Status of NHI Pilot districts

12-month progress report

Prepared for the National Department of Health

25 May 2015

health
Department:
Health
REPUBLIC OF SOUTH AFRICA

A long and healthy life for all South Africans

ACRONYMS

CCG	Community Care Giver
CCMD	Chronic Care Medicines Depot
CEO	Chief Executive Officer
CHC	Community Health Centre
CHW	Community Health Worker
COO	Chief Operating Officer, NDoH
DBSA	Development Bank of South Africa
DCST	District Clinical Specialist Team
DDG	Deputy Director General, NDoH
DG	Director General, NDoH
DHA	District Health Authority
DHC	District Health Council
DHER	District Health Expenditure Reviews
DHMT	District Health Management Team
EEL	Essential Equipment List
EMS	Emergency Medical Services
ESMoE	Essential Strategy for the Management of Obstetric Emergencies
FIT	Facility Inspection Team
GP	General Practitioner
HBC	Home Based Carer
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HPV	Human Papilloma Virus
HR	Human Resources
ICD10	International Classification of diseases and related health problems (tenth edition)
ICP	Ideal Clinic Project
ISHP	Integrated School Health Programme
M&E	Monitoring and Evaluation NDoH
MMR	Material Mortality Ratio
NCS	National Core Standards
MCWH	Maternal, Child and Women's Health
NDoH	National Department of Health
NGO	Non-Governmental Organisation
NHI	National Health Insurance
NHIRD	National Health Information Reporting and Database Warehouse
NIMART	Nurse-Initiated Management of Anti-Retroviral Therapy
NPO	Not-for-Profit Organisation

OHSC	Office for Health Standards Compliance (formerly the Office of Standards Compliance - OSC)
PHC	Primary Health Care
PPT	Planned Patient Transport
PTICR	Perfect Team for Ideal Clinic Realisation
QIP	Quality Improvement Programme
QA	Quality Assurance
RAT	Rapid Appraisal Tool
SOP	Standard Operating Procedure
WBPHCOT	Ward-Based PHC Outreach Team
WHO	World Health Organisation
WISN	Workload Indicator of Staffing Need (WHO)

SUMMARY CONCLUSIONS

Whilst this report represents, the third rapid assessment of NHI pilots, there are significant differences to the preceding two reports.

Past assessments focussing on 2012/13 and 2013/14 have focused primarily on the district pilots; this assessment takes a snapshot of all NHI related activities. Hence a direct comparison is not always possible.

In summary, there has been significant and encouraging progress in almost all areas. Most important to note is the continuing expansion of pilot activities and activities focussing on strengthening of the general public health system. New activities such as e-health strategies, distribution of medicines, expansion of school health and the introduction of HPV in young girls and the introduction of a diagnosis related groupers (DRGs) show positive signs. The introduction of OPERATION PHAKISA for the expansion of the ideal clinics initiative is another encouraging development, which will see a countrywide rollout in the 2015/16 financial year.

The introduction of an independent service provider (ISP) for the contracting of GPs/doctors has seen a rapid expansion of the number of PHC facilities now serviced by doctors. The current level of staffing allows the PHC facilities in the nine districts to provide an additional 1,5 – 2 million doctor consultations per year. Assuming an average rate of PHC clinics visits of 2/annum this means up to 1 million South Africans now have ready access to a GP.

There are some areas that require dedicated focus or enhancement, such as quality of infrastructure and infrastructure development as a whole.

It must be noted that budget allocations, or rather the decreased budget allocations do threaten the impact and potentially might regress some gains made during 2014/15.

Achievements

- In 2014/15, all districts reported integration, coordination and alignment between District Health planning and implementation with that of NHI pilot activities. This is a significant improvement over the previous financial year, 2013/14, where only 6 out of 10 districts reported integration of NHI pilot activities into routine District management planning and implementation.
- All districts indicate that they are on tract to spend in excess of 90% of the grant funds. The NHI conditional grant continues to be used on procurement of equipment. Very little is spent on refurbishment. District Managers are generally very supportive of the grant, mainly as it provides access to dedicated funds at their disposal. However, the primary question that remains is whether this grant is most strategically being used.
- All districts indicated that they have plans for infrastructure improvements. All districts continue with variable results - mostly poor scores for PHC facilities and slightly better scores for hospitals being achieved in most pilot districts.
- As with the 13/14 assessment districts report that referral mechanisms are in place in all pilot districts.

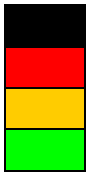
- DCSTs have been established in all pilot districts. A formal evaluation of their impact on service delivery has taken place, however the report is only due at the end of May 2015.
- In an environment where there is a lack of specialists available to take on these roles, especially in deep rural areas, the NDOH and National Treasury have agreed to expand the scope of GP contracting to include the DCSTs as part of the funding conditions.
- Currently the DCSTs, even though their scope has largely been in the MCWH area, can only support a portion of the district facilities, with a focus on neonates and maternal deaths being addressed.
- A key change from the previous assessment was the largely successful implementation of HPV. Data from the districts and the NDOH show that more than 95% of the targeted number of girls was reached averaged across two outreach activities during April/May 2014 and September/October 2014.
- The introduction of an independent service provider to recruit and place GPs in facilities has significantly increased the number of GPs contracted. However, as the contract only came into effect in November 2014, there was an under achievement. Prior to the introduction of the independent service provider, just over 150 doctors were recruited during the 21 months of the project. Since November 2014, a further 150 doctors have been recruited increasing the number of doctors to just over 300. The service provider has access to a further 300 doctors in the recruitment pipeline. However this is contingent on funding
- Nevertheless, during 2015/16 the intention is to supply a minimum of 180,000 hours to clinics in 9 pilot districts. This means that between 1.5 to 2m visits will be seen by GPs under this initiative translating into almost 1m people having access to doctors at a PHC level.
- Central Chronic Medicines Dispensing and Distribution Program or CCMDD is currently being rolled out in 10 districts, as well as in 2 hospitals that are not in the NHI districts.
- It is comprised of two program components, Central Chronic Medicines Dispensing and Distribution (CCMDD) and Pick-up Points (PuPs). Combined both models have in excess of 380,000 patients; with current enrolments in the private distribution model half at around 190,000.
- The revenue retention project continues to achieve very high success rates with 12/13 hospitals managing to reach their revenue target in the past 2 financial years.
- e-Health initiatives have been implement in the 10 pilot districts with 700 clinics being equipped with necessary hardware and software including Internet connectivity. A total of 3337 computers, 700 printers and wireless networking equipment were procured to equip 700 fixed PHC facilities in 10 NHI Pilot districts. All facilities were setup on a wireless LAN thereby optimising costs. This wireless LAN will be used to connect computers and printers internally at health facilities.
- Linked is the rollout of population registration efforts. In July 2013 the National Department of Health contracted the CSIR for the development of a Health Patient Registration System (HPRS). This system standardise patient registration across all health facilities, using the SA Identity Number as a unique patient identifier. It supports the tracking of utilisation and linkage to electronic health records.

Concerns

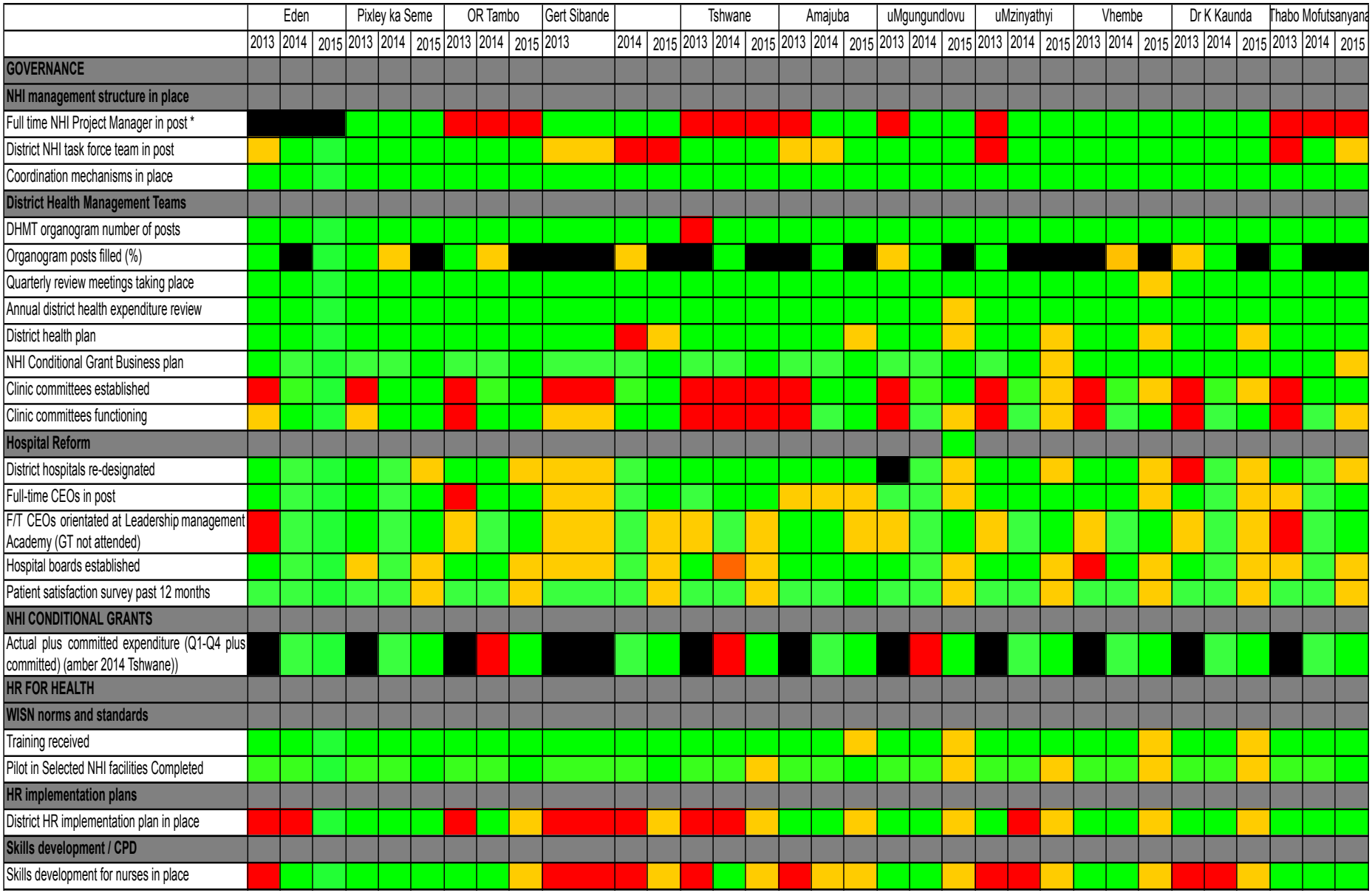
- There is a significant disconnect between district teams and the NDOH on the implementation, scope and timing of projects. This has narrowed in the past 12 months but continues to be a serious concern.
- As reported in the last assessment, and continues into 14/15 there are significant differences in NHI management structures. All pilot districts have appointed, or have proxy, NHI coordinators, at both the Provincial and district level
- The NHI conditional grant continues to be used on procurement of equipment. However, only 55% of the spending is on medical equipment.
- At the NDOH level, there is a strong view that this grant should be transformed and reprioritized to be of greater strategic value. The officials at the National Treasury are also supported of the view that this grant should be used to support the Ideal Clinic rollout.
- The coordination of infrastructure spending between the National Health grant managed by the NDOH, the provincial grants for infrastructure revitalization and the small amounts of the NHI conditional grant spent on infrastructure shows extremely poor coordination.
- All district managers indicated, they did not know what the National Health Grant infrastructure money was being spent on. In addition, there was no involvement in planning of the use of the grants. Two districts indicated that both the province and NDOH had plans to refurbish the same clinic, which was all already upgraded through the supply of park-home structures from DBSA using EU funds.
- Access to transport and vehicles is a major constraint to the EMS and school health programme.
- There remain many concerns around the GP contracting initiative, including:
    a) GP placement vs. need
    b) Monitoring of impact
    c) Introduction of performance framework
- The independent service provider has supplied data on the placement and utilization of GPs including data on patients being seen. This data is currently still being evaluated, but was not supported with similar data from the GPs on the NDOH contract.
- The NDOH should conduct an assessment of the value and benefits of the GP contracting programme.
- The contracting of allied health professionals has not yet started

