



▶ Mohammed Jeenah (HISP)

# PUBLIC HEALTH DATA SYSTEMS & POSSIBILITIES

#foresight2017  @Insight\_SA

A WHOLE  
NEW WORLD





**Health Information Systems Program - SA**

**Public Health Data Systems**

**Mohammed Jeenah**

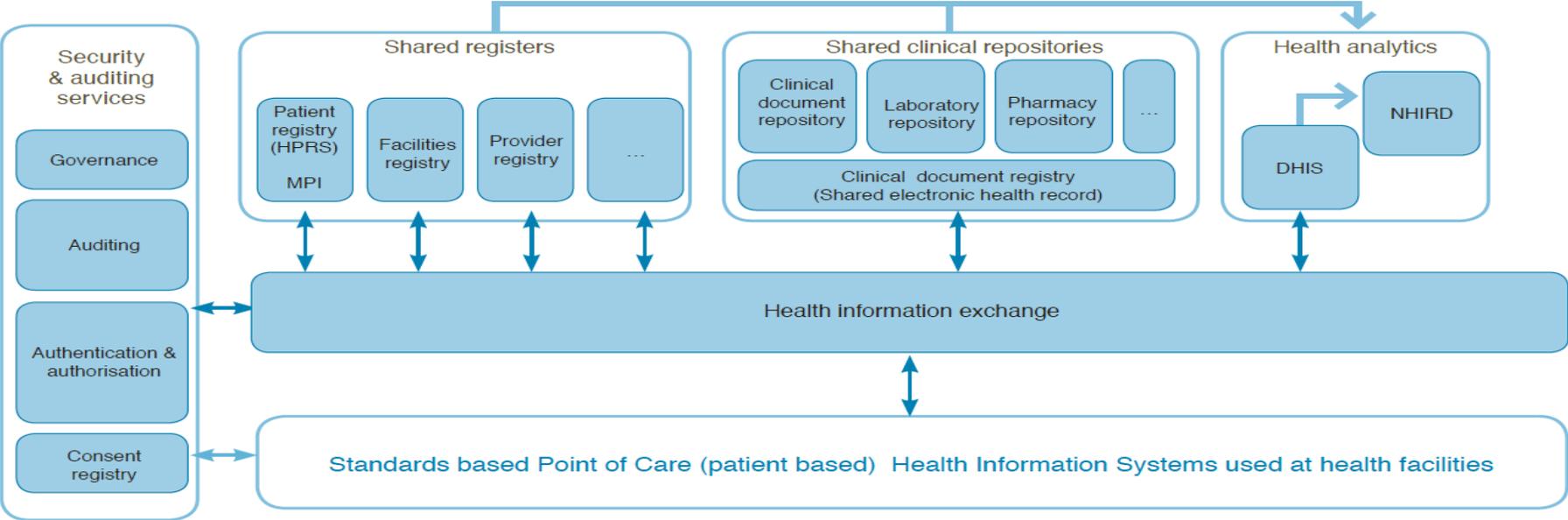
**25<sup>th</sup> May 2017**

**Foresight Dialogues**

## Presentation

- 1. National System**
- 2. Current Deployment**
- 3. Use case examples**
- 4. Challenges**
- 5. Opportunity**

# Interoperability Framework

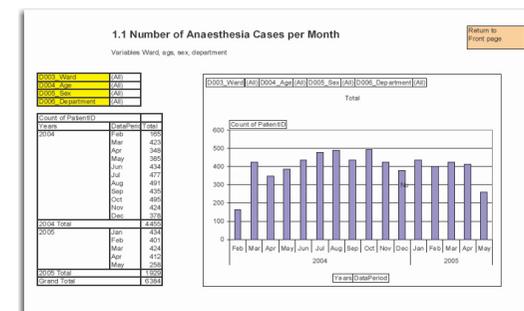
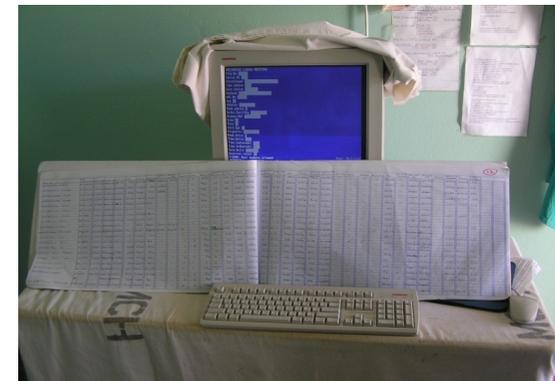


