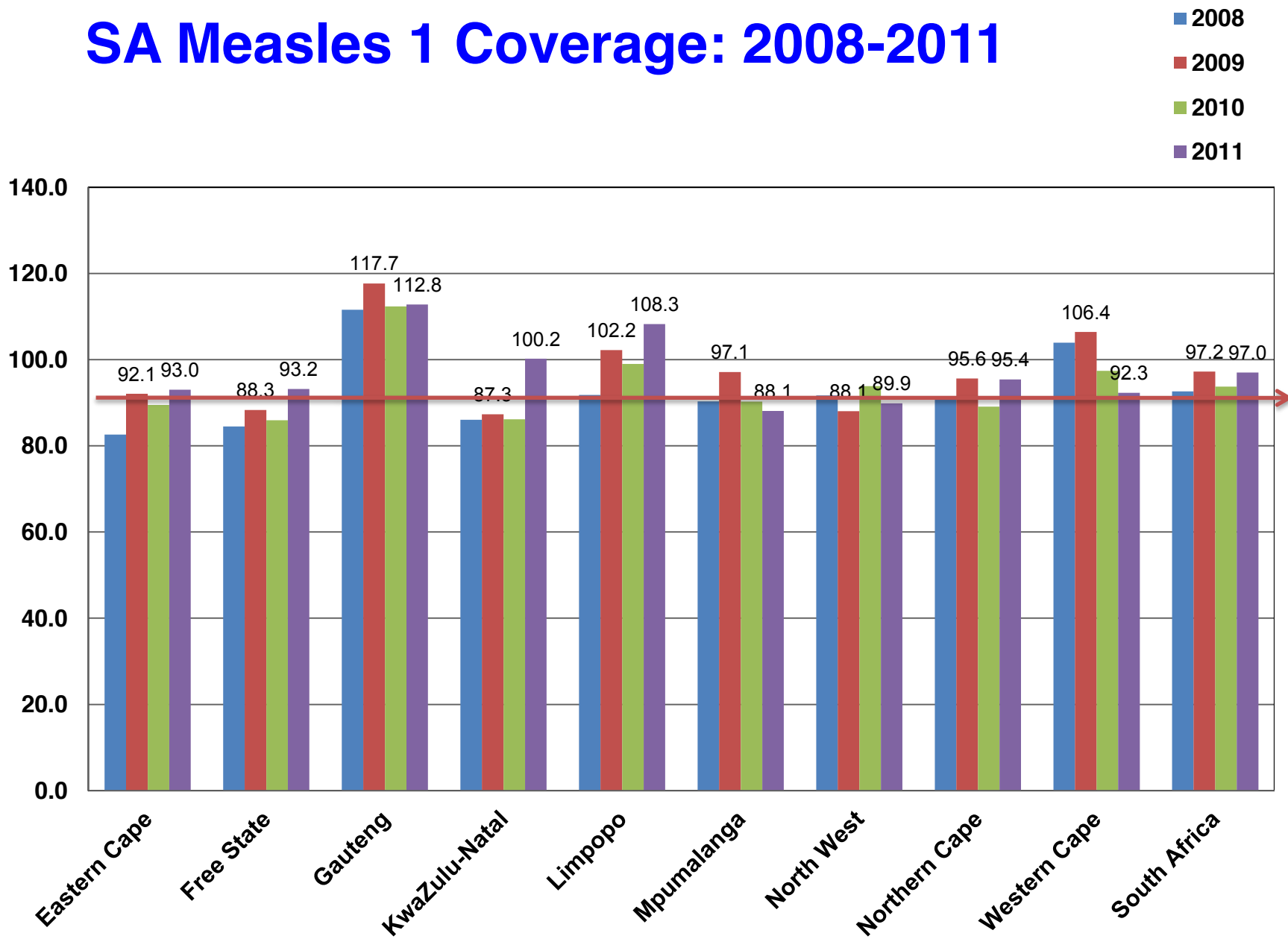
- Data Quality issues from point of source. Variation between facility, sub-district, district, province, even national: data verification/quality issues
- Denominator issues: do not explain all
- Numerator issues: data quality
- Data Quality Audits with provinces help to clean data but may not address some of the issues
- ??? Recording on the RTHC, esp. with catch-up