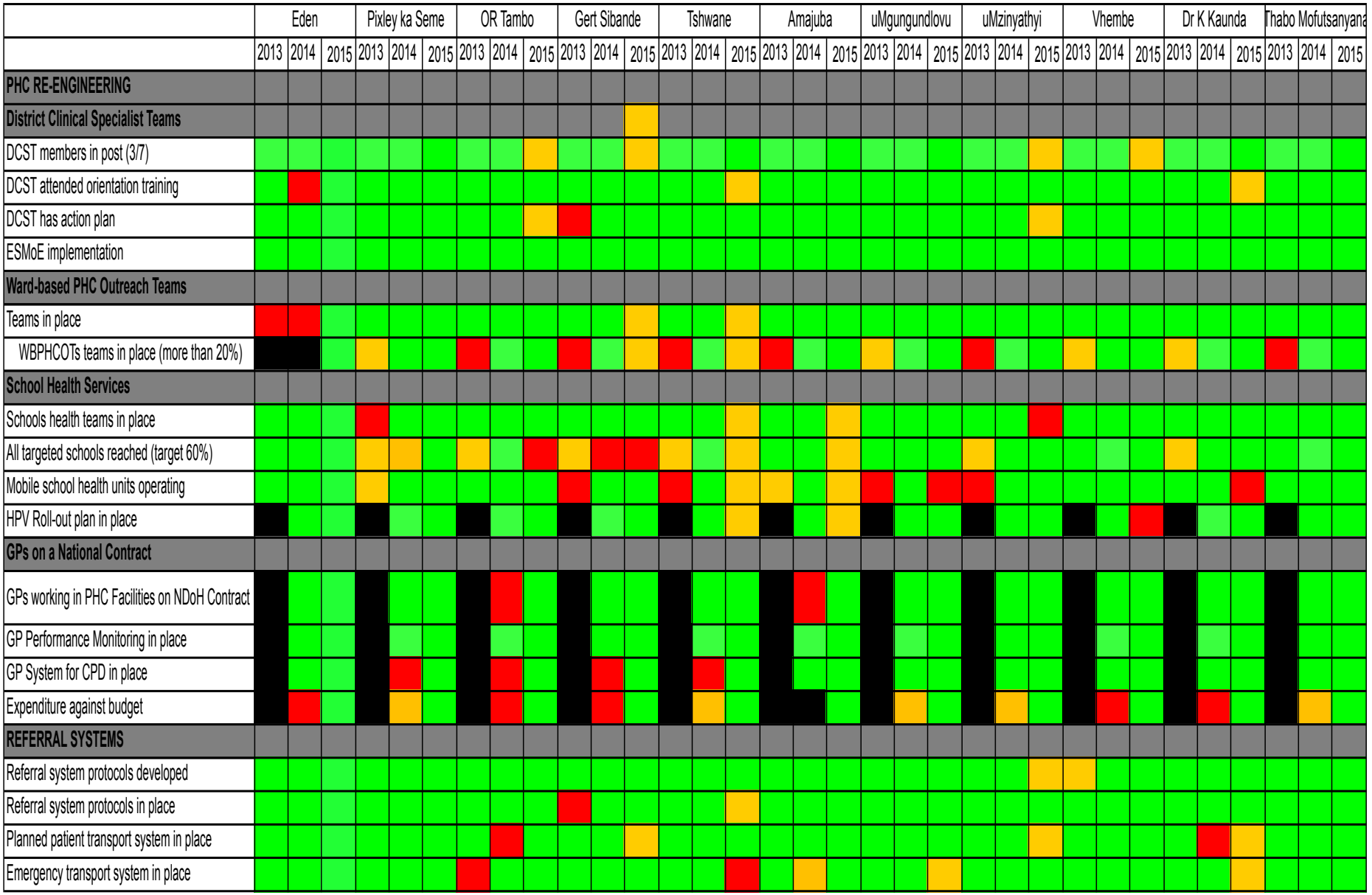
The Table below, is the key to the dashboard that follows:

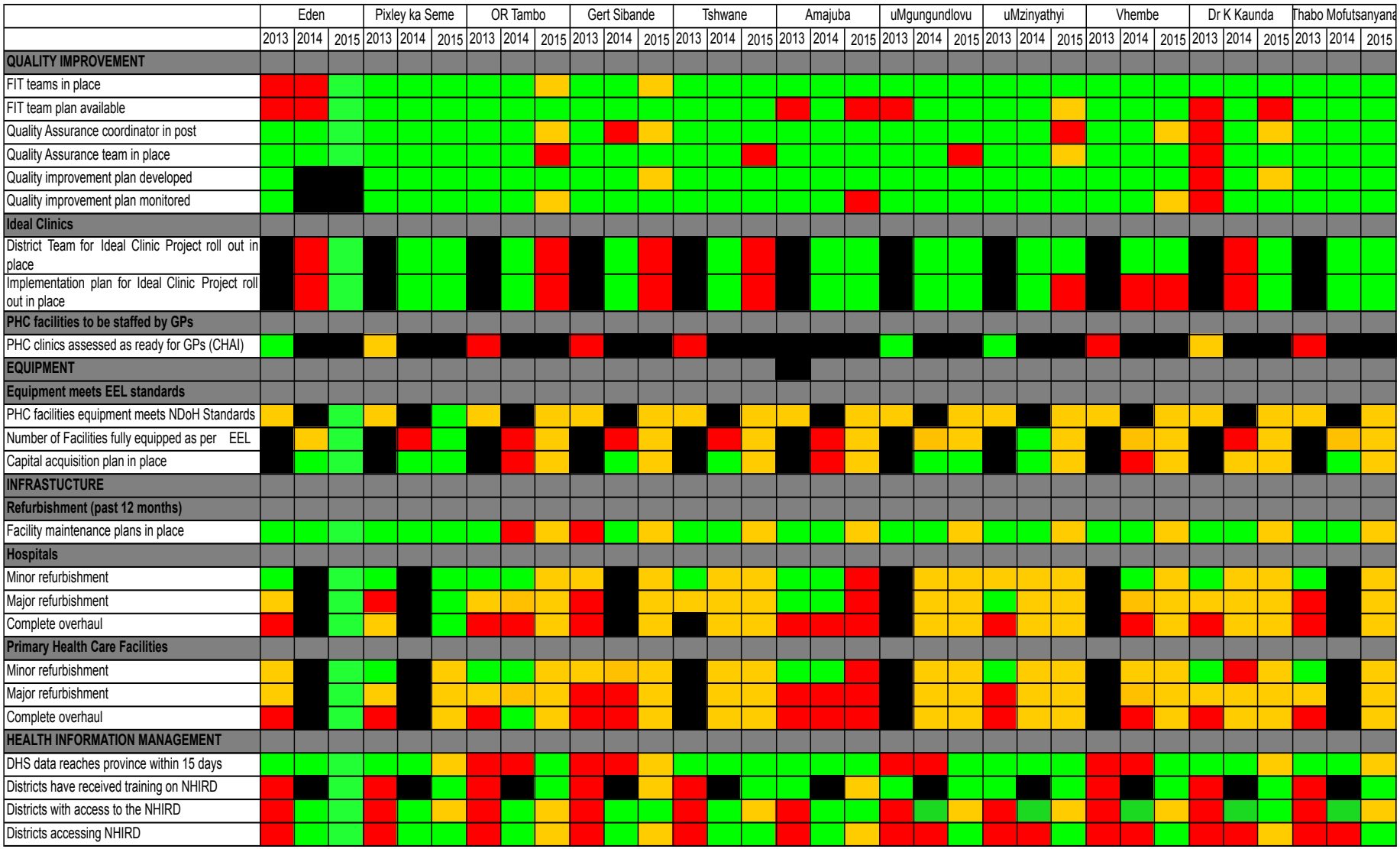
NOT APPLICABLE
LESS THAN 50%
50-75%
>75%



Status of NHI Pilot Districts – May 2015




Eden
Pixley ka Seme
OR Tambo
Gert Sibande
Tshwane
Amajuba
uMgungundlovu
uMzinyathyi
Vhembe
Dr K Kaunda
Thabo Mofutsanyana
2013 2014 2015
PHC RE-ENGINEERING
District Clinical Specialist Teams
DCST members in post (3/7)
DCST attended orientation training
DCST has action plan
ESMoE implementation
Ward-based PHC Outreach Teams
Teams in place
WBPHCOTs teams in place (more than 20%)
School Health Services
Schools health teams in place
All targeted schools reached (target 60%)
Mobile school health units operating
HPV Roll-out plan in place
GPs on a National Contract
GPs working in PHC Facilities on NDoH Contract
GP Performance Monitoring in place
GP System for CPD in place
Expenditure against budget
REFERRAL SYSTEMS
Referral system protocols developed
Referral system protocols in place
Planned patient transport system in place
Emergency transport system in place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Tshwane
Amajuba
uMgungundlovu
uMzinyathyi
Vhembe
Dr K Kaunda
Thabo Mofutsanyana
2013 2014 2015
QUALITY IMPROVEMENT
FIT teams in place
FIT team plan available
Quality Assurance coordinator in post
Quality Assurance team in place
Quality improvement plan developed
Quality improvement plan monitored
Ideal Clinics
District Team for Ideal Clinic Project roll out in place
Implementation plan for Ideal Clinic Project roll out in place
PHC facilities to be staffed by GPs
PHC clinics assessed as ready for GPs (CHAI)
EQUIPMENT
Equipment meets EEL standards
PHC facilities equipment meets NDoH Standards
Number of Facilities fully equipped as per EEL
Capital acquisition plan in place
INFRASTUCTURE
Refurbishment (past 12 months)
Facility maintenance plans in place
Hospitals
Minor refurbishment
Major refurbishment
Complete overhaul
Primary Health Care Facilities
Minor refurbishment
Major refurbishment
Complete overhaul
HEALTH INFORMATION MANAGEMENT
DHS data reaches province within 15 days
Districts have received training on NHIRD
Districts with access to the NHIRD
Districts accessing NHIRD

1. INTRODUCTION

This report follows on the first and second rapid assessment of the implementation of National Health Insurance (NHI) in eleven pilot districts in South Africa in 2013 and 2014, and comes almost 3 years after the launch of the pilot districts in 2012.

It was agreed that the report, to the extent possible, should apply the same framework that was used in the 2013 and 2014 assessment to enable stakeholders to compare current performance to that measured in the previous financial year. The outlines of the reports have therefore remained almost the same.

