



**HEALTH
SYSTEMS
TRUST**

THE CHALLENGING JOURNEY ENABLING CONNECTIVITY FOR E-HEALTH IN SOUTH AFRICA

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Format of the Presentation

- ❑ Aim and Objectives
- ❑ Maturity Model and Current Context
- ❑ Challenges
- ❑ Lessons learned
- ❑ Recommendations
- ❑ Conclusion

The National ePHC project

The aim is: **To ensure that all PHC facilities in South Africa operate in an eHealth information environment by 2020; in preparation for NHI**

The successful implementation of this project hinges on a tight sequence of events, namely:

- Hardware deployment
- Establishment of connectivity
- Implementation and use of the HPRS
- Change management process

Our understanding of connectivity

□ Connectivity is defined as

A generic term for **connecting devices to each other in order to transfer data back and forth**. It often refers to network connections, which embraces bridges, routers, switches and gateways as well as backbone networks.

Rationale for connectivity during implementation

❑ Cornerstone to enable

- Patient registrations on the health patient registration system(HPRS)
- Obtaining health statistics for decision making at all levels of care

Maturity Model of the PHC eHealth Programme

Maturity Level 0: Stakeholder engagement

(Buy-in for an integrated approach; facility-level support is critical for success)

Maturity Level 1: Deployment of IT hardware support

(Co-ordinated with provincial & district IT departments)

Maturity Level 2: Site preparation, hardware integration, phased connectivity

(Facility flow & patient administration optimised; networked computing)

Maturity Level 3: Implementation of Health Patient Registration System and webDHIS

(Improves waiting time; efficient reporting)

Maturity Level 4: Web-based reporting, online capture

(Centralised routine & real-time data)

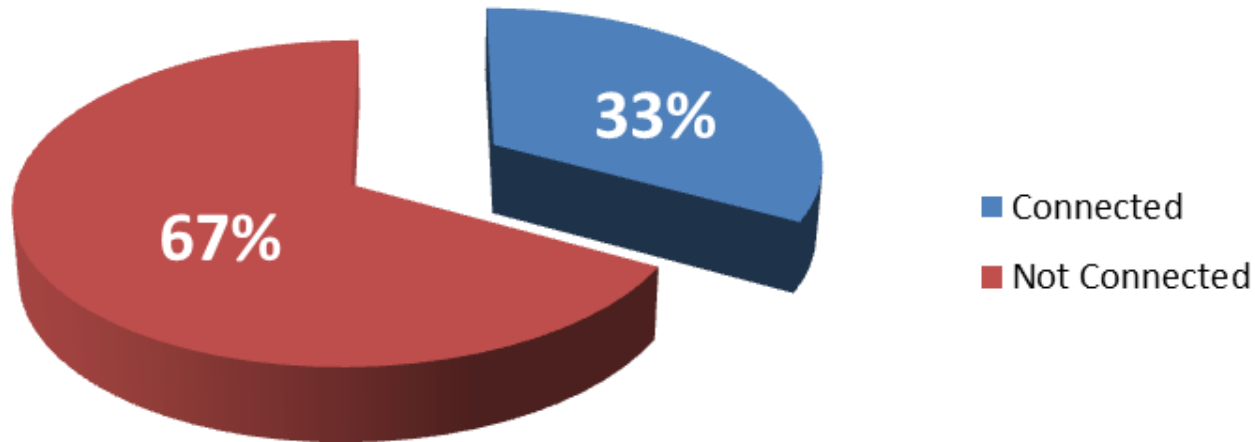
Challenge

Few PHC facilities in South Africa currently have IT infrastructure or connectivity options capable of supporting an integrated health information environment. Reasons include:

- ❑ Limited access to fixed telephone lines with fibre and copper exchange points
- ❑ Theft of copper cabling if a facility is connected
- ❑ Low levels of security for computer equipment at facilities
- ❑ Little involvement by facilities, sub-districts and districts in asset management