# SA Fully Immunised Coverage: 2008-2011

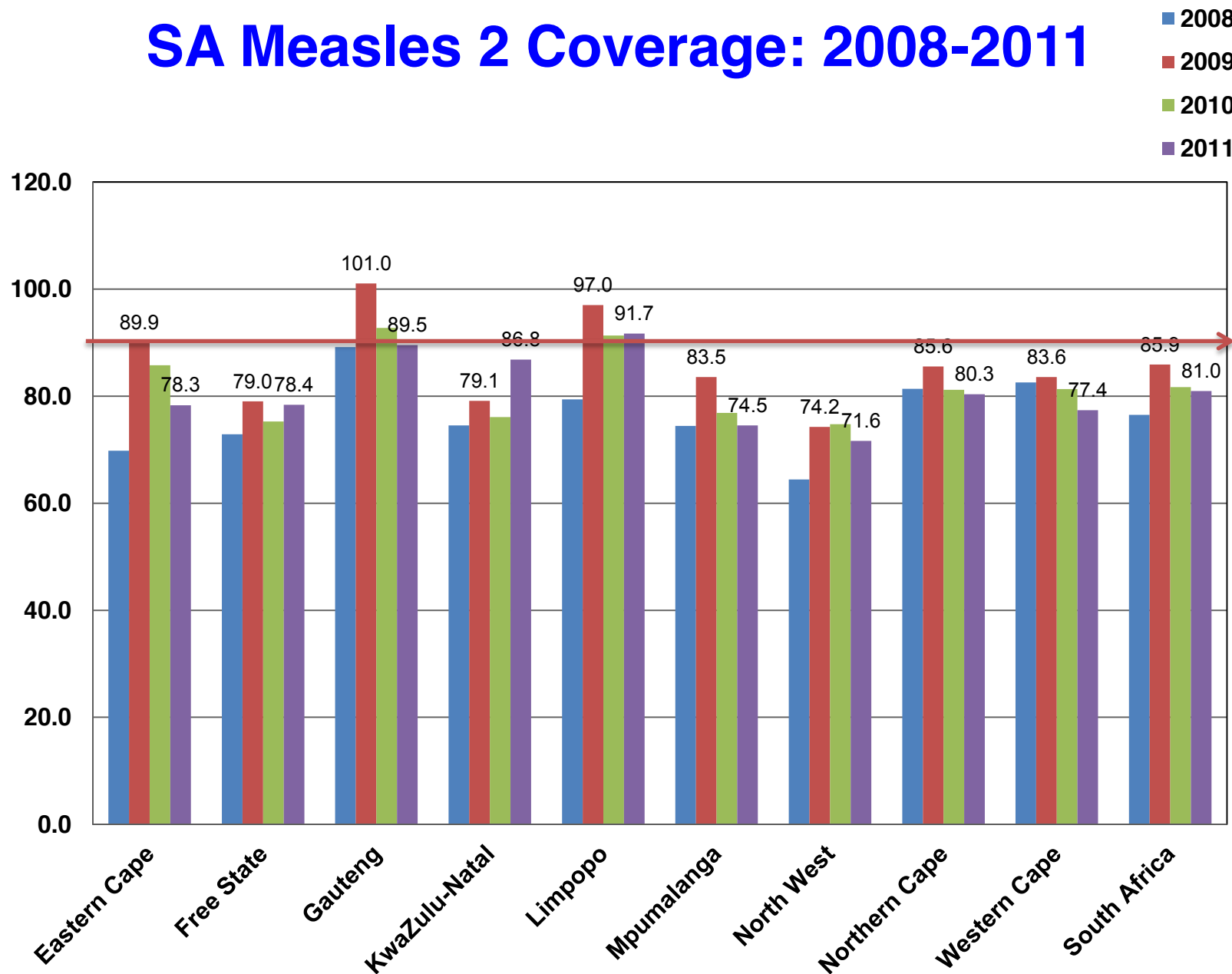
■ 2008  
■ 2009  
■ 2010  
■ 2011



# SA Measles 1 Coverage: 2008-2011

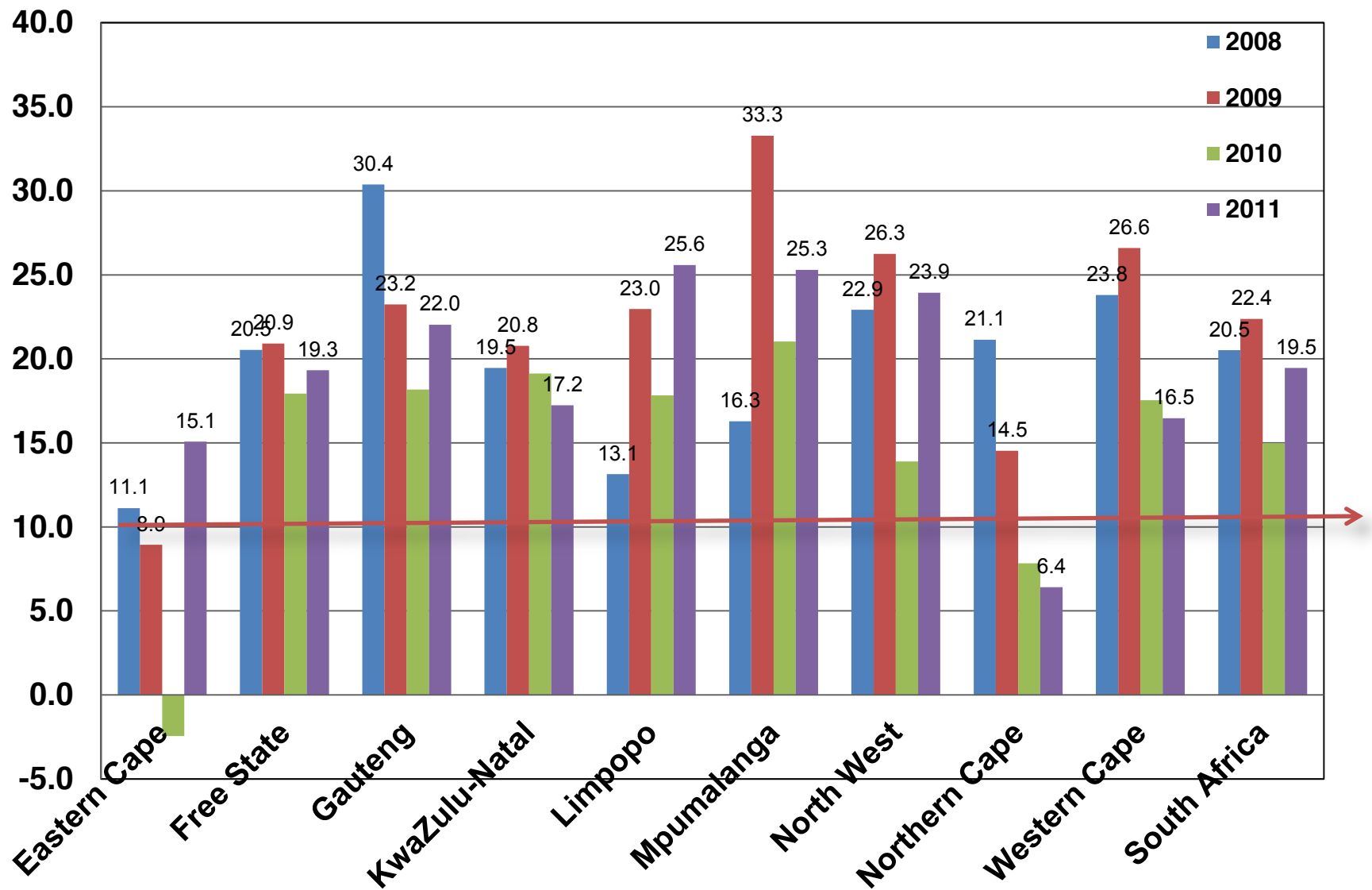


# SA Measles 2 Coverage: 2008-2011

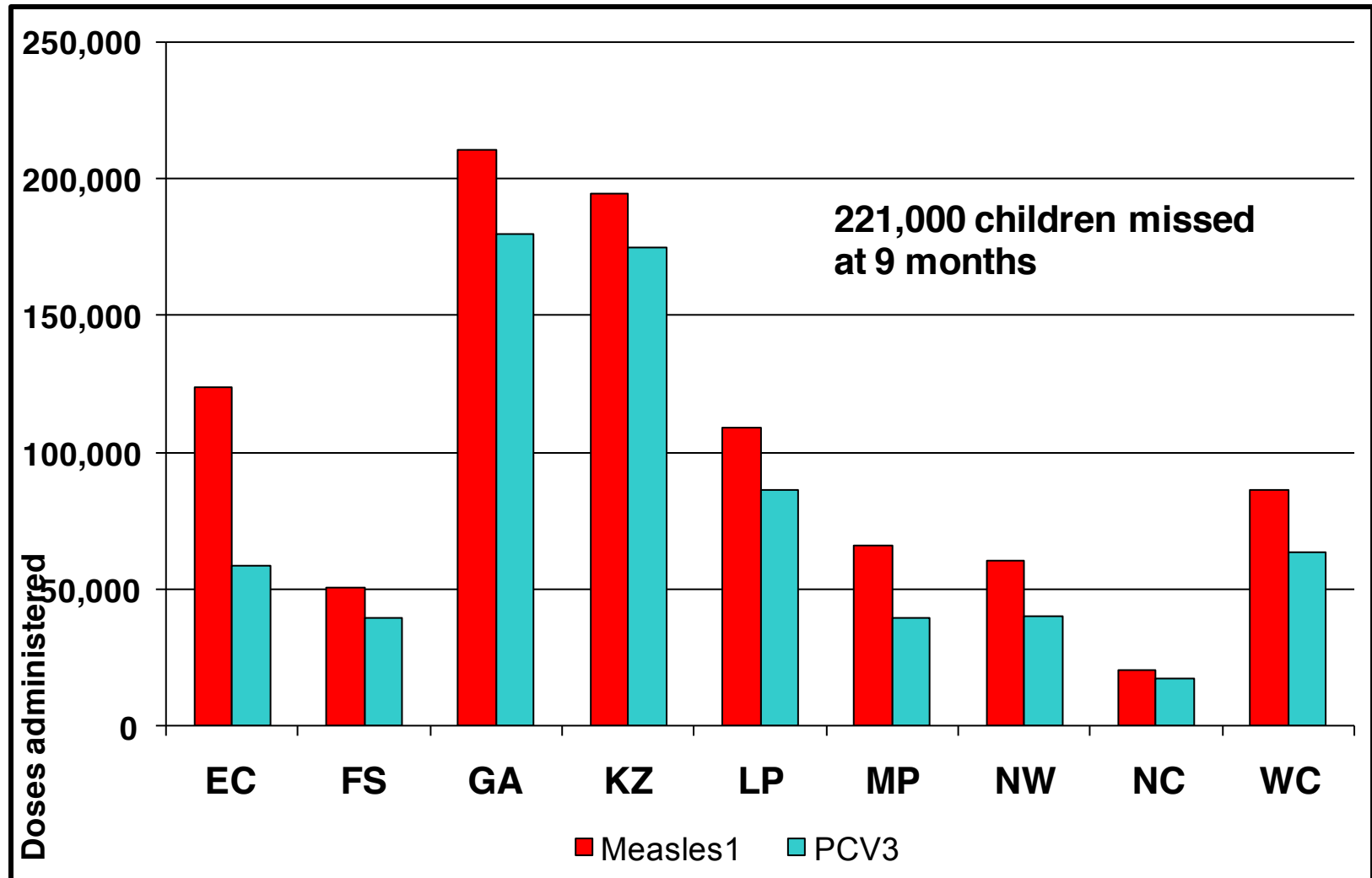




# SA Drop-out Rate: HepB3 and Measles1 2008-2011



# Children who missed PCV dose at 9 months Apr 2010-Mar 2011 (Source: 2010 PIE Report)



# Actions taken to improve immunisation coverage

- National 5 day RED DQS training held in November 2011
- Meeting held in May 2012 with WHO & UNICEF Headquarters
- 3-day Data Clean-up Workshop held in July 2012 with provincial EPI & DHIS personnel
- 5-day RED DQS Implementation capacity building Workshops by National, WHO & UNICEF held in August, September & October 2012 in 4 provinces (Free State, Mpumalanga, Limpopo & North West) & in KwaZulu Natal & Eastern Cape through UNICEF/HSP & the Discovery Fund
- Letter to STATS SA requesting revised mid-year population figures after 2011 National Census

# Examples of Findings at EPI Data Clean-up Workshop

Province	District	Pentaxim3	% Pentaxim 3 Cov	Live births
Gauteng	Ekurhuleni MM	50894	105	48348
Gauteng	Johannesburg MM	80900	130	62206
Gauteng	Sedibeng DM	18445	119	15451
KwaZulu-Natal	eThekwini MM	63233	104	60862
Limpopo	Capricorn DM	26196	101	25914
Mpumalanga	G Sibande DM	20721	104	19967
North West	R S Mompoti DM	12237	120	10171
Northern Cape	Frances Baard DM	8184	113	7260