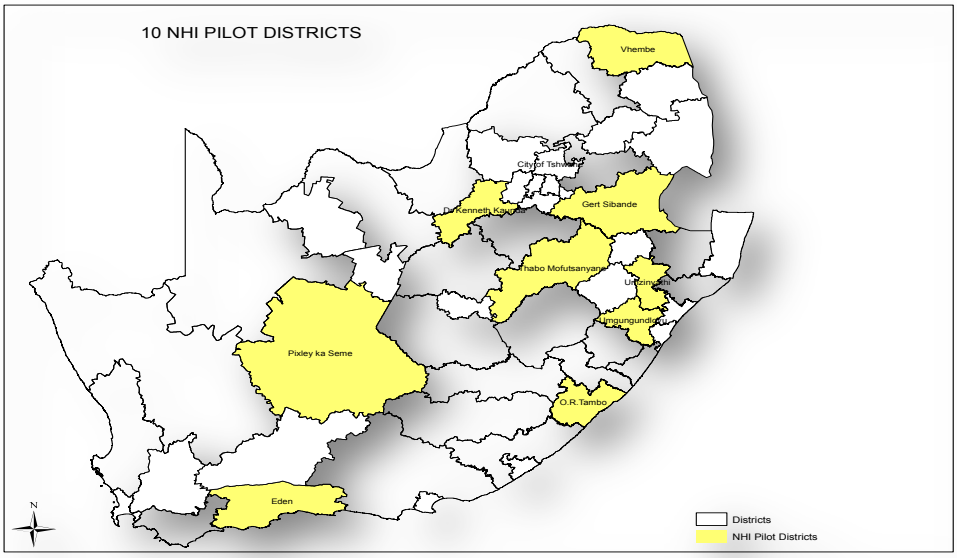
Whilst this report represents, the third rapid assessment of NHI pilots, there are significant differences to the preceding two reports.

Past assessments focussing on 2012/13 and 2013/14 have focused primarily on the district pilots; this assessment takes a snapshot of all NHI related activities. Hence a direct comparison is not always possible.

In addition, the 14/15 rapid assessment attempts to continue the trend of measuring selected indicators in a dashboard format, the 14/15 rapid assessment is the first year of full implementation of many projects/activities.

As such the focus for this rapid assessment is as follows:

a) District Health Management Teams
b) GP Contracting
c) Distribution of Chronic medicines
d) Integrated School Health Programme
e) District clinical specialist Teams



2. BACKGROUND

According to the Green Paper of the NHI, 'the transitional process from the current health service delivery environment to the proposed National Health Insurance environment within the South African health system will require a well-articulated implementation plan. The implementation of National Health Insurance will be done in a phased and systematic manner at both the national and sub-national levels. The migration period will occur in three phases over the fourteen years of implementation'.

The policy paper further advises that a number of inter-related elements will need to be addressed during the transition period and these include:

- Development of strategies to strengthen district health management structures to accelerate PHC re-engineering (Ward Based PHC Outreach teams, the School Health program, District Clinical Specialist Teams and GP contracting).
- Reinforce the approach to Quality Improvement in all facilities in line with stipulations from the Office for Health Standards Compliance (OHSC).
- Address Human Resources shortcomings in the short and medium term (also consider increasing capacity of nursing colleges and health faculties).
- Assessment of health infrastructure to build capacity to deliver better services within the NHI.
- Implementation of hospital management reforms that include governance reforms, improvements in financial management.
- Development of an integrated plan to support processes around population registration.
- Development of a detailed transition process from the current fragmented health information system to an integrated health information system that supports efficiency.

The country is still within the first phase of implementation of NHI which is planned to take five years. (Almost three years have passed since the NHI Green Paper was published in 2011). This report comes at the midpoint of the first phase, which is an opportune time to take stock of the areas which must be attended to in order to scale up implementation.

3. METHODOLOGY

The rapid assessment tool which was developed in 2013 was revised to take stock of the current state of implementation of NHI in the pilot districts. This included a focus on, for instance, the “Ideal Clinic Initiative” and the launch of the HPV vaccine rollout.

As the tool for this assessment was web based, the tool used in the previous assessment was sent out to the districts in order that the various departments could assist in populating the tools in order for the assessment to deliver a comprehensive report to the NDoH.

Additional spreadsheets covering equipment, hospital reform and refurbishment were also sent to the districts and submission timeframes were communicated.

Some of the districts were able to populate the tool prior to the visits by the assessment teams. On the day of the visit, the District Health Management Team provided the team with additional information and insights as some of the questions were new and only existed in the web based tool.

The field visits to the 11 District Offices took place between 09 April and 15 May 2014.

4. FINDINGS

4.1 District Health Management Teams

4.1.1 Integration, coordination and planning related to DHMTs

In 2014/15, all districts reported integration, coordination and alignment between District Health planning and implementation with that of NHI pilot activities. This is a significant improvement over the previous financial year, 2013/14, where only 6 out of 10 districts reported integration of NHI pilot activities into routine District management planning and implementation.

The level of engagement in the implementation of different NHI pilot activities varies significantly from district to district.

As reported in the last assessment, and continues into 14/15 there are significant differences in NHI management structures. All pilot districts have appointed, or have proxy, NHI coordinators, at both the Provincial and district level

4.1.2 NHI Conditional Grants

In the previous rapid assessment, it was reported that the NHI Conditional Grants have contributed significantly to progress in NHI implementation, principally through staff training, provision of equipment, and refurbishment of health facilities. However, the NHI conditional grant continues to be used on procurement of equipment. Very little is spent on refurbishment.

District Managers are generally very supportive of the grant, mainly as it provides access to dedicated funds at their disposal. However, the primary question that remains is whether this grant is most strategically being used.

Key concerns around the grant include:

- In 2012/13, the estimated shortfall in equipment needs was R130m. however; to date in excess of R150m has been spent collectively by districts in procuring equipment, yet Districts indicate that not all facilities have met the minimum equipment needs.
- An examination of the actual spending shows that only 55% of the expenditure is classified as medical equipment, with computer related equipment being the largest component of non-medical equipment

At the NDOH level, there is a strong view that this grant should be transformed and reprioritized to be of greater strategic value. The officials at the National Treasury are also supported of the view that this grant should be used to support the Ideal Clinic rollout.

4.1.3 Infrastructure spending and planning

In addition to the NHI conditional grant, the coordination of infrastructure spending between the National Health grant managed by the NDOH, the provincial grants for infrastructure revitalization and the small amounts of the NHI conditional grant spent on infrastructure shows extremely poor coordination.

All district managers indicated, they did not know what the National Health Grant infrastructure money was being spent on. In addition, there was no involvement in planning of the use of the grants. Two districts indicated that both the province and NDOH had plans to refurbish the same clinic, which was all already upgraded through the supply of park-home structures from DBSA using EU funds.

The NDOH infrastructure was unable to share the data on their plans of use of funds not could they indicate what the level of spending was. According to National Treasury, whilst the financials have not been finalized, there was a strong sense that the overall spending on the National Health Grant (infrastructure only) would fail to reach 25% for the 2014/15 financial year.

4.1.4 Quality Improvement interventions

All districts continue with variable results - mostly poor scores for PHC facilities and slightly better scores for hospitals being achieved in most pilot districts.

For the 13/14 assessments, data was obtained from the OHSC to compare with the Health facilities audit. Unfortunately the team has not accessed the data for 14/15.

In the majority of districts, facilities are submitting quality improvement plans, and the districts have submitted their composite quality improvement plan to the assessment team.

All districts indicated that they have plans for infrastructure improvements.

However, as reported in 13/14 access to funding was the main constraint, with most district managers were of the opinion that the National Health grant was to be used for this purpose.

4.1.5 Referral and planned patient transport

As with the 13/14 assessment districts report that referral mechanisms are in place in all pilot districts. However, a shortage of vehicles remains a challenge in Planned Patient Transport, which limits this service to clinic-to-hospital and back only.

Another repeated weakness is that EMS also experiences long turnaround times for emergency transport and skilled human resources constraints contribute to long waiting times for EMS.

4.1.6 Population registration and Health Patient Registration System

In the 2014 assessment it was reported that population registration had commenced albeit slowly.

In the past 12 months, this has gained significant traction and alongside the ministerial led "mom-connect" project it is reported that collectively across all pilot districts, more than 200,000 households have been reached.

In July 2013 the National Department of Health contracted the CSIR for the development of an Health Patient Registration System (HPRS). This system standardise patient registration across all health facilities, using the SA Identity Number as a unique patient identifier.

It supports the tracking of utilisation and linkage to electronic health records. The purpose is to create a register of patients, to assist the health sector with planning and improved service delivery. It further tracks the beneficiaries accessing services at health facilities at different levels of care.

The software development of the system has completed version 0.1.3 and the current system capabilities are:

- Barcode Scanning (ID Book and Driver's License) and Biometric reader
- Patient lookup (patient demographic details, facility linkage, patient file number)
- Generate a patient file number
- Maintenance of patient details
- Linkage of patient to PHC facility
- Record the visit (date, time, facility, purpose)
- Management information – health service provision

The Health patient registration System were deployed in identified Beta Testing Facilities.

The table below provide for the status of patients registration in each of the Beta Sites

Province	Facility	Total
Eastern Cape Province	Bodweni Clinic	1439
	Mbekweni CHC	6707
	Mthatha Gateway Clinic	1640
	Ngangelizwe CHC	1447
	Palmerton Clinic	3587
	Qaukeni Clinic	3600
	Qokolweni Clinic	2049
	Qunu Clinic	4512
Eastern Cape Province Total		**24981**
Free State Province	Bohlokong Clinic	4445
	Dinkweng Clinic	1251
	Harrismith Clinic	9483
	Hobhouse Clinic	2111
	Mamello CHC	8410
	Marakong Clinic	9882
	Tebang Clinic	7252
Free State Province Total		**42834**
Gauteng Province	KT Motubatse Clinic	27701
Gauteng Province Total		**27701**
KwaZulu-Natal Province	Amakhabela Clinic	334
	Central City Clinic	8276
	Church of Scotland Gateway Clinic	13641
	East/Boom CHC	69071
	Eastwood Clinic	9824
	Efaye Clinic	9630
	Greytown Gateway Clinic	360
	Imbalenhle CHC	1472
	Ntembisweni Clinic	127
	Phatheni Clinic	3719
	Pine Street (Greytown) Clinic	5568
KwaZulu-Natal Province Total		**125190**
Limpopo Province	Makhado CHC	3151
	Masisi Clinic	7996
	Mudimeli Clinic	2567
	Mulala Clinic	3094
	Nancefield Clinic	15142
	Tshipise Clinic	4005
Limpopo Province Total		**35955**
Mpumalanga Province	Embalenhle CHC	1014
Mpumalanga Province Total		**1014**
Northern Cape Province	Britstown Clinic	54
	Carnarvon Clinic	75
	Richmond CHC	713
	Richmond Clinic	2676
Northern Cape Province Total		**3518**
North West Province	Alabama Clinic	5835
	Boiki Thlapi CHC	5213
	Empilisweni Clinic	3979
	Grace Mokgomo CHC	966
	Jouberton CHC	4537
	Leeudoringstad CHC	2746
	N Pretorious Gateway Clinic	3829
North West Province Total		**27105**
Grand Total		**288632**

4.1.7 Ideal Clinics

During October and November 2014, the ideal clinics initiative was completely overhauled. The revised approach is meant to be fast tracked for implementation during the 2015/16 financial year.

The Ideal Clinic Realisation and Maintenance Programme is an initiative of the NDoH, an approach for effectively addressing weaknesses and ensuring sustained improvements in quality of health services delivered at public sector primary health care facilities.

The Ideal Clinic initiative is an important strategic initiative that is supported by the DPME in the Presidency, National Treasury, other government departments, Non-governmental Organisations, development partners.