Source: Adapted from the eHealth Interoperability Health Normative Standards Framework 2014<sup>3</sup>



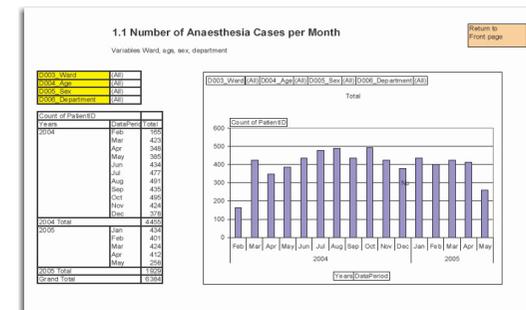
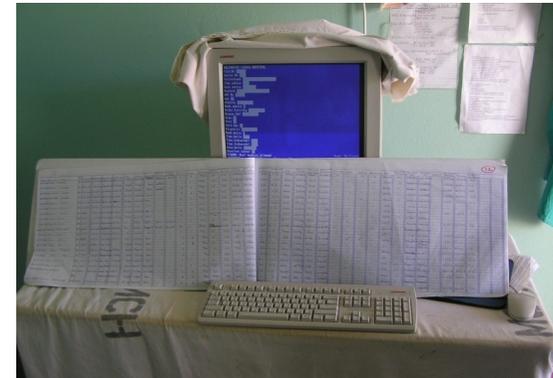
# Public Sector Information System webDHIS

- Tool to facilitate the collection and capture of routine health data  
&
- help improve service management to achieve better health for all by using current information



# Public Sector Information System webDHIS: Deployment

- In more than 4000 health facilities in SA
- Capturing approx. 200 National Indicator Data Sets Comprising of approx. 400 data elements
- Also included are number of Provincial Indicator Data Sets
- Training of data captures
- Training of managers in use of Information