# Francis Baard HepB 3 Coverage

	Jan	Feb	Mar	Apr	May	Jun
Dikgatlong LM	74	54	60	27	62	99
Magareng LM	66	59	Missing			19
Phokwane LM	82	100	128	127	144	143
Sol Plaatjie LM	301	385	Missing			53

# Td 12 yrs Data

		Jan	Feb	Mar	Apr	May	Jun
N Mandela MM	N Mandela A SD	16	16	43	27	100	9
	N Mandela B SD	22	1 327	651	18	10	2
	N Mandela C SD	21	460	1 193	440	189	49
		Jan	Feb	Mar	Apr	May	Jun
Fezile Dabi DM	Mafube LM	1		1	2	2	1
	Metsimaholo LM	1	535	3	14	501	15
	Moqhaka LM	17	1 038	92	6	4	8
	Ngwathe LM	9	155	299	133	62	51
		Jan	Feb	Mar	Apr	May	Jun
Sedibeng DM	Emfuleni LM	311	708	965	515	819	43
	Lesedi LM		14	89	5	7	5
	Midvaal LM	3	39	78	124	107	3
							Jun

# Capricorn Dist HepB 3 Coverage

	Jan	Feb	Mar	Apr	May	Jun
Aganang LM	359	293	299	306	290	348
Blouberg LM	416	361	381	361	342	375
Lepelle- Nkumpi LM	406	396	444	403	397	466
Molemole LM	176	160	254	284	190	210
Polokwane LM	1 193	1 074	1 051	1 995	1 221	1 289

# Findings during 2012 Provincial RED DQS Workshops

- Data Quality is a serious challenge
- Poor quality & unreliable data in all districts:  
Worse for new vaccines: doses are captured wrongly,  
discontinued antigens are still being captured
- Data collection tools outdated: no standardised  
country-wide data collection tools
- Some districts use old data collection tools that are not  
updated
- No consistency in the data tools used in the same  
district
- Data is not verified & monitored by supervisors



