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IDEAS THAT WORK

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eHealth

Matthew Chetty

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eHealth Defined

World Health Organisation defines eHealth as “the use of ICTs for health to, for example, treat patients, pursue research, educate students, track diseases, and monitor public health.”

Electronic Health Records

Vital Registrations

Consumer Health Informatics

Mobile health (mHealth)

Telemedicine

“Historically, health information systems in South Africa have been characterised by fragmentation and lack of coordination, prevalence of manual systems and lack of automation, and where automation existed, there was a lack of interoperability between different systems.”

Dr Aaron Motsoaledi,
Minister of Health,
eHealth Strategy South Africa, 2012-2016



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Health Normative Standards Framework (HNSF)

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Global eHealth base standards

eHealth standards stacks

- Health Level 7 (HL7) V3
- ISO 13606
- Integrating the Health Enterprise (IHE)

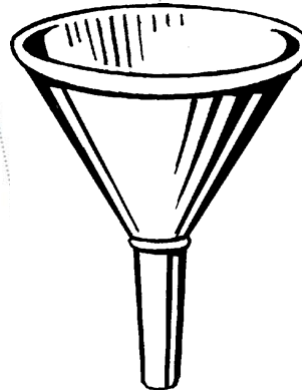
Proposed stack - IHE

Selection Criteria

Scalability, Implementability, testable, cost, maturity, extendibility, flexibility

Health System Requirements

- NIDS
- NHI
- Burden of disease scenarios
- Continuity of care



Health Functions

- Identification, authentication and authorisation
- Search or retrieve patient record
- Lookup or update patient record
- Admission, discharge and transfer
- Scheduling
- Generate metrics
- ...

Normative Standards Framework for eHealth in South Africa (HNSF)

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- Patient Identification: ISO 22220:2011
- Provider (extendible to suppliers) Identification: ISO/TS 27527:2010

Identifier



- General Messaging for health information: HL7 V2.X
- Medical Images: DICOM
- Aggregate data: SDMX - HD

Messaging



- Continuity of care (CCD)
- Clinical document archive (CDA)
- Care record summary
- Common message elements type

Content and Structure



- ICD-10
- Procedure codes
- Medicine codes
- LOINC (Lab results)
- UPFS (Billing)
- DRGs*

Coding and Terminology



- EHR – Definition, scope and context (ISO/TR 20514:2005, ISO 18308:2011)

Electronic Health Record



- Privilege management and access control (Part 1-3) – ISO/TS 22600

Security



- MIOS v5
- Healthcard standards
- Biometric
- Barcodes (e.g. for item identification)