# Public Sector Information Systems

## Tables: immunisation

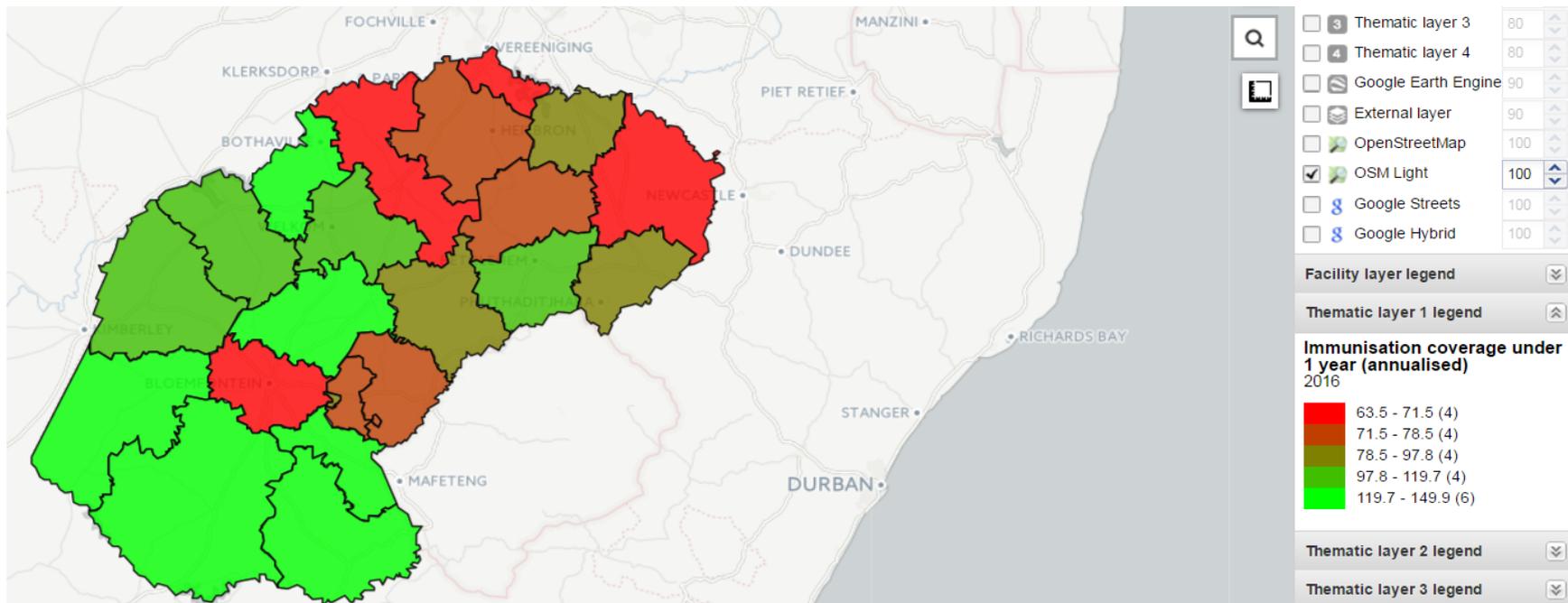
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Organisation unit	Data / Period	May 2016	June 2016	July 2016	August 2016	September 2016	October 2016	November 2016	December 2016	January 2017
fs Free State Province	BCG dose coverage (annualised)	95.6	103.4	96.2	106.1	106.4	85.7	95.2	92.5	35.4
	DTaP-IPV-HepB-Hib 3 - Measles 1st dose drop-out rate	-11	-5.2	-19	-4.8	-16.2	-2.3	4.1	-2.6	-1.5
	DTaP-IPV-HepB-Hib 1st dose coverage (annualised)	105.3	102.4	95.3	110	102.7	102.6	96.1	86.7	26.3
	DTaP-IPV-HepB-Hib 3rd dose coverage (annualised)	95.9	99.2	86.7	101.6	97.5	95.7	96.4	85.7	25.1
	HepB 3rd dose coverage (annualised)	8.3	5.1	0.03	0	0.03	0	0	0	0
	DTaP-IPV-HepB-Hib 4th dose coverage (annualised)	88.8	86.1	75.1	78.4	78.6	74.2	80.5	67.5	17.1
	Immunisation coverage under 1 year (annualised)	82.6	85.9	73.2	79.2	82	80.3	76.8	67.2	20.7
	Measles 1st dose under 1 year coverage (annualised)	106.4	104.4	103.2	106.4	113.3	98	92.4	87.9	25.5
	Measles 2nd dose coverage (annualised)	108	106.6	105.4	116.4	142.5	118.2	112.5	93.1	24.8
	PCV 3rd dose coverage (annualised)	94.8	98.1	80.8	90.3	91.7	90.8	86.8	79	22.7
	RV 2nd dose coverage (annualised)	99.7	101.4	89.5	104.7	100	100.4	100.2	88.4	26.3
	Td dose coverage at 6 years (annualised)	46.2	35.4	37.8	35.4	45	36.7	39.1	28.8	9.4
	OPV 1st dose coverage (annualised)	103.2	93.6	89.3	107.6	100.1	99.2	83	87.8	26.4
	PCV 2nd dose coverage (annualised)	100.2	103.8	91.7	104.3	102.5	101.1	101.8	89	26.7
	DTaP-IPV-HepB-Hib 3rd (Hexavalent) dose to Measles 1st dose drop-out	-380	-181	-595	-175	-551	-81	139	-80	-13