The Ideal Clinic Realisation and Maintenance Programme has attracted massive interest and support from within and outside government because:

- It seeks to enhance patients' experience of care in public sector Primary Health Care facilities
- It seeks to create an enabling environment for improved service delivery in Primary Health Care facilities
- It seeks to contribute towards improving clinical outcomes and (incrementally) population health indicators
- Primary Health Care is a fundamental building block of National Health Insurance (NHI)
- Primary Health Care is one the key priorities reflected in Chapter 10 of the National Development Plan 2030 and the Medium Term Strategic Framework (2014-2019).

An Ideal Clinic in South Africa will have the following elements

- It will be a clinic that **opens on time** in the morning, according to its set operating hours, and which **does not close until the last patient** has been **assisted**, even if this is beyond the normal closing hours.
- It is staffed by health care **providers** who **treat people with dignity**, and **observe** the **Batho Pele principles** of Access, Consultation, Courtesy, Information, Service Standards, Openness and Transparency, Redress and Value for Money.
- The Ideal Clinic will **provide community-based health promotion** and disease prevention programmes **in collaboration with the community**.
- It is very **clean**, promote hygiene and **take all** precautionary measures to prevent the spread of diseases.
- It has **reasonable waiting times** and community members do not have to sacrifice their entire working day to seek health care.
- It provides a **comprehensive package of good quality health services** every day and community members do not have to return on different days for different services.
- It has the **basic necessities available**, such as essential medicines.
- It **refers people** to higher levels of care **timeously** when this is required.

- It **works** together with the **community** it serves, with diverse stakeholders, in **promoting health and socio-economic development**.
- Finally, community members would say an Ideal Clinic is one that we can be proud of, and call it **"our own clinic",** rather than a "government clinic" or a "state health facility".

The lab aspiration was to enable all 3,507 PHC facilities to achieve sustainable Ideal Clinic status by 2018/19. To achieve this aspiration, the lab was organised in 8 work streams

1. **Service Delivery**
2. **Waiting Times**
3. **Infrastructure**
4. **Human Resources for Health**
5. **Financial Management**
6. **Supply Chain Management**
7. **Scale-up and Sustainability**
8. **Institutional Arrangements**

- These work streams covered the supporting processes, resources and governance model required to scale up the ICRM Programme
- These work streams contributed to the overall aspiration of the system to improve patient experience, and enhance clinical and population health outcomes

Overview of some proposed initiatives

- **Effectively managing "Patient Demand " for health care services through:**
  - Alternative points of access to the PHC system for more accessibility
  - Expansion of chronic medicine distribution sites
  - Access to Provincial Call Centres for non-clinical advice e.g. PHC operating hours, where to find PHC facilities
  - Expansion of Ward-based PHC Outreach Teams; District clinical specialist teams and School health services
  - Contracting out services, resulting in reduced clinic congestion and increased time for clinical consultation
- **Standardised service package**
  - Creation of 3 types of clinics (small, medium and large sizes)
  - Finalisation of the standardised package of services for these clinics
  - Ensuring consistent level of service delivery and patient experience
- **Automation of Health Information Systems**
  - Transition from manual to electronic record keeping systems in PHC facilities;
  - Ensuring Interoperability of information systems
  - Rationalisation of registers;
- **Optimal staffing levels**
  - Achieving appropriate staffing levels at all clinics (doctors, nurses, pharmacists, pharmacy assistants) based on agreed upon model

  - Recruitment and re-employment of clinical staff that have left the public sector (or the country)
  - Identification and protection of essential non-clinic posts (facility manager; security guard; cleaner; data capturer, etc.)
  - Increased private sector contracting
  - Improved performance management

- **Integrated Infrastructure Delivery**
  - Implementation of a public visible National/Provincial PHC capital works programme that includes:
    - Maintenance; facility upgrades
    - Refurbishment; newly built facilities
  - Creation of Clinic maintenance hubs to be for effective maintenance
  - Consolidated provincial asset register with SOP for accessing, use and updating of registers
  - Infrastructure standards used across the country
- **Decentralisation of authority as a key enabler**
  - Facility managers receive delegations to ensure successful and sustainable scale up in the following areas: Supply chain management; Financial management; HR management and Stakeholder management
  - Facility managers to cascade training to clinic teams
- **Full availability of essential supplies and medicines**
  - Development of a national catalogue of supplies reflecting minimal specs; maximum prices and database of approved suppliers
  - District demand forecasting units: forecast demand based on clinic stock data
  - Warehouses converted to cross-docks
  - Weekly supplies to clinics
  - Transversal procurement contracts

These proposals have been validated by National Treasury (NT) and will be developed in more detailed during the next few months within existing SCM reforms led by NT.

4.2 District Clinical Specialist Teams (DCSTs)

The DCSTs are made up of a number of clinical specialists who provide clinical mentorship and guidance to health facilities to improve their ability to provide effective maternal, neonatal and child health services.

The DCSTs are recruited to a district in order to provide clinical guidance to existing staff in health facilities. DCSTs are expected to dedicate a maximum of 70% of their time to clinical governance, 20% on clinical work and 10% on teaching and research. The DCSTs are therefore expected to possess basic competencies that will enable them to provide leadership in clinical governance.

By the end of 2013, DCSTs had been established in all health districts, although most districts do not have complete teams, only one district has a full complement of team members.

Current status of DCST recruitment is reflected below:

Province	Ad Midwife	Anaesthetist	Family Physician	Obstetrician	Paediatric Nurse	Paediatrician	PHC Nurse	Total
EC	8		5	1	6	3	7	30
Free State	5		5	2	5	1	5	23
Gauteng	5	1	5	4	5	4	5	29
KZN	11		7	4	11	3	11	47
Limpopo	5		5	2	5	2	5	24
MP	2	1		2	3	2	3	13
NW	4		3	3	3	3	4	20
NC	5	1	5	1	2	1	5	20
WC	1	3	2	3	1	3	1	14
Total	46	6	37	23	41	22	446	220

Over the past year the DCSTs have found different ways of working, gaining much experience on various means to overcome the challenges they are trying to address in strengthening the health system.

A formal evaluation of their impact on service delivery has taken place, however the report is only due at the end of May 2015.

Currently the DCSTs, even though their scope has largely been in the MCWH area, can only support a portion of the district facilities, with a focus on neonates and maternal deaths being addressed.

The DCSTs alone will not be able to achieve the desired outcomes of reducing maternal and child mortality. A collaborative effort with other role players, including the provincial specialists, the district management team and the MCH unit is essential to achieve the intended targets for the country.

In past assessments, DHMT commented on the fact that roles and responsibilities were not very clear. In this light the NDOH has published, a **Handbook for District Clinical Specialist Teams.**

Since its launch, the DCST programme has shown that it can play a crucial role in improving systems at the heart of primary health care. DCSTs across the provinces are successfully following different models, adapting what they learn from the trainings and induction and orientation meetings to the realities on the ground.

In order to extend their reach and impact, DCSTs should strive towards continuously strengthening their teams, improving their work plans and monitoring systems, and building and strengthening collaborations with key stakeholders in the healthcare system, government and communities.

DCSTs are not only being implemented in NHI pilot districts.

Province	District in which DCST's are appointed
Eastern Cape	7 Districts : Alfred Nzo DM, Amathole DM, Buffalo City MM, C Hani DM , Cacadu DM, Joe Gqabi DM, Nelson Mandela Bay MM, **OR Tambo DM (NHI District)**
Free State	5 Districts : Fezile Dabi DM, Lejweleputswa DM, Mangaung MM, **T Mofutsanuane DM (NHI District),** Xhariep DM
Gauteng	5 Districts Ekurhuleni MM, Johannesburg MM, Sedibeng DM, **Tshwane MM (NHI District),** West Rand DM
KwaZulu-Natal	11 Districts Amajuba DM (NHI District), eThekwinii MM, iLembe DM, Sisonke DM, Ugu DM, **Umgungundlovu DM (NHI District),** Umkhanyakude DM, Uuthukela DM , **Umzinyathi DM (NHI District),** Uthungulu DM, Zululand DM
Limpopo	Capricorn DM, G T Sekhukhune DM, Mopani DM, **Vhembe DM (NHI District),** Waterberg DM
Mpumalanga	3 Districts: Ehlanzeni DM, **Gert Sibande DM (NHI District),** Nkangala DM
North West	4 Districts: Bojanala Platinum DM, **Dr K Kaunda DM (NHI District)** , Ngaka Modire Molema DM, Ruth Segomotsi Mampatu DM
Northern Cape	5 Districts: Frances Baard DM , JT Gaetswewe DM, Namakwa DM, **Pixley ka Seme DM (NHI District)** , Siyanda DM
Western Cape	5 Districts: Western Cape MM (New Somerset), Western Cape MM, Cape Winelands DM (Worcester) , Cape Winelands DM (Paarl) , **Eden DM (NHI District)**

In an environment where there is a lack of specialists available to take on these roles, especially in deep rural areas, the NDOH and National Treasury have agreed to expand the scope of GP contracting to include the DCSTs as part of the funding conditions.

Alongside the DCSTs are the PHC ward-based teams (or WBPHCOTs). The table below highlights the current status of implementation

NHI Pilot District	WBOT Required based on 1:1500 households	Number of WBOT registered March 2014	Number of WBOT registered January 2015
Amajuba DM	74	10	10
Dr K Kaunda DM	139	49	93
G Sibande DM	182	9	64
Oliver Tambo DM	199	223	223
Pixley ka Seme DM	33	41	44
T Mofutsanyane DM	145	29	68
Tshwane MM	608	19	155
uMgungundlovu DM	182	17	19
Umzinyathi DM	76	20	22
Vhembe DM	229	17	54
Eden	109	-	-
Grand Total	**1976**	**434**	**752**

4.3 Integrated School Health

School Health teams have not yet reached national requirements in all pilot districts, but show significant improvement with an average of more than 80% of teams needed are in place and plans are in place to increase the number of teams required to meet national targets this financial year.

School Health activities have been significantly hampered by:

i) A lack of access to allied health professionals required for specialized screening of learning related disorders such as occupational therapists, speech and hearing and optometrists.
ii) A lack of vehicles in the pilot districts. Whilst the NDOH has facilitated increased vehicles, there is still a shortage according to district teams

There are currently,

- 27 Mobile PHC Trucks

- 17 Oral Health Mobiles
- 3 Eye Care Mobiles

Appointment of school-based teams led by a nurse

PROVINCE	NO. OF TEAMS
Eastern Cape	65
Free State	20
Gauteng	62
KwaZulu-Natal	147
Limpopo	47
Mpumalanga	32
Northern Cape	3
North West	25
Western Cape	43
Total	444

These teams are operational on a inter-district basis and not restricted to pilot districts.

To illustrate, the impact of the ISHP, in the 6-month from May to December, the teams identified 54,238 children (excluding WC) with different health related learning disorders.

	Q1 and Q2	Q3 – Q5	Total
Learner referred for Eye Care	4 533	6 631	11 164
Learner referred for Oral Health	16 891	19 236	36 127
Learner referred for Hearing problems	2 010	2 437	4 447
Learner referred for Suspected TB	1 235	754	1 989
Learner referred for Speech problems	261	250	511
Total of referrals	24 930	29 308	54 238

A key change from the previous assessment was the largely successful implementation of HPV. Data from the districts and the NDOH show that more than 95% of the targeted number of girls was reached averaged across two outreach activities during April/May 2014 and September/October 2014. With the second phase being slightly higher in coverage.

4.4 General Practitioner Contracting

In the 13/14 assessments, the majority of pilot districts are ready to take on NDoH-contracted GPs to work alongside nurses in primary health care facilities. However, the GP contracting initiative has failed to reach the specified targets.