# DQS: 2 pillars...

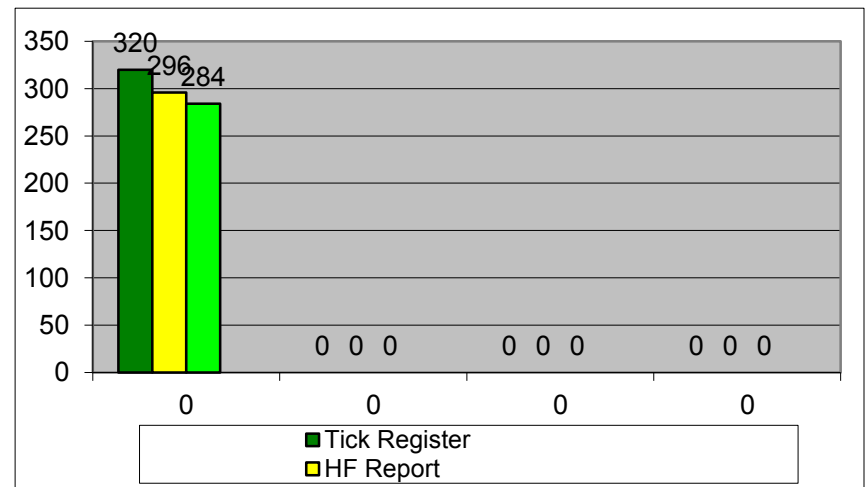
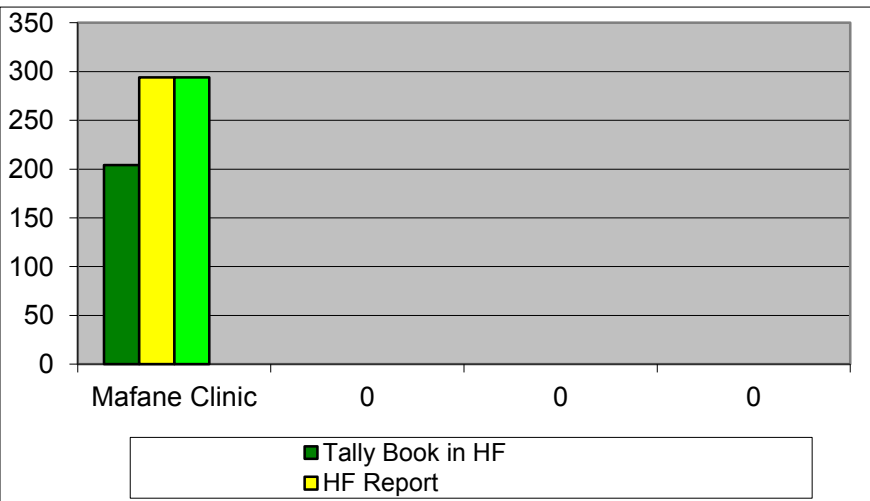
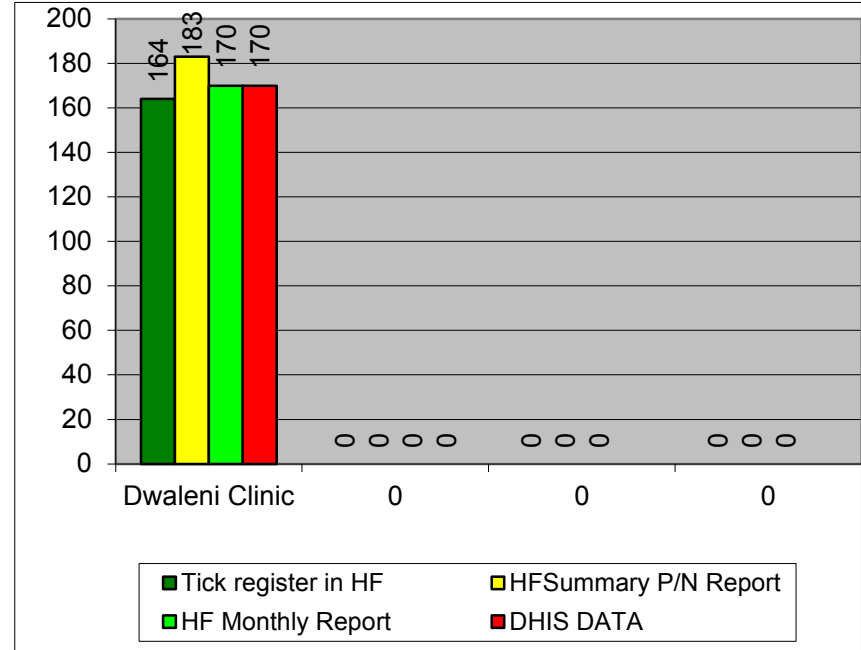
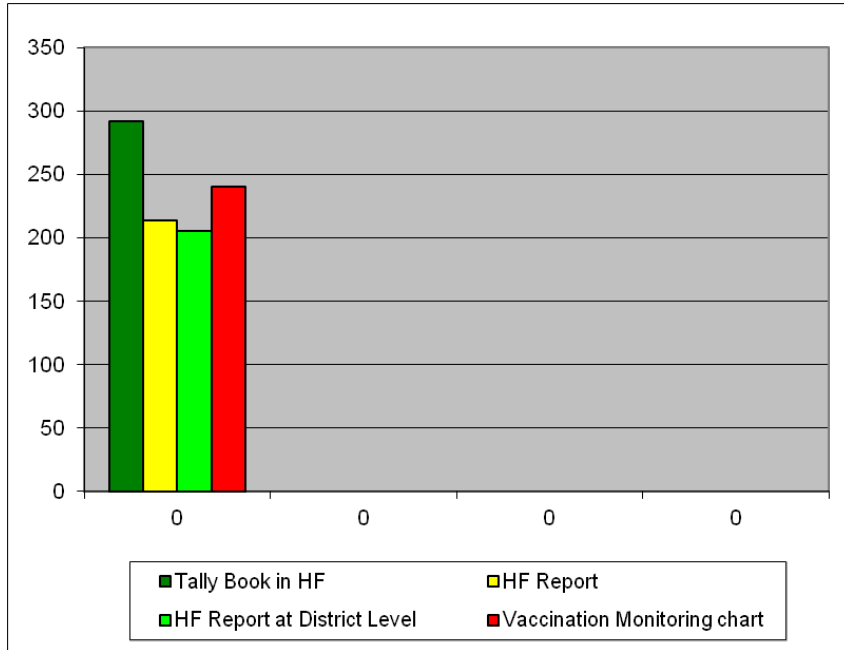
## Data accuracy

- how much of reported data can be verified?
- **quantitative** value

## System quality

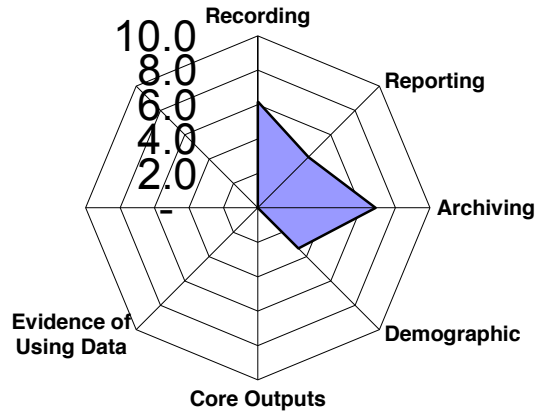
- is my system effective?  
tools and components of the system
- **qualitative** scores