# webDHIS

## Maps: Immunisation Coverage



## Public Sector Information Systems Graphs PMTCT cascade

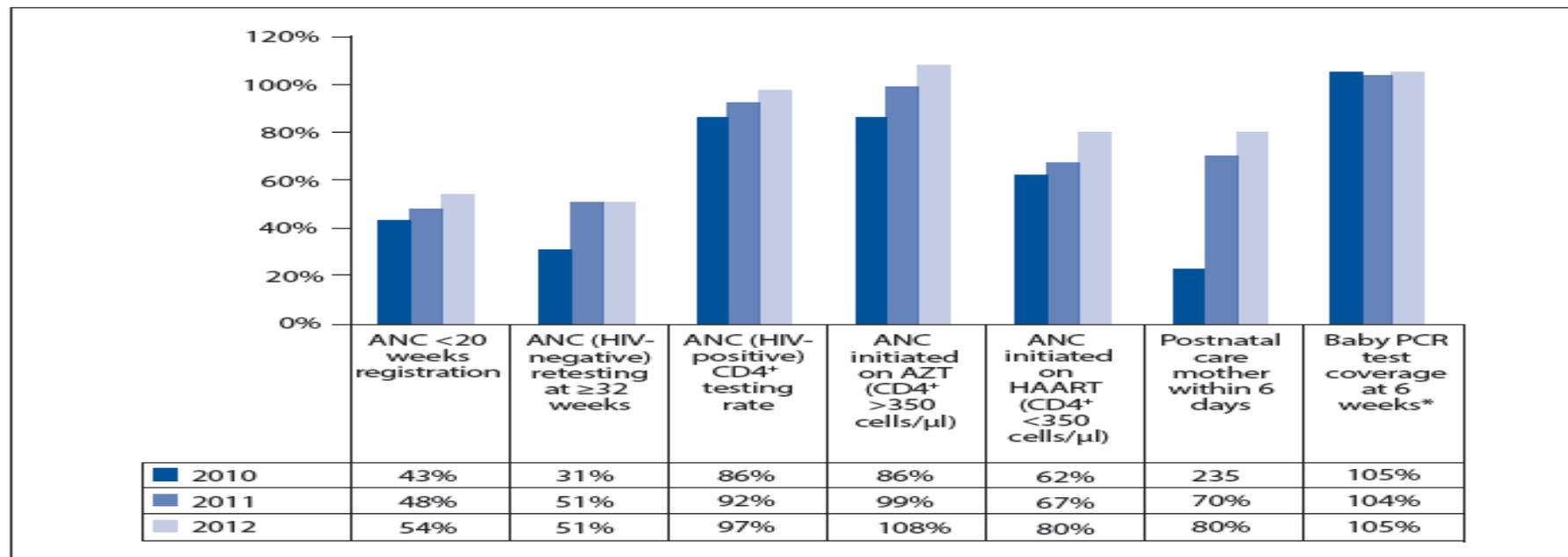


Fig. 3. Lejweleputswa District prevention of mother-to-child transmission cascade 2010 -2012 (District Health Information System data). (ANC = antenatal care; AZT = zidovudine; HAART = highly active antiretroviral therapy; PCR = polymerase chain reaction). \*All HIV-positive exposed babies.

Courtesy Y Pillay NDoH



## Public Sector Information Systems webDHIS

### **Status:**

- At present 77% of facility data captured at nearest point of connectivity on webDHIS
- All reporting done via the webDHIS

### **Plan:**

- To have Daily Data Capture at Facility Level by 2020

### **Major Benefit:**

- Improvement in timeliness and quality of data
- Improvement in patient care

# Public Sector Information Systems

## Future Core System

### **Health Patient Registration System**

- Core system to be installed in all health facilities
- Utilisation of unique identifier
- At present intensive roll out
- Aim to register 10m patient within this year

## Public Sector Information Systems Other Systems (eg)

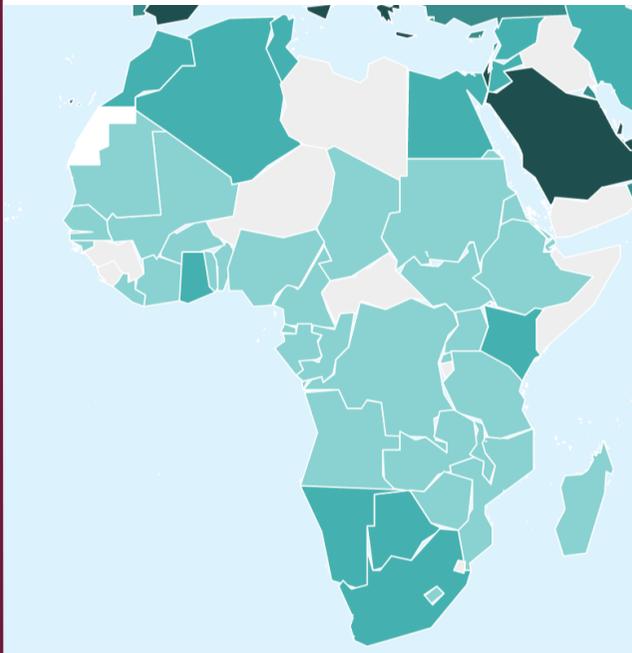
### **Computer based**

- Hospital Management systems
- TB/HIV system
- Stock Visibility System
- HIV hotspot mapping

### **Mobile Applications**

- Momconnect
- HPV Campaign
- Community healthcare workers WBOT

## Connectivity Changing Landscape



2015



2016



## Public Sector Information Systems Resource Challenges

- Governance:
  - coordinated rollout
  - data security and access
- Connectivity
  - Coverage
  - Infrastructure
  - Cost
- Trained health care workers
  - Data capturers
  - Clinicians
  - Managers

# Public Sector Information Systems

## webDHIS:

### Systems Challenges

- Data standards
  - To promote interoperability:
- Complexity
  - Of the architecture
- Open source software
  - Availability
- Standards
- Electronic patient record
  - Its role within architecture

## Future Considerations

- Changes in the ICT environment
- Future information requirements : NHI
- Changes in healthcare delivery systems
- Changes in lifestyle

# Thank You

## Acknowledgement

- National Department of Health
- Centre for Disease Control
- Vincent Shaw HISP: ED

# PLEASE NOTE

- ▶ **This presentation is incomplete without the accompanying narrative**