General IT



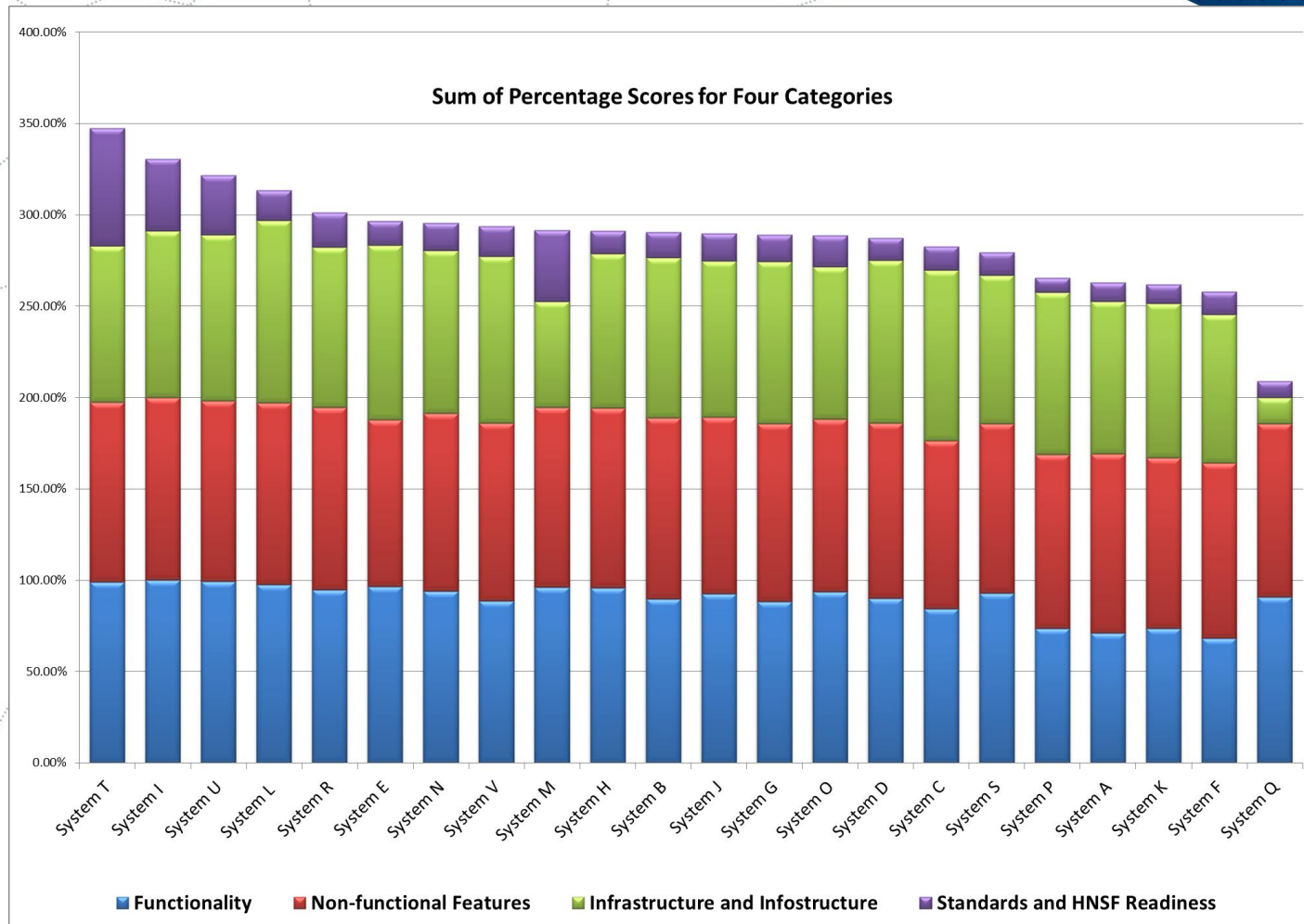
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Primary Healthcare Patient Information Systems Assessment

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PHC-PIS Overall Scoring



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Health Patient Registration System (HPRS)

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HPRS

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To enable the DOH to plan and provision health care facilities and services in accordance with the needs of the population within the catchment area of the facilities

To identify members of the population (patients) when providing health care services

To link the individual to his/her electronic health records for improved service provision

To support the tracking of beneficiaries using health facilities

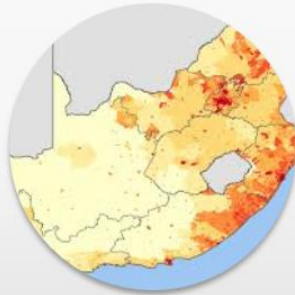
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HPR Initialisation

- Import data from DHA NPR
- Data verification against other data sources



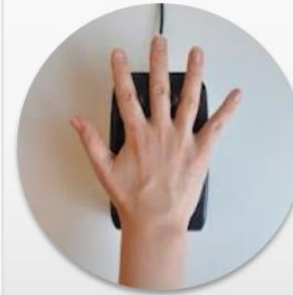
Facility Linkage

- Geo-coding of addresses
- Linkage to health facility catchment area



Patient Registration

- Verification and update of data
- New registrations for health services



Identity Verification

- Visual
- Online Biometrics
- Offline Biometrics



Deployment

- Ideal Clinics for evaluation
- NHI Pilot Districts



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Thank you

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