# Examples of DQS Data Precision findings

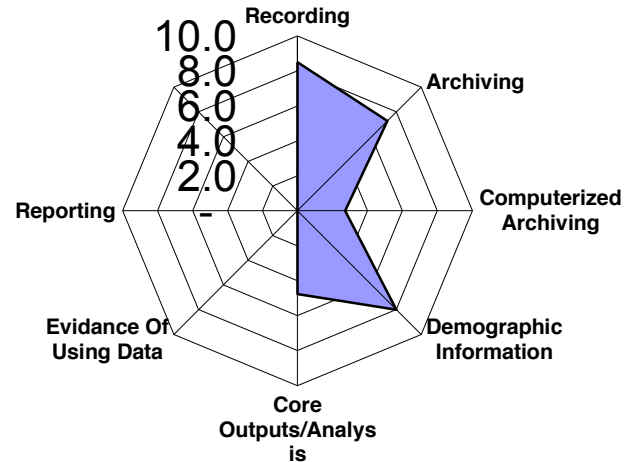


# Examples of Data Quality

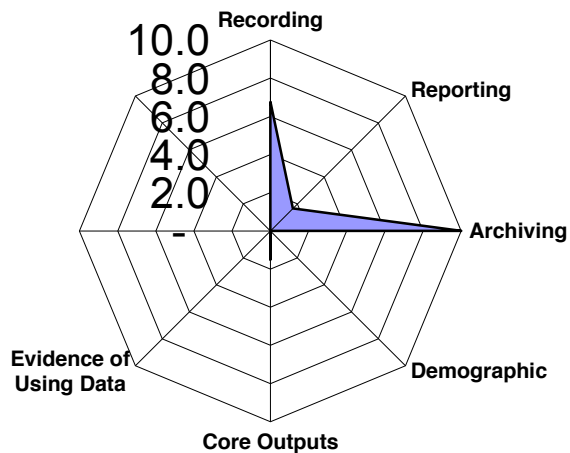
**Health Facility Quality Chart**



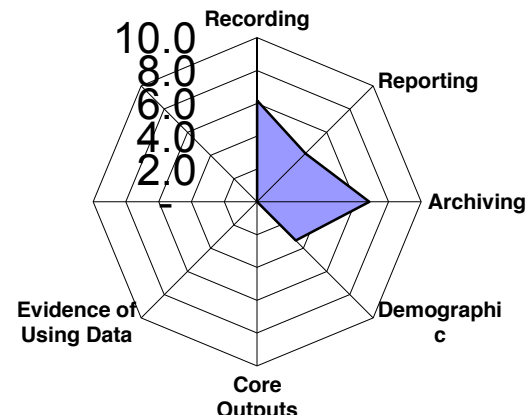
**Regional Quality Chart**



**Health Facility Quality Chart**



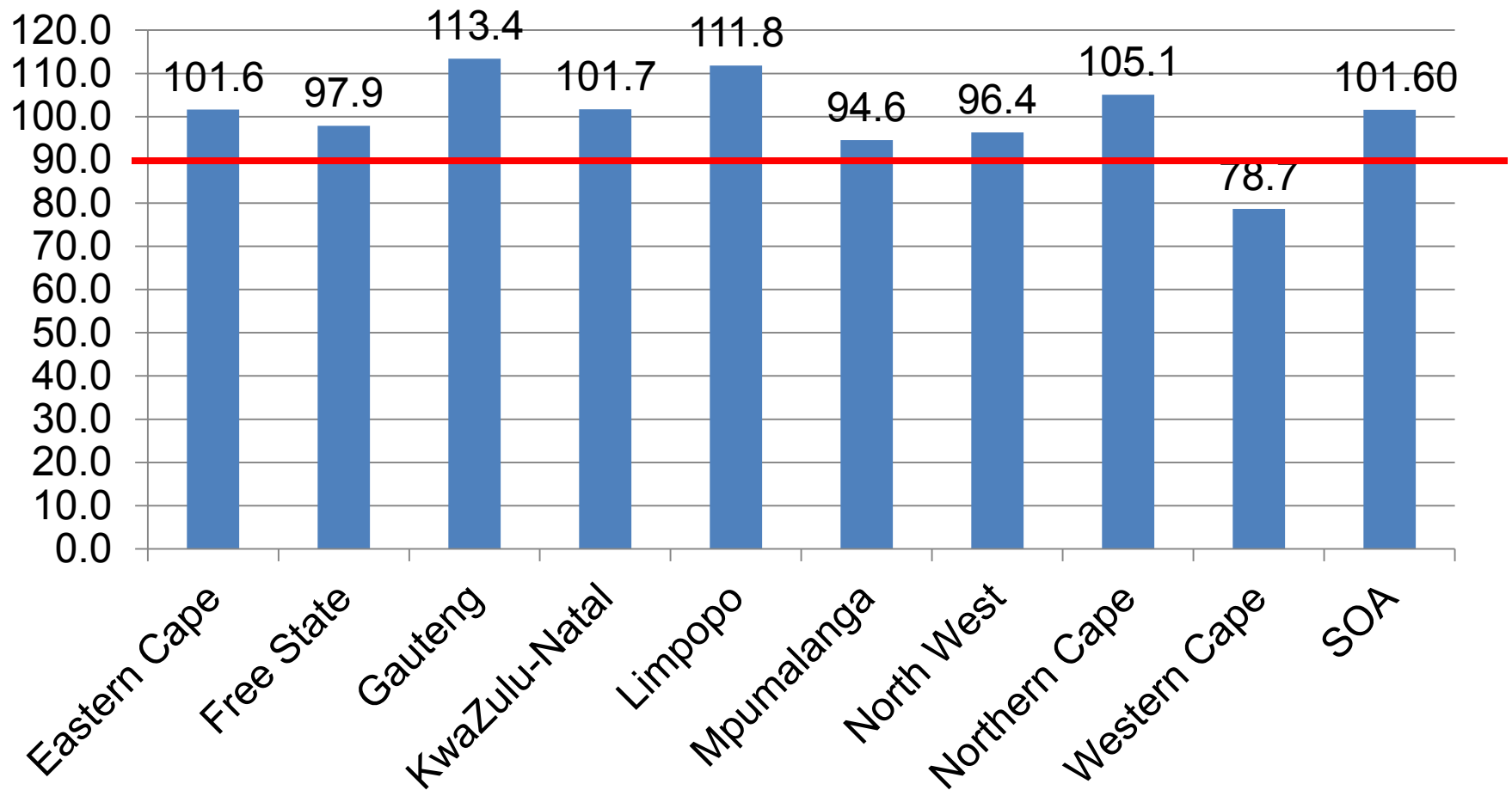
**Health Facility Quality Chart**



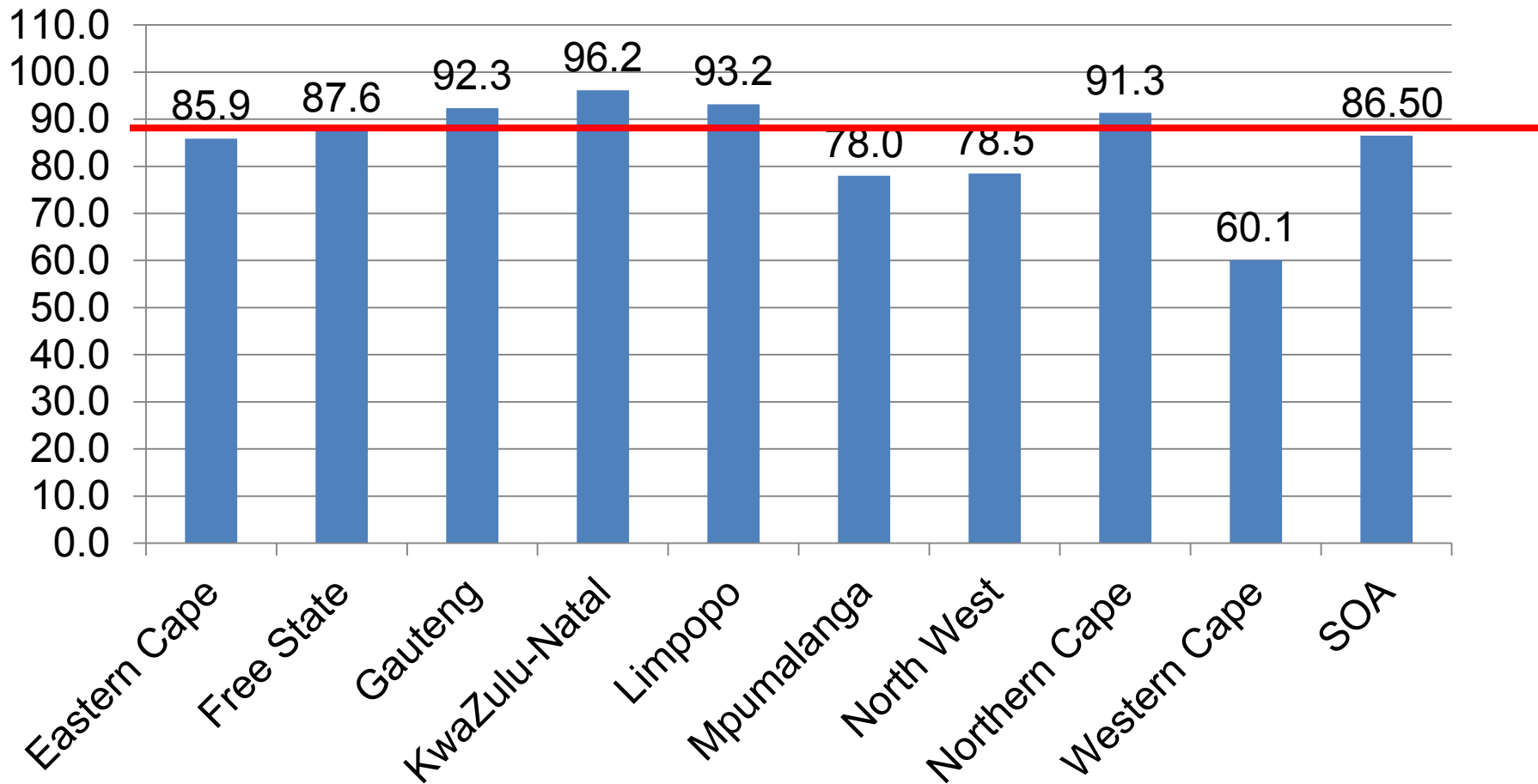
# Question

- What really is the Immunisation Coverage in South Africa?