The introduction of an independent service provider (ISP) to recruit and place GPs in facilities has significantly increased the number of GPs contracted.

The independent service provider is a consortium made up as follows and coordinated by the Foundation for Professional Development (FPD)

NHI District	PEPFAR District Support Partner
Dr Kenneth Kaunda	WHRI
Eden	FPD/Aurum
Gert Sibande	Broadreach
OR Tambo	Aurum
Pixley ka Seme	Aurum
Thabo Mofutsanyane	Right to Care
Tshwane	FPD
UMgungundlovo	Aurum
UMzinyathi	Aurum
Vhembe	FPD

The independent service provider contract as initiated as follows:

- Appointment letter 08 August 2015
- Final version of MoU signed on 19 November 2014
- 1st doctors placed 1 December 2015

Prior to the introduction of the independent service provider, just over 150 doctors were recruited during the 21 months of the project. Since November 2014, a further 150 doctors have been recruited increasing the number of doctors to just over 300.

However, as the contract only came into effect in November 2014, there was an under achievement.

The service provider has access to a further 300 doctors in the recruitment pipeline. However this is contingent on funding

Is Doctors/GPs Interested in offering services through an independent service provider?

- Interest was substantial
- More than 1500 doctors expressed interest through engaging with the recruitment team
- This translated to 600+ moving to engagement step where substantive contract negotiations took place
- Engagement had to be stopped once informed of the budget cuts early in February 2015

Below, is a letter submitted by one of the doctors, highlighting that this pilot initiative is about improving health outcomes and saving lives:

"I wanted to share an incredible story that reaffirms my decision to work at Mpophomeni clinic.

Three weeks ago a child (Andile, 9) was hit by a taxi while waiting on the side of the road. He was rushed to the clinic by people on the scene. When he arrived he seemed to have escaped unscathed but within a few minutes, at the clinic, he started to decompensate and begin to lose consciousness.

I reassessed him and felt that he was developing a tension pneumothorax. I was able to decompress his chest with a Jelco needle, as a temporary measure. He regained consciousness soon after this intervention and was transferred to Grey's Hospital.

He has made a full recovery according the last report I heard from Hospital. This dramatic case highlights the benefits of having a GP at a clinic. If a doctor was not at the clinic this child would surely have died.

This is a dramatic example but there are many other daily interactions that I have that are no less significant. Like the diabetic patient who finally understands her diabetes or the child failing to thrive who was found to have a rare genetic disorder or the client suffering from bleeding who finally gets referred and helped by the correct hospital.

Thanks for placing me here I am learning a lot and feel like I am making a difference".

Dr Greg Skinner 20 March 2015

Progress Made by the ISP

The independent service provider has supplied data on the placement and utilization of GPs including data on patients being seen. This data is currently still being evaluated, but was not supported with similar data from the GPs on the NDOH contract.

Original target was to recruit 450 FTE's i.e. 50 doctors/district for the 9 participating NHI districts. **However, placement limited to 156 FTE.** Due to the budget cut for FY15/16 only 156 Full Time Equivalent (FTE) doctors could be contracted.

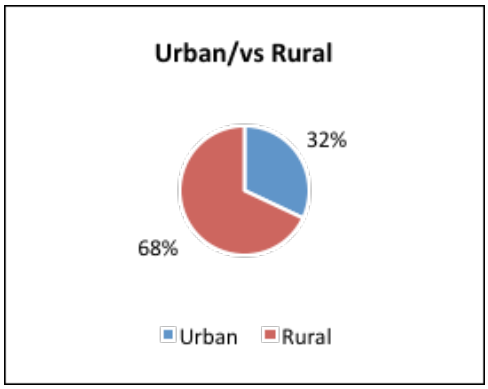
Employee Breakdown	Rural Full Time	Rural Part Time	Rural Sessional	Non-Rural Full Time	Non-Rural Part Time	Non-Rural Sessional	Total
GPs Recruited	99	21	2	41	8	3	**174**
Full Time Equivalents	99	10.5	66%	41	4	66%	**156**
% of Total Full Time Equivalents	62%	7%	1%	27%	3%	1%	**100%**
	Total Rural Full Time		**71%**	**Total Non-Rural Full Time**		**29%**	

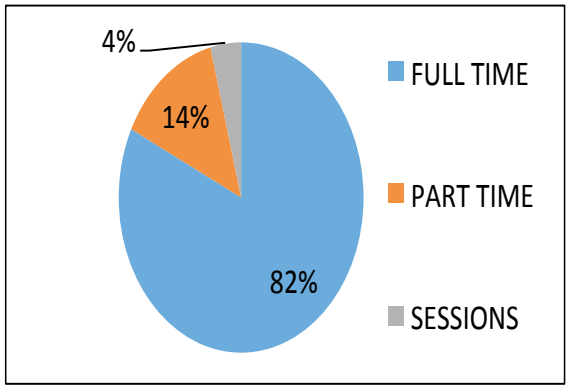
Due to historical underperformance on this grant, in December 2014, the National Treasury through the budget allocation letter, informed the NDOH of the significant reduction in the grant allocation for the 15/16 MTEF.

Employment model (reflecting doctor preference)

Doctors were offered the preference of full-time engagement, part-time or sessional basis. Of doctors contracted by the ISP, 82% opted for full-time arrangements, with only 4% choosing sessional basis.

This highlights not just the interest but also the commitment to the project.





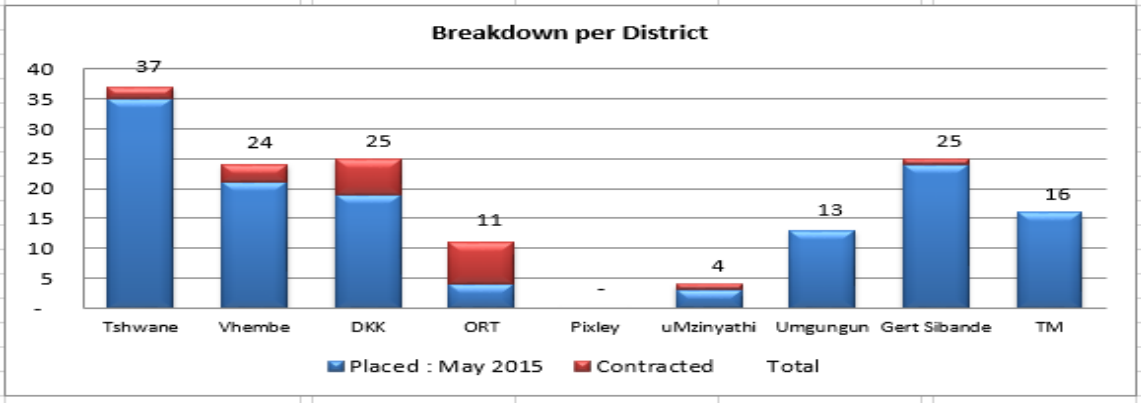
Rural vs. Urban

The ISP has been extremely successful in attracting doctors under this programme into rural areas, with 68% of placements to date being made in rural areas.

District-by-District Placement

With the exception of Pixley ka Seme, doctors have been placed in all districts.

Breakdown per district	*Placed : May 2015*	*Contracted*	*Total*	*% of Total*
Tshwane	35	2	37	24%
Vhembe	21	3	24	15%
DKK	19	6	25	16%
ORT	4	7	11	7%
Pixley	-		-	0%
uMzinyathi	3	1	4	3%
Umgungun	13		13	8%
Gert Sibande	24	1	25	16%
TM	16		16	10%
	135	***20***	***155***	***100%***



Improved access to doctors

Important to note is that the number of hours that GPs service clinics is 2x greater than those on the NDOH contract. During December 2014 and February 2014 the service provider was able to supply 12 hours of time from GPs. During 2015/16 the intention is to supply a minimum of 180,000 hours to clinics in 9 pilot districts.

The current level of staffing allows the PHC facilities in the nine districts to provide and additional 1,5 – 2 million doctor consultations per year.

Assuming an average rate of PHC clinics visits of 2/annum this means up to 1 million South Africans now have ready access to a GP

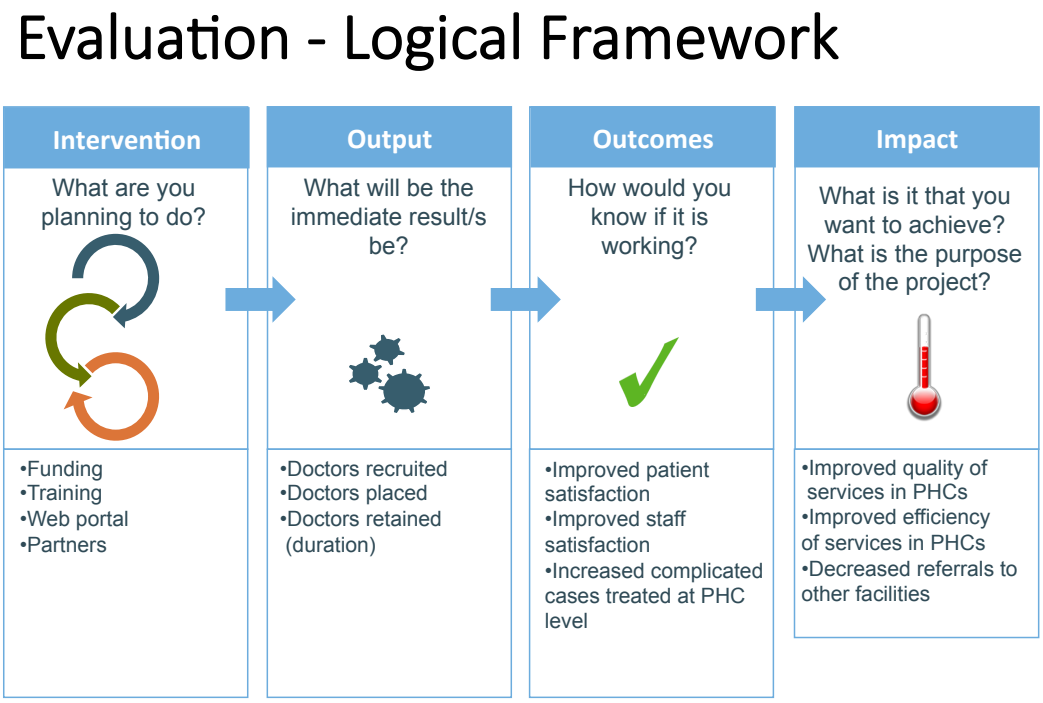
Western Cape approach

The Western Cape DOH is excluded as they are implementing a different framework. The WCDOH is using a principle of deploying existing medical officers employed by the WCDOH to clinics in the Eden district, and using the grant funding, they are employing doctors on sessional basis in hospitals to cover the gap left by the medical officers deployed to clinics.

According to the WCDOH, this has proved to be highly effective strategy as attracting private GPs to hospitals is easier than to clinics. The team is assessing the impact of this model against the NDOH and the service provider model.

Formal evaluation

A formal outcomes evaluation study has been commissioned that will evaluate the project at the end of the 2 year period



Routine patient satisfaction surveys are being conducted by the District teams and whilst they will be used in the formal evaluation, they are being used to inform day-to-day performance.