Connectivity at sites

Total HPRS
Implementations: 658



31 March 2016

Connectivity challenges experienced at sites

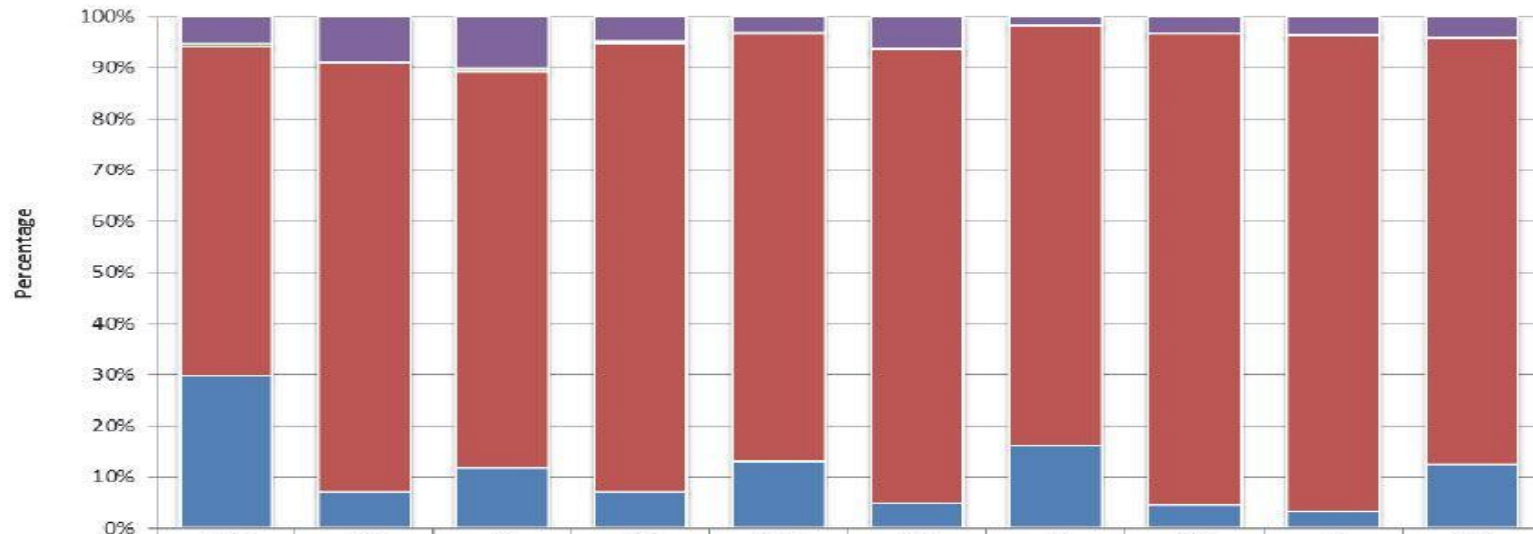
Province	District	Challenges
Limpopo	Vhembe	Telkom connectivity unreliable and incomplete connections, Cell signal poor in some areas
Mpumalanga	Gert Sibande	Poor cell signal, connectivity slow
Free State	Thabo Mofutsenyane Xhariep	Poor cell signal
Eastern Cape	OR Tambo	Electricity unavailable, Poor cell signal
Northwest	Dr K Kaunda	Connectivity slow, Incomplete Telkom VSAT connections
Northern Cape	Pixley ka Sema	Incomplete VSAT connection
KZN	Umgungundlovu Amajuba Umzinyathi	Connectivity slow, poor cell/3G coverage

Lessons learned

- ❑ Buy-in by Province and District
- ❑ Functional Task teams
- ❑ Do not assume connectivity
- ❑ Adequate preparations of sites an important prerequisite
- ❑ Change management processes: System uptake / utilisation
- ❑ Site interaction: participatory approach
- ❑ Offline HPRS not dependant on connectivity; however, uploading data is dependant on connectivity

South African Household survey (Statistics South Africa:2014)

Households using landlines and cell phones



	WC	EC	NC	FS	KZN	NW	GP	MP	LP	RSA
None	5,2	8,9	10,2	4,9	3,1	6,2	1,8	3,2	3,6	4,1
Only landline	0,7	0,1	0,7	0,3	0,3	0,3	0,1	0,1	0,0	0,2
Only cell	64,4	83,9	77,5	87,6	83,6	88,6	82,0	92,1	93,3	83,1
Cell & landline	29,7	7,1	11,7	7,2	13,1	4,9	16,1	4,6	3,1	12,6

Recommendations

- ❑ Provincial/District concerted effort to ensure connectivity
- ❑ To establish best connectivity solution
- ❑ Availability and utilisation of 3G modems from various providers depending on coverage
- ❑ Positioning equipment within facility areas with optimum signal
- ❑ Security solutions



Conclusion

- ❑ The offline HPRS is functional for rollout in districts.

HOWEVER;

- ❑ Data bundles of 3G modems and service providers' contracts are major challenges
- ❑ Means to manage connectivity is dependant on Provincial and Service Provider interaction

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THANK YOU