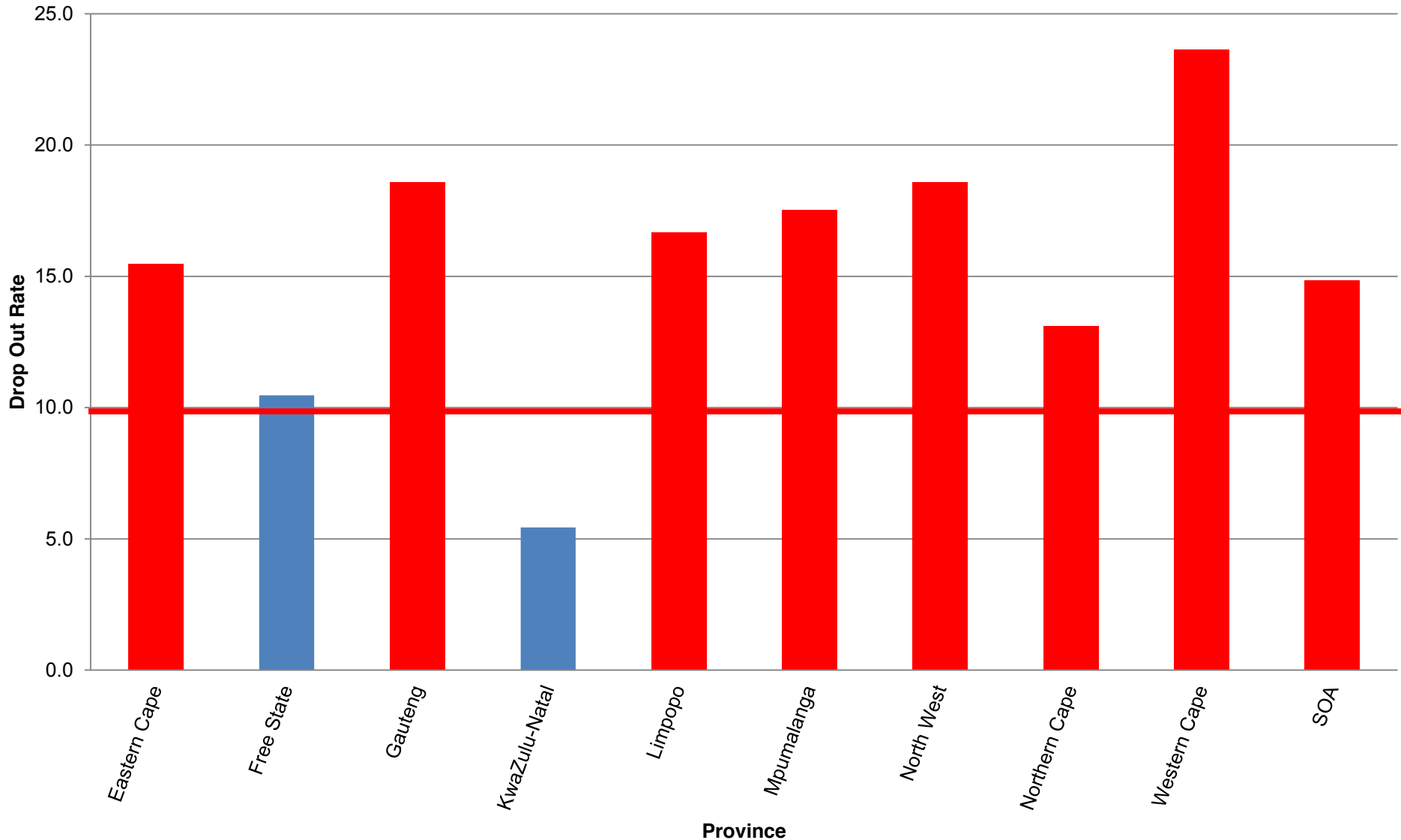
# MCV1 Coverage by province 2012



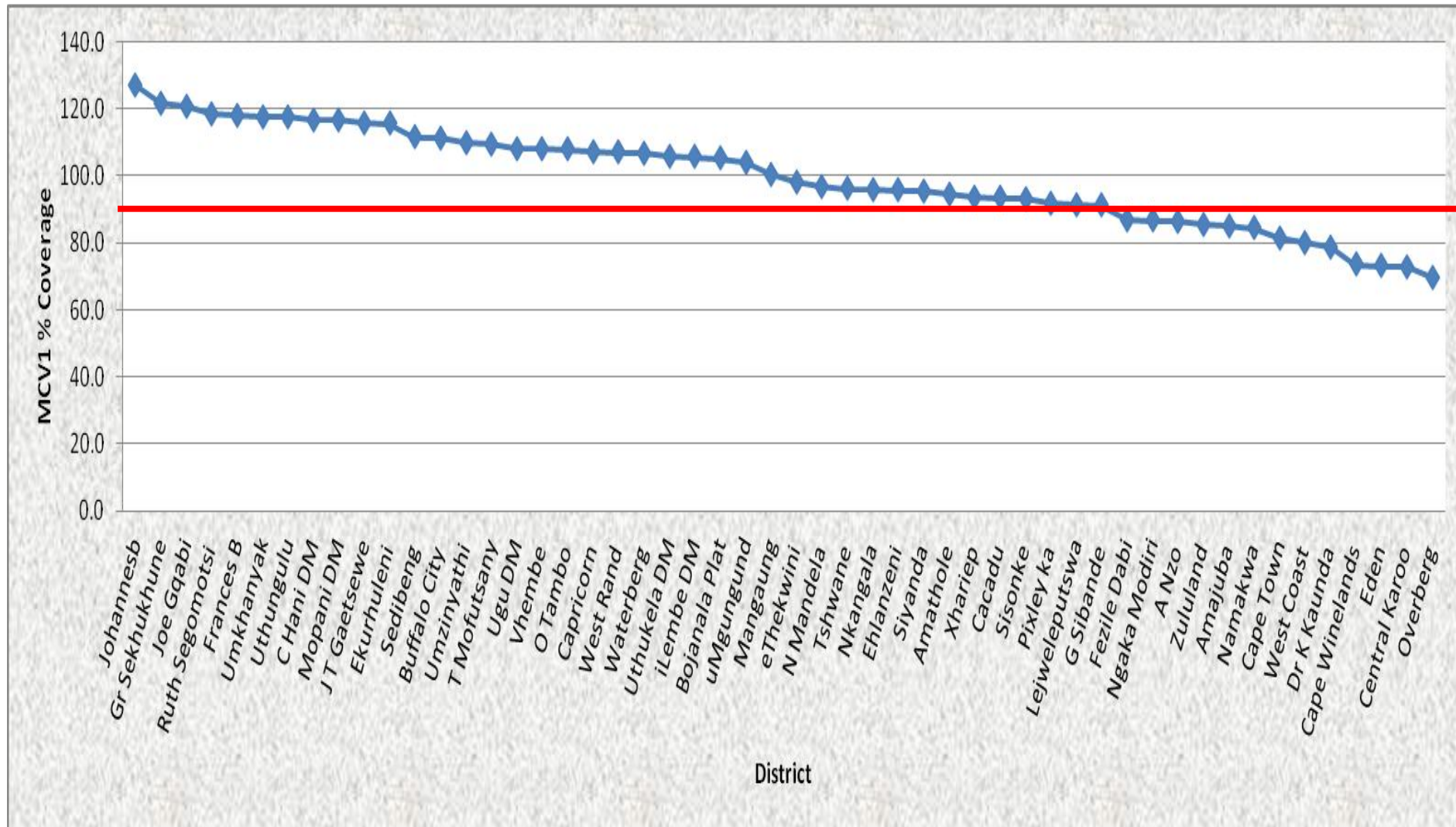
# MCV2 Coverage by province 2012



# Drop-Out rate (DOR) between MCV1 and MCV2, Jan –June 2012 (*Target DOR<10%*).

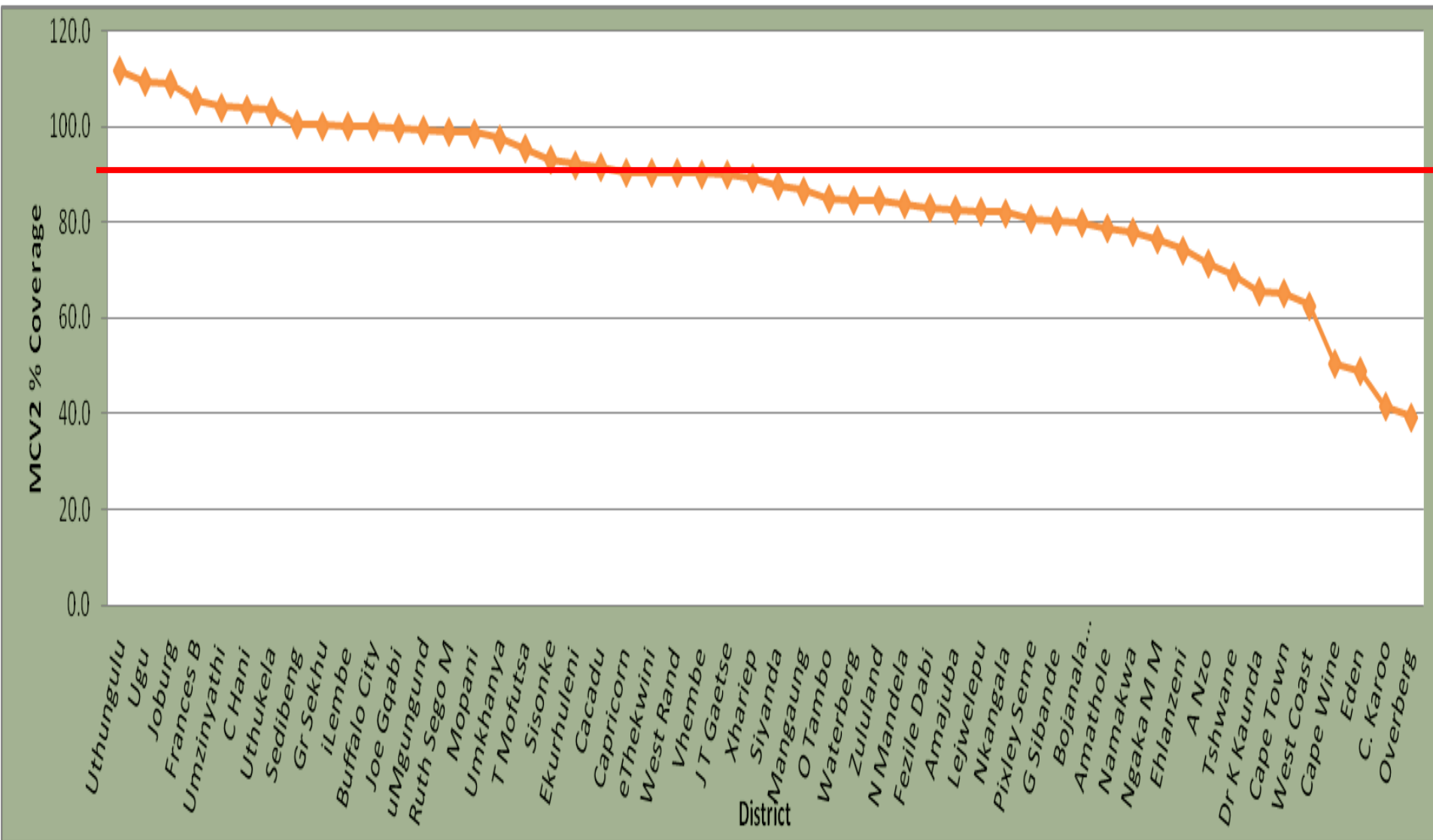


# MCV1 coverage by District 2012





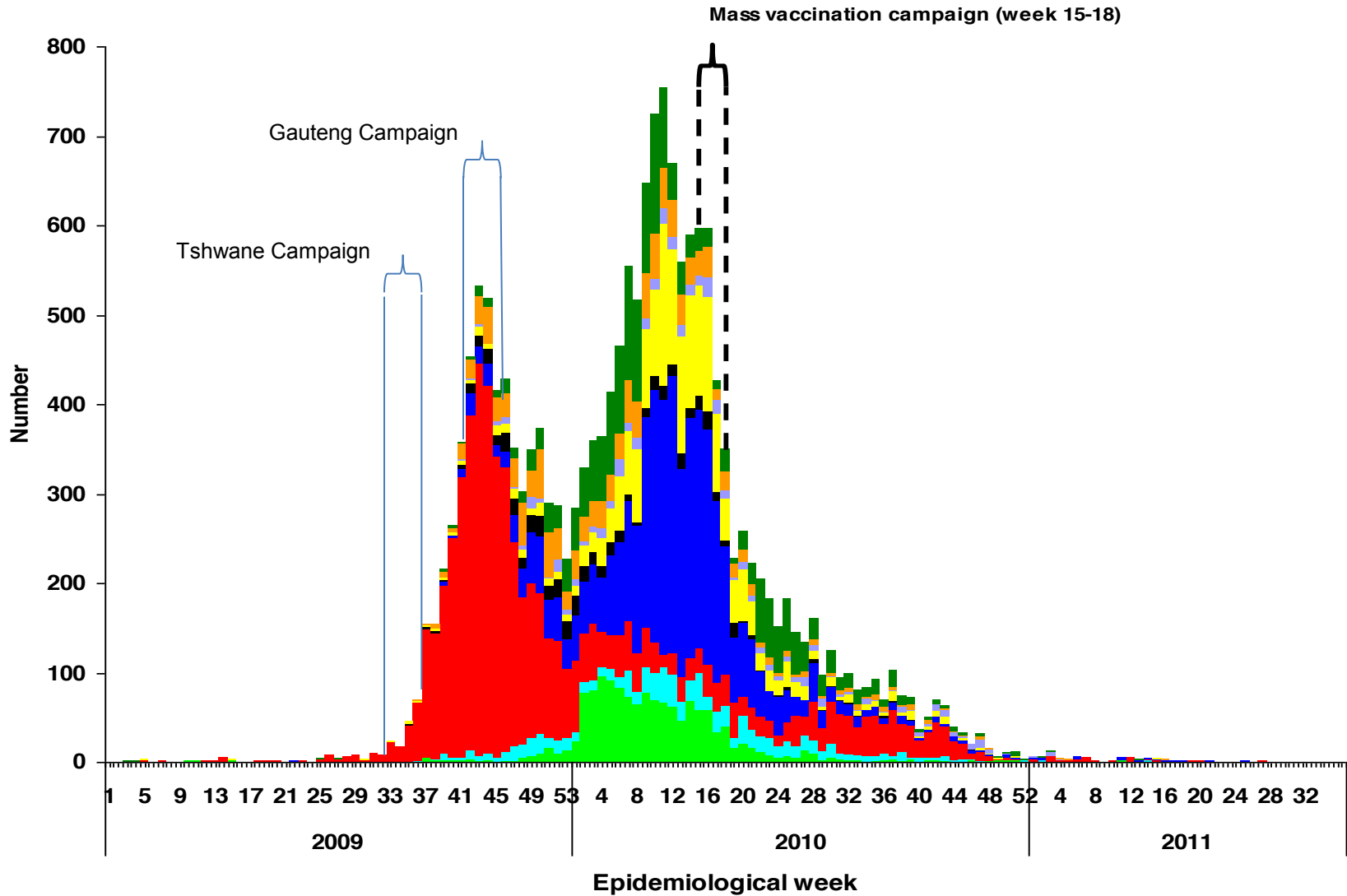
# MCV2 coverage by District 2012



# Fully Immunised by District 2012



# SA Measles IgM positive results by province: January 2009-August 2011



■ ECP 
 ■ FSP 
 ■ GAP 
 ■ KZP 
 ■ LPP 
 ■ MPP 
 ■ NCP 
 ■ NWP 
 ■ WCP

	ECP	FSP	GAP	KZP	LPP	MPP	NCP	NWP	WCP	Total
Cumulative total: Jan 09-Aug 11	1 390	841	5 764	4 282	511	1 977	447	1 217	2 011	18 440