Lessons learned from the ISP

a) Cash flow

- Service provider only refunded for doctor salaries and other costs 30 days after the actual expenditure, requiring the service provider to have deep either deep pockets or risk defaulting on salary payments. This is especially acute when payments are delayed at the beginning of the new financial year due to purchase orders being loaded on the system and payment is delayed for longer than 30 days
- Potential solution: Upfront payment system (in line with practice of larger donors) and monthly reconciliations

b) Supply of doctors

- Country has a severe shortage of doctors
- If # /100 000 is compared with Brazil we have a deficit of 60 000 doctors – Source NDOH HRH Strategy
- As a result churning took place between public sector and GP tender

Where our candidates were previously employed

	Contract	Handover	Placed	Total	% of total
Public Sessionals	0	0	3	3	2%
Private Practice Urban	9	2	12	23	15%
Private Locums	1	0	6	7	4%
Private Practice Rural	6	0	8	14	9%
Other	3	0	3	6	4%
CSO	2	0	15	17	11%
2 weeks	0	0	0	0	0%
Employed by PEPFAR	0	0	37	37	24%
Employed by DOH	19	3	26	48	31%
Retired	1	0	0	1	1%
Total	**41**	**5**	**110**	**156**	**100%**

Potential solution: Increase recruitment from abroad

c) Supply of doctors

- As these doctors are not employed as public sector doctors they needed to be covered through indemnity insurance against malpractice suits as such the agreed to level of cover that NDOH refunds consortium places restrictions on scope of practice around deliveries and surgical procedures
- Problem: In some PHC sites these doctors are required to undertake deliveries and surgery
- Potential solution: State to provide indemnity cover on similar bases as for full-time public sector employees.

Concerns

There remain many concerns around the GP contracting initiative, including:

a) GP placement vs. need
b) Monitoring of impact

c) Introduction of performance framework

4.5 Central Chronic Medicines Dispensing and Distribution Program

As this is the first report that focuses on the CCMDD, more detailed explanation is provided. CCMDD is a National Department of Health (NDoH)-led program that aims to decongest public healthcare facilities and improve access to chronic medicines in South Africa. The program contracts the dispensing and distribution of repeat prescriptions for stable chronic patients to private sector service providers.

The program led by NDoH is comprised of two program components, Central Chronic Medicines Dispensing and Distribution (CCMDD) and Pick-up Points (PuPs).

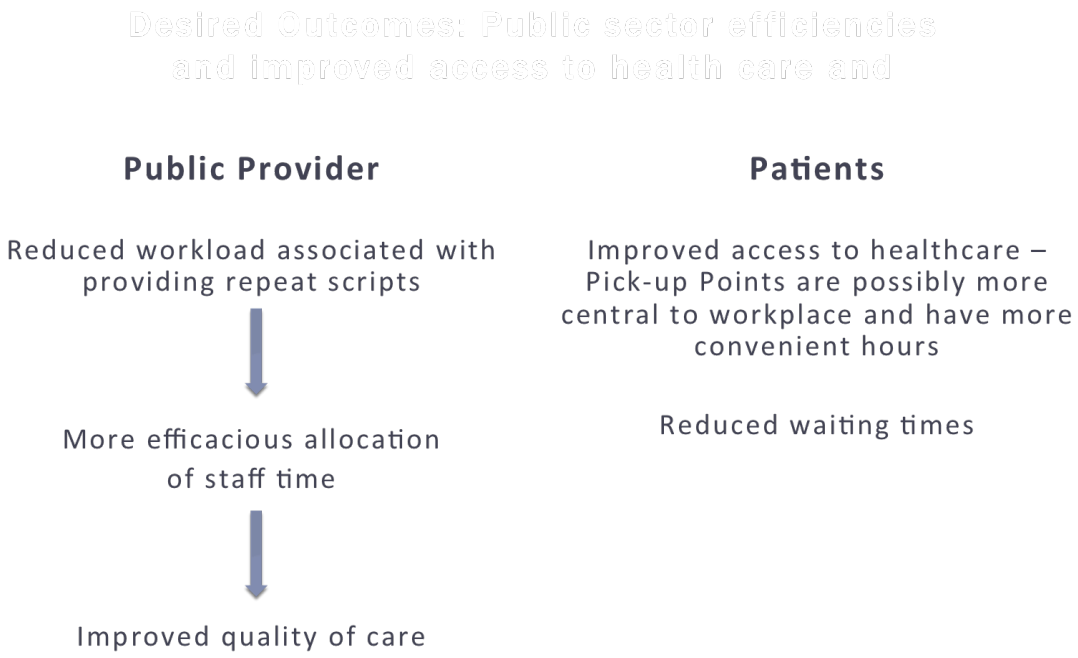
i. The first relates to individual patients' medicines being centrally dispensed and distributed to the point of service delivery.
ii. The second relates to the provision of pre-dispensed medicines at private sector pharmacies, or 'Pick-Up-Points' (PUP), that is conveniently located for patients.

The contract for CCMDD has been awarded to three service providers whereas the PuP contracts can be entered into with any number of vetted private sector retail pharmacies. Service Providers (SPs) are responsible for the collection, preparation and delivery of scripts to health facilities and other designated collection sites. The contract does not provide for the delivery of patient medicine parcels (PMPs or patient ready packs) to patients' residences or via the postal service. PuP SPs are responsible for issuing sealed PMPs to patients upon verification of the patient's identity and for notifying the program's district coordinator when patients fail to collect their scripts.

Without external PuPs, facilities must orchestrate the handing out of parcels, and in the absence of designated staff who fulfil this function, clinicians are responsible for dispensing medicines as they were before, but must now also navigate the administrative responsibilities specific to CCMDD.

To date, the implementation of CCMDD has focused primarily on the provision of ARVs, Fixed-dose Combination (FDC) in particular, to stable HIV patients receiving Antiretroviral Treatment (ART); however, the program is eventually intended to encompass all stable patients with chronic conditions whose management consists in bi-annual clinical visits.

CCMDD will provide services to all stable chronic patients at the same cost irrespective of a patient's particular condition.



CCMDD is currently being rolled out in 10 districts, as well as in 2 hospitals that are not in the NHI districts.

Combined both models have in excess of 380,000 patients; with current enrolments in the private distribution model half at around 190,000.

a) Western Cape Chronic distribution

In addition to the NDOH lead CCMDD programme, the WC is running their own chronic distribution model.

The alternative chronic medicines distribution programs begun by Western Cape in 2005 and by the National Department of Health (NDoH) in February 2014 share a similar model of providing medicines to patients with stable chronic conditions, but are distinguished by several key differences. The first relates to differences in the services, which are contracted to private sector service providers. The second relates to differences between provincial management structures in Western Cape as compared to other provinces.

Western Cape's alternative chronic medicines distribution program is comprised of one programmatic element, the Chronic Dispensing Unit (CDU), which is governed by a single contract that has been awarded to a single service provider (SP). The SP is responsible for collecting prescriptions from facilities, preparing prescriptions at its centralized dispensary and delivering patient medicine parcels (PMP) either to health facilities or alternative collection sites, to patients' residences, or sending them via the postal service. Where medicines are delivered to health facilities and alternative collection sites, healthcare facility staff issues the PMPs.

The expectation of healthcare staff and managers is that the successful implementation of CCMDD depends on the roll-out of PuPs, yet Western Cape's healthcare facilities have become less congested with the CDU, even as facilities retain responsibility for the handing-

out of parcels. Western Cape has been able to rely on its well-established network of ARV and chronic patient adherence clubs, held in healthcare facilities and at community sites, as ideal settings in which PMPs can be distributed.

Where PMPs are distributed in facilities, removing collection from the pharmacy to another location in the facility not only satisfies the objective of decongesting pharmacies, but also removes the collection process from the managerial oversight of pharmacists, oversight that is not necessary to the process.

Further arguments in support of keeping collection in facilities relate to the management of parcels that are missing out-of-stock items and to the monitoring of non-adherent patients. When provincial stock-outs occur, PMPs are often delivered to facilities with items missing. In these occasions, enrolled patients are referred to an expedited queue at the facility dispensary to collect their outstanding items. If collection occurs offsite, such as the case with PuPs, the collection of out-of stock medicines would pose a large problem to patients, who would have to return to facilities, and to health facilities who would have to reincorporate these patients.

To date, WC does not have systems in place to track defaulting patients except through adherence clubs, in which the close relationships between members allows them to remain abreast of one another's' treatment and particular circumstances and thus, reach out to other members in case of default. Still, a defaulting patient enrolled in CDU could present to the prescribing clinician when his prescription expires and insist that he has collected his medicines all along.

Furthermore, this difficulty tracking adherence within healthcare facilities contributes to Western Cape's failure to remove defaulting patients from enrolment in the CDU. While the national CCMDD and PuP programs place a strong emphasis on the tracking of defaulting patients just days after their default and stipulate that PuPs must notify district coordinators of defaults, who must in turn notify clinics and mobilize Ward-based Outreach Teams (WBOT-verify), these monitoring systems have yet to be established in Tshwane, and it is not clear when such systems might become operational. These difficulties are compounded by the fact that unique patient file numbers are not used in most provinces, as they are in Western Cape. Without such a system it will be difficult to monitor the adherence chronic patients who, for example, chose to receive treatment for HIV in one clinic and treatment for conditions such as hypertension elsewhere.

b) Cost Comparison

The cost analysis compares the personnel costs of pre-CCMDD modes of service delivery with the total cost of CCMDD and PuPs. The costs of pre-CCMDD modes of service delivery are expressed as per patient monthly costs and were calculated for a sample of eight PHC facilities. These costs are compared to the per patient monthly cost of dispensing and distributing repeat prescriptions through CCMDD and PuPs, which has been set for each province by national tenders for the two program components.

In establishing the cost of providing chronic medicines through pre-CCMDD modes of service delivery, it was found across the eight sample facilities that modes of service delivery

vary in function of the patient's chronic condition. In the sample facilities, ARVs are dispensed in consultation rooms by dedicated professional nursesi (PNs).

All other chronic medicines are dispensed by post-basic pharmacist assistants (PBPAs) under indirect supervision from regional pharmacists. In the sample facilities, responsibility for the dispensing of ARVs has been shifted from pharmacists to professional nurses as a means of managing constraints in the supply of pharmacy personnel. To account for these observed differences, the analysis calculates the cost of providing medicines to stable patients on ART and stable patients with other chronic conditions separately for each facility.

Provision of repeat prescriptions to stable patients with chronic conditions		
Analysis compares	PHC led provision	Private sector led provision
Interventions compared:	• Provision of ARVs by Professional Nurses • Provision of chronic medicines (not including ARVs) by Post-basic pharmacist assistants	• Provision of ARVs and all other chronic medicines through CCMDD and PuPs
Costs compared:	• Pppm cost of providing ARVs in terms of human resources • Pppm cost of providing all other chronic medicines in terms of human resources	• Combined per patient cost of CCMDD and PuPs as determined by national tender (includes overhead and consumables, but not the cost of medicines)
Impact of difference in costs:	• Cost savings in terms of personnel and patients' time	

The cost analysis suggests that all four combined CCMDD and PuP tender prices are greater than the average personnel costs associated with the provision of chronic medicines pre-CCMDD. When comparing pre-CCMDD modes of providing ARVs and other chronic medicines, providing ARVs is more costly, and thus, the differential between the cost of providing ARVs and the four tender prices is less.

Stating the results alternatively, when the personnel costs of pre-CCMDD modes of service delivery are compared with the average combined tender price of CCMDD and PuPs, CCMDD outsources the work of one PN at the cost of 1.2 PNs, and that of one PBPA at the cost of 1.4 PBPAs. It is important to note that staff time that has been freed up through the outsourcing of services to CCMDD ought to be reallocated to different tasks if facilities are to avoid paying private sector providers for CCMDD while also compensating staff for the outsourced services.

