What is the South African Immunisation coverage?

Vaccinology, Hermanus
15 – 17 October 2012

Johann van den Heever: EPI (SA) Manager
Contents

• Background
• 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)

- Vaccine Supply & Quality
  - Budget: R1,25bil
- Service delivery & Training
- Surveillance & Data (DHIS)
- Advocacy & Communication
- Logistics
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

- Health Facility
  - HF report
  - Tally

- District Level
  - Health Facility reports
  - District reports

- Province Level
  - District reports
  - Province reports

- National Level
  - Joint Report
  - Health Facility reports

- Wastage
- AEFI
- Other

- Child Register
- Child Health Card

- WHO
- UNICEF
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

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UNICEF vs. DHIS Coverage 2009

- DPT3: UNICEF 69%, DHIS 103.6%
- Hib3: UNICEF 67%, DHIS 103.6%
- MCV1: UNICEF 62%, DHIS 98.1%
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

Eastern Cape  81.1
Free State  89.9
Gauteng  114.8
KwaZulu-Natal  97.8
Limpopo  96.8
Mpumalanga  68.7
North West  83.4
Northern Cape  93.2
Western Cape  87.8
South Africa  90.4
SA Measles 1 Coverage: 2008-2011

- Eastern Cape
- Free State
- Gauteng
- KwaZulu-Natal
- Limpopo
- Mpumalanga
- North West
- Northern Cape
- Western Cape
- South Africa
SA Measles 2 Coverage: 2008-2011

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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)

221,000 children missed at 9 months
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

<table>
<thead>
<tr>
<th>Province</th>
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*Francis Baard HepB 3 Coverage*
# Td 12 yrs Data

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## Capricorn Dist HepB 3 Coverage

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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

Dwaleni Clinic
Tick register in HF
HFSummary P/N Report
HF Monthly Report
DHIS DATA

Mafane Clinic
Tally Book in HF
HF Report at District Level
Vaccination Monitoring chart

Tick Register
HF Report
Examples of Data Quality

**Health Facility Quality Chart**

**Regional Quality Chart**

**Health Facility Quality Chart**
Question

• What really is the Immunisation Coverage in South Africa?
MCV2 Coverage by province 2012

- Eastern Cape: 85.9
- Free State: 87.6
- Gauteng: 92.3
- KwaZulu-Natal: 96.2
- Limpopo: 93.2
- Mpumalanga: 78.0
- North West: 78.5
- Northern Cape: 91.3
- Western Cape: 60.1
- SOA: 86.50
Drop-Out rate (DOR) between MCV1 and MCV2, Jan – June 2012 (Target DOR<10%).

[Bar chart showing the drop-out rate by province, with the provinces listed in the x-axis and the drop-out rate on the y-axis.]
MCV2 coverage by District 2012
Fully Immunised by District 2012

Districts:
- Uthungulu
- Tshwane
- Johannes
- Frances B
- C Hani
- Buffalo C
- Ekurhuleni
- Sediibeng
- Umkhanyak
- J T Gaetsewe
- Maun
- Mopani
- North West
- Randburg
- Uthukela
- Lekme
- Vhembe
- Thembwe
- Capricorn
- Siyanda
- Mangaung
- Bolswala
- Ntsha
- Amathole
- Calade
- Lejweleput
- Waterberg
- Xhokwe
- Fezile Dabi
- Sisonke
- Pixley ka
- Namakwa
- O Tambo
- Zululand
- Vhembe
- Nkangala
- West Coast
- Cape Town
- Dr K Kaun
- Eden
- Cape Win
- Central Karoo
- A Nzo
SA Measles IgM positive results by province: January 2009-August 2011

Epidemiological week

Number

0 100 200 300 400 500 600 700 800

2009 2010 2011

Epidemiological week

Mass vaccination campaign (week 15-18)

Gauteng Campaign

Tshwane Campaign

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

Cumulative total: Jan 09-Aug 11

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<th>KZP</th>
<th>LPP</th>
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<td>841</td>
<td>5 764</td>
<td>4 282</td>
<td>511</td>
<td>1 977</td>
<td>447</td>
<td>1 217</td>
<td>2 011</td>
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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