ECP=Eastern Cape; FSP=Free State; GAP=Gauteng; KZP=KwaZulu-Natal; LPP=Limpopo; MPP=Mpumalanga; NCP=Northern Cape; NWP=North West; WCP=Western Cape

# Recommendations

- Standardised user-friendly data collection tools nationally
- Drastically Improve EPI Data at all levels: Rapidly roll-out RED DQS in ALL districts country wide: EPI/DHIS partnerships strengthened
- Data verification: M & E & supportive supervision
- Timely & complete data within data flow policy
- Use of data for action at all levels
- 2013 Country wide EPI Coverage Survey

# Way forward

- Revised National EPI Coverage figures expected from DHIS by mid-October 2012, after National Workshop held between Provincial EPI & DHIS in July 2012
- EPI Coverage Survey Planning Meeting with WHO, UNICEF and other partners from 3 – 4 December 2012: strongly recommended by NAGI & UN partners
- Expecting revised mid-year population figures from STATS SA by end October 2013
- RED DQS implementation workshops planned for Western Cape, Northern Cape, Gauteng in 2013
- Rapid District & Provincial roll-out of RED DQS in 2013
- Post Campaign evaluation of children immunised after the 2013 Supplementary Immunisation Activities (mass campaign against Measles and Polio) by independent monitors

# Acknowledgements

- DHIS: Calle Hedberg & Team
- Provinces where RED DQS Workshops were held
- EPI(SA) Team
- WHO, UNICEF & Partners

Together  
we can work smarter: not harder

Thank you