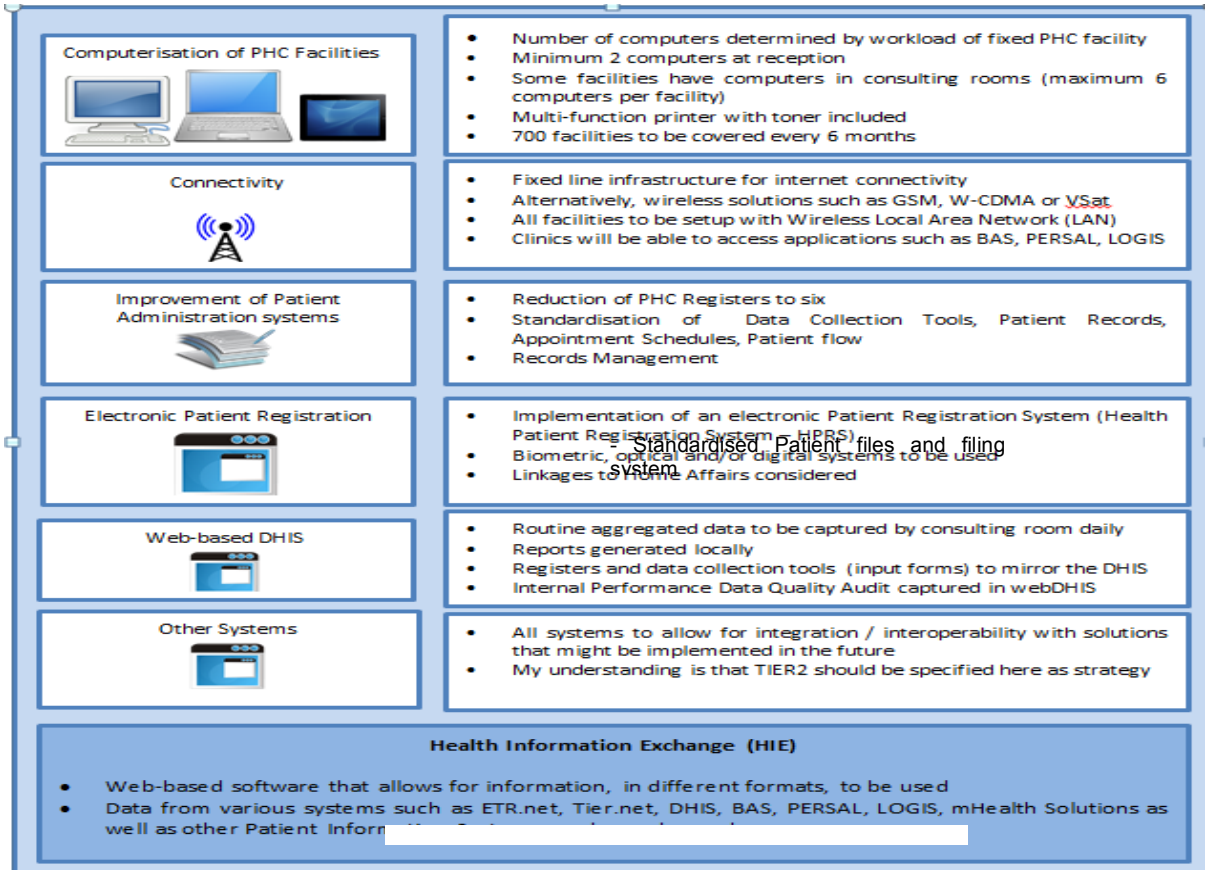
These results notwithstanding, the considerable variation among facilities in the personnel costs associated with the provision of ARVs precludes broader generalization regarding the differential in cost between CCMDD and pre-CCMDD modes of service delivery at large. Furthermore, the results of the cost analysis should be interpreted with the understanding that the pre-CCMDD modes of providing chronic medicines to stable patients have not been evaluated according to normative standards of care. As a result, the cost analysis does not differentiate between facility-level cost savings that are efficiency driven, and therefore appropriate, and those, which might otherwise take quality of care below a minimum acceptable standard.

While the findings of the cost analysis suggest that CCMDD is a more costly mode of providing chronic medicines to stable patients in the sample facilities even when the total cost of pre-CCMDD service delivery is considered, CCMDD may nonetheless be an effective mechanism for decongesting PHC facilities and improving access to chronic medicines.

A better understanding of the cost to patients of collecting repeat chronic medicines would be an important starting point against which improvements in access to healthcare could be assessed. Going beyond an expanded cost analysis, there is important scope to bring together supply and demand side costs and benefits and to establish evidence on the cost-effectiveness of CCMDD by linking costs to patient outcomes such as patient adherence and viral load suppression rates.

4.6 E-Health Implementation in NHI Pilot District Primary Health Care Facilities

Envisioning an integrated system, within the context of the eHealth Strategy of South Africa and the challenges identified the following package of intervention have been identified for roll-out in the 700 PHC facilities in 10 NHI Pilot Districts;



The successful implementation of this project hinges on a tight sequence of events, namely hardware deployment and establishment of connectivity, training in the use of the software, and careful implementation of a change management process to ensure that nurses and clinicians are supported in the move from paper-based systems to electronic systems. A key

success factor is the optimal usage of all resources for development, training and rollout in line with the ethos of an integrated approach.

Hardware Deployment

A total of 3337 computers, 700 printers and wireless networking equipment were procured to equip 700 fixed PHC facilities in 10 NHI Pilot districts. All facilities were setup on a wireless LAN thereby optimising costs. This wireless LAN will be used to connect computers and printers internally at health facilities.

District	PHC Facilities	Total Computers for Admin	Total Computers for Consulting Rooms	Total Computers
Oliver Tambo District Municipality	134	293	126	419
Thabo Mofutsanyane District Municipality	74	164	155	319
City of Tshwane Metropolitan Municipality	76	254	496	750
uMgungundlovu District Municipality	58	154	187	341
Umzinyathi District Municipality	45	96	141	237
Vhembe District Municipality	120	259	137	396
Gert Sibande District Municipality	74	159	229	388
Dr Kenneth Kaunda District Municipality	38	79	104	183
Pixley ka Seme District Municipality	38	87	100	187
Eden District Municipality	43	97	20	117
TOTALS	**700**	**1 642**	**1 695**	**3 337**

One Network Multifunction Duplex Network shared printer per PHC health facility has also been provisioned. Basic networking hardware has been provisioned for PHC Health Facilities.

- 449 (of 700) fixed PHC Health Facilities in 10 NHI Pilot Districts received computer equipment allocated to the reception desk only

- 251 (of 700) facilities comply with the criteria to receive computers in reception and consulting rooms

Rationalisation of Register to collect routine health data

The National Health Council (NHC) resolved to reduce the number of registers used in Primary Health Care (PHC) facilities for the collection of health programme data. A rationalised set of registers has been identified and will be implemented in all PHC facilities in South Africa by March 2015.

The decision was made in light of the current situation of a minimum of 54 vertical health programme registers being used for data collection at health facility level. Collection of data in these registers is deemed to be time intensive and poses challenges in terms of data quality.

A pilot study to test the acceptability, feasibility, effectiveness and implementation of a rationalised set of six registers was conducted in Ehlanzeni district in 2013/2014 and the results were presented to the National Health Council (NHC) in July 2014.

The NHC, based on the results of this study, has mandated the roll-out of these rationalised set of six registers to all primary health care facilities in South Africa by the end of February 2015. These registers are to be used effectively from 1 April 2015.

The Health Systems Trust (HST) has been commissioned to coordinate and manage the national roll-out of the rationalised set of registers in all PHC facilities and provide technical support to provinces during this process.

The rationalisation of registers project is implemented in all PHC facilities in the 10 NHI Pilot Districts except for Eden District. The Western Cape Department of Health support the implementation of the rationalisation of registers and has indicated that they prefer to use a structured provincial process for implementation.

Progress on Implementation of the eHealth Reference Implementation at Beta testing sites

Province	Facility	Computerisation	Broadband Connectivity	Improved Patient Flow	Rationalisation of Registers	Standardised Patient Files	Standardised Patient Filing system	Health Patient Registration	Web Based Daily Data Capturing
Eastern Cape Province	Bodweni Clinic								
	Mbekweni CHC								
	Mthatha Gateway Clinic								
	Ngangelizwe CHC								
	Palmerton Clinic								
	Qaukeni Clinic								
	Qokolweni Clinic								
	Qunu Clinic								
Free State Province	Bohlokong Clinic								
	Dinkweng Clinic								
	Harrismith Clinic								
	Hobhouse Clinic								
	Mamello CHC								
	Marakong Clinic								
	Tebang Clinic								
Gauteng Province	Laudium CHC								
	Laudium Clinic								
	East Lynne Clinic								
	Dark City CHC								
	KT Motubatse Clinic								
KwaZulu-Natal Province	Amakhabela Clinic								
	Central City Clinic								
	Church of Scotland Gateway Clinic								
	East/Boom CHC								
	Eastwood Clinic								

Province	Facility	Computerisation	Broadband Connectivity	Improved Patient Flow	Rationalisation of Registers	Standardised Patient Files	Standardised Patient Filing system	Health Patient Registration	Web Based Daily Data Capturing
	Efaye Clinic								
	Greytown Gateway Clinic								
	Imbalenhle CHC								
	Ntembisweni Clinic								
	Phatheni Clinic								
	Pine Street (Greytown) Clinic								
Limpopo Province	Makhado CHC								
	Masisi Clinic								
	Mudimeli Clinic								
	Mulala Clinic								
	Nancefield Clinic								
	Tshipise Clinic								
Mpumalanga Province	Diepdale Clinic								
	Nhlatshaze 6								
	Breyten CHC								
	Ntoroane								
	Grootveli								
	Embalenhle CHC								
Northern Cape Province	Britstown Clinic								
	Carnarvon Clinic								
	Richmond CHC								
	Richmond Clinic								
	Loxton								
North West Province	Alabama Clinic								
	Boiki Thlapi CHC								
	Empilisweni Clinic								
	Grace Mokgomo CHC								

Province	Facility	Computerisation	Broadband Connectivity	Improved Patient Flow	Rationalisation of Registers	Standardised Patient Files	Standardised Patient Filing system	Health Patient Registration	Web Based Daily Data Capturing
	Jouberton CHC								
	Leeudoringstad CHC								
	N Pretorious Gateway Clinic								

Summary of observation form the Implementation of the eHealth Reference Implementation at Beta testing sites

- From the table above progress on the components of the reference implementation of eHealth has been achieved in most of the Beta sites except for the Standardised patients files and Filing system.
- The implementation of the rationalisation of registers in all 3641 Primary Health Care facilities has resulted in delayed implementation of these components. This is being addressed as part of the roll-out of all components to all 698 PHC facilities in the NHI Pilot Districts.
- A reduction in waiting times in these facilities has been observed. The extend of this reduction will be formally assed.
- The nursing staff working in these facilities has reported positively that the implementation of the above components has decreased their administrative tasks which allow them more time to spend with patients.

4.7 Hospital Reform

Over-and-above district pilots, the NHI pilot activities extend into hospital reform. Specifically:

a) Re-designation of hospitals and improvement in CEO competency
b) Revenue retention
c) Diagnostic related groups

The overall aim of hospital reform initiatives is to create changes that ensure hospitals provide affordable, accessible, efficient, appropriate and good quality health services. This may include introducing new health policies and legislation as a legal framework for hospital services, improving equitable access for all, and strengthening management to ensure better quality and efficiency.

4.7.1 Re-designation of hospitals and improvement in CEO competency

The pilot districts have made attempts to introduce some of the elements of the reform process, but are hampered in large measure by the instability at executive management level. There is reportedly high turnover in CEOs of the hospitals, as well as failure to attract talent due to unattractive remuneration packages and unacceptable periods spent by staff in acting positions at executive levels.

The CEO orientation is, however, on-going and the number of CEOs that have attended leadership training has increased compared to the last assessment (2013/2014).

4.7.2 Revenue retention

The revenue pilots are currently run in 7 central hospitals and 6 tertiary hospitals. All but one of the 13 hospitals were below the revenue target set. Unfortunately, the provincial health departments could not confirm the final revenue figures and were working on completion of their annual financial statements.

4.7.3 DEVELOPMENT OF DIAGNOSIS RELATED GROUPERS (DRGs)

The National Department of Health has initiated a process of developing and testing a Diagnosis Related Grouper (DRG) as an alternative reimbursement tool for hospitals.

Diagnosis Related Group (DRG) is a patient classification system adopted on the basis of diagnosis consisting of distinct groupings. It is a scheme that provides a means for relating the type of patients a hospital treats, with the costs incurred by the hospital. DRG are based upon the patient's principal diagnosis, ICD diagnoses, gender, age, treatment procedure, discharge status, and the presence of complications or comorbidities. The original DRGs were invented at Yale University's Health Systems Management Group in the late 1970s.

What is the purpose of a DRG?
DRGs are typically used for the following purposes:

1. Hospital reimbursement
2. Improving Quality of care through

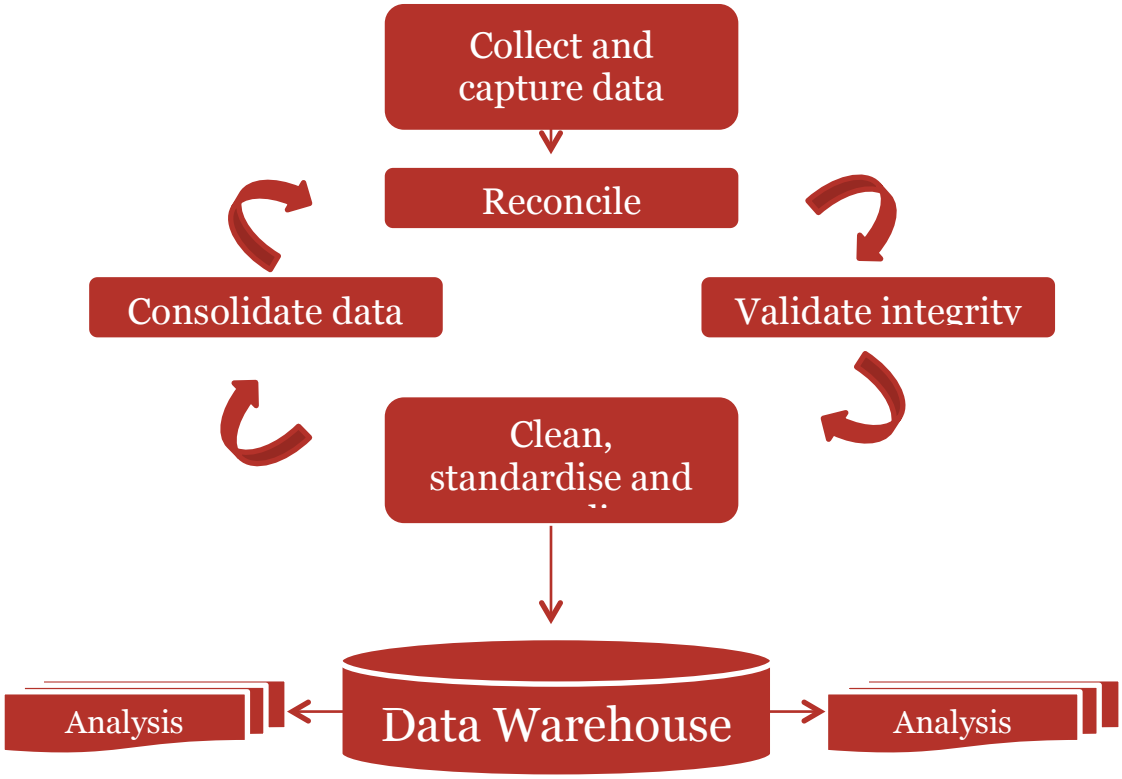
- Evidence based interventions
- Continuous Medical Education

3. Epidemiology – Statistics
   - To study how often diseases occur in different groups of people and why. Epidemiological information is used to plan and evaluate strategies to prevent illness and as a guide to the management of patients in whom disease has already developed.
4. Management tool
   - Cost, Resources allocation, Volumes, Quality, Outcomes, Value for money

Project Phases
The DRG project is structured as follows:

Services and their requirements/ specifications	Time frames
Preliminary phase	March2014-May 2014
Phase one: Capture data	June 2014-May 2015
Phase two: Analyse data	April 2014-February 2016
Phase three: Case-mix analysis	July 2014-November 2015
Phase four: Modelling and fitting algorithm	March 2014-February 2016
Final report Submitted	March 2016 – April 2016

Phase 1 of this programme of work is being undertaken over a two-year period and started in April 2014.



Phase 1 involves developing a base DRG tool for the 10 central hospitals across the country.

Central Hospital	Province
1. Universitas	Free State
2. Dr George Mukhari 3. Charlotte Maxeke 4. Chris Hani Baragwanath 5. Steve Biko	Gauteng
6. King Edward VIII 7. *Inkosi* Albert Luthuli	KwaZulu-Natal
8. Nelson Mandela	Eastern Cape
9. Tygerberg Hospital 10. Groote Schuur Hospital	Western Cape

A group of 10 professional nurses with extensive clinical (diagnostic and procedural) coding experience were employed to collect the data. The coding team was deployed to 8 of the 10 central hospitals in South Africa. The team was supported onsite by a team supervisor, project management assistant and project management team.

The clinical data collection tool was developed, tested and approved for use.

From 17 June 2014 until 6 March 2015, a total of more than 24 000 files were coded (final total in verification process). This exceeded the target of 22 500 files expected.

All data is maintained in the secured database

Each hospital has had a formal introductory kick-off workshop (management and clinical heads of department representivity). Permission is then given to the Service provider team to begin data capturing.

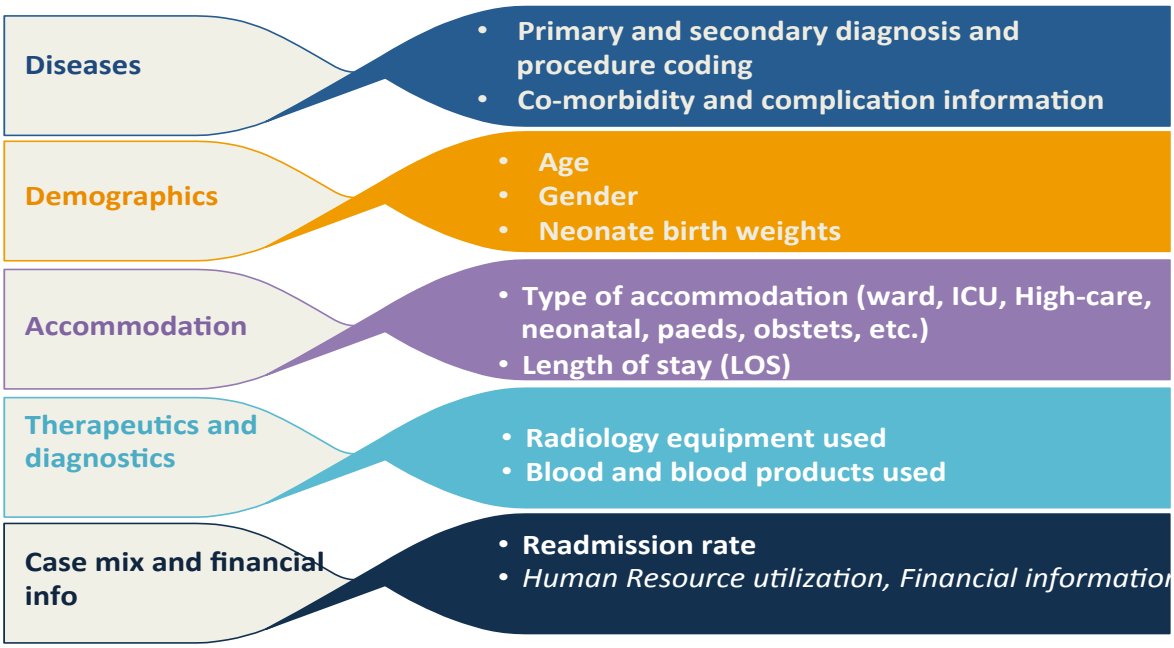
During data capturing, service provider (PwC) has also completed an on-site assessment of filing quality, content, filing, archiving, missing information and met with case management teams (if present) to discuss key challenges with patient file coding systems.

In addition, clinical committee meetings are requested at each hospital and engaged to discuss areas requiring further input.

Each hospital then has a feedback session on clinical findings and the assessment of patient file quality.

Information that has been collected

A total of 25,000 clinical files (i.e. 108% of the set target) have been analysed and data extracted.



The data has been categorised into 25 Major Disease Categories as part of the preliminary technical work to develop and apply a disease algorithm.

Technical work on case mix and actuarial analyses has been undertaken on the data that has been aggregated and a triangulation process has been undertaken with regards to data from other third part sources.

The next phases of work involve further in-depth case mix analyses, followed by the modelling and fitting of the algorithm. These phases will also involve independent review of the work done to ensure technical robustness and applicability within the South African context.

Progress in Phase 1

As at March 2015, the Department had managed to extract clinical and financial data from the following central hospitals in Gauteng (Steve Biko Academic, Chris Hani Baragwanath, Charlotte Maxeke & Dr George Mukhari), in KwaZulu-Natal (Inkosi Albert Luthuli & King Edward VIII), in Eastern Cape (Nelson Mandela Academic) and in the Free State (at Universitas Academic Hospital).

The data from the Western Cape hospitals (i.e. Groote Schuur and Tygerberg) is still to be collected and analysed.

Activity	Progress made
1. Finalisation of project scope, project charter and SLA	Completed
2. Development of data collection tools, testing, refinement, approval, implementation. Database development.	Completed
3. Appointment of coding team, training on electronic data collection, implementation of data security and integrity processes.	Completed
4. Data collection by professional nurses with clinical coding experience and expertise	Completed

5. On-going database management	In progress
6. Doctor case file review (clinical analysis per line item to ensure validity)	In progress
7. Costing model development per cost centre (HR & financial)	In progress
8. DRG linking to ICD10 & procedural coding	In progress
9. Theoretical algorithm formulation	In progress
10. Appointment of international independent peer reviewer ("TUB")	Completed
11. Clinical committees: DRG case mix analysis	In progress
• The above activities are closely monitored through Operational and Steering Committee attendance from all parties every 6 weeks. • Ad hoc planning meetings are scheduled as required. • Monthly and quarterly reports are submitted to NDoH.	

Summary data findings

a) Depth and quality of clinical and non-clinical data varies greatly
   - Inconsistency in patient filing systems (electronic vs. paper)
   - Variable capacity for case management and coding
   - Coding focused on private fee-paying patients in some hospitals

b) Many clinicians only capture primary diagnosis
   - Co-morbidities and complications not always accurately captured (yet impacts on resource use)
   - Separate clinical data (hospital and research purposes)

c) Incompleteness of clinical data in some cases
   - Discharge summaries vary (greatly in some cases) across and within facilities

d) Variable case mix across the hospitals
   - Conflicting financial classification of patients (sometimes non-existent; challenge of foreign patients)