# Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa

# NDOH10/2017-2018

**Final Evaluation Report**

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# ACRONYMS

| | |
|---|---|
| AI | Appreciative Inquiry |
| AIDS | Acquire Immune Deficiency Syndrome |
| AMD | Affordable Medicine Directorate |
| ARV | Antiretroviral Medicine |
| ART | Antiretroviral Treatment |
| BSI | British Standards Institution |
| CCMDD | Centralised Chronic Medicine Dispensing and Distribution |
| CHC | Community Health Centre |
| CHW | Community Health Worker |
| CHP | Centre for Health Policy |
| COO | Chief Operations Officer |
| CUP | Contracting Unit for Primary Healthcare |
| DBE | Department of Basic Education |
| DCST | District Clinical Specialist Team |
| DG | Director General |
| DDG | Deputy Director General |
| DHA | District Health Authority |
| DHIS | District Health Information System |
| DHMT | District Health Management Team |
| DHS | District Health Services |
| DoH | Department of Health |
| DPW | Department of Public Works |
| DRG | Diagnosis Related Groups |
| DSD | Department of Social Development |
| EC | Eastern Cape |
| EMS | Emergency Medical Services |
| EU | European Union |
| FDC | Fixed Dose Combination |
| FM | Facility Manager |
| FS | Free State |
| GDP | Gross Domestic Product |
| GP | General Practitioner |

| | |
|---|---|
| GP | Gauteng Province |
| HCP | Healthcare Professional |
| HIE | Health Information Exchange |
| HIV | Human Immunodeficiency Virus |
| HOD | Head of Department |
| HPRS | Health Patient Registration System |
| HREC | Human Research Ethics Committee |
| HR | Human Resources |
| HRH | Human Resources for Health |
| HSS | Health Systems Strengthening |
| IAEG | Integrated Agency Expert group |
| ICRM | Ideal Clinic Realisation and Maintenance Model |
| ISHP | Integrated School Health Programme |
| ISP | Information Security Policy |
| IT | Information Technology |
| KII | Key informant interview |
| KPI | Key Performance Indicator |
| KZN | KwaZulu-Natal |
| LMIC | Low- and Middle-Income Countries |
| LP | Limpopo |
| M&E | Monitoring and Evaluation |
| MEC | Member of Executive Council |
| MP | Mpumalanga |
| MRC | Medical Research Council |
| NC | Northern Cape |
| NCD | Non-Communicable Disease |
| NDP | National Development Plan |
| NDoH | National Department of Health |
| NGO | Non-Governmental Organisation |
| NHI | National Health Insurance |
| NHLS | National Laboratory Health Services |
| NHRD | National Health Research Database |
| NT | National Treasury |
| NW | North West |

| | |
|---|---|
| OHH | Outreach Household |
| OM | Operations Manager |
| OTL | Outreach Team Leader |
| PEPFAR | President's Emergency Plan for AIDS Relief |
| PDoH | Provincial Department of Health |
| PFM | Public Finance Management |
| PFMA | Public Finance Management Act |
| PHC | Primary Health Care |
| PMDS | Performance Management Development Systems |
| PUP | Pick Up Points |
| PwC | PricewaterhouseCoopers |
| RMNCH | Reproductive Maternal New Born and Child Health |
| SC | Steering Committee |
| SBCC | Social Behaviour Change Communication |
| SDGs | Sustainable Development Goals |
| SHT | School Health Team |
| SOP | Standard Operation Procedure |
| SVS | Stock Visibility System |
| TAC | Technical Advisory Committee |
| TB | Tuberculosis |
| TWG | Technical Working Group |
| UFE | Utilisation-Focused Evaluation |
| UHC | Universal Health Coverage |
| WBPHCOT | Ward-Based Primary Healthcare Outreach Team |
| WCDoH | Western Cape Department of Health |
| WHO | World Health Organization |
| WISN | Workload Indicators of Staffing Need |
| WC | Western Cape |

# ACKNOWLEDGEMENTS

# EXECUTIVE SUMMARY AND POLICY IMPLICATIONS

## Introduction

South Africa faces numerous challenges in delivering high quality health services to the majority of its population. The majority of the population in South Africa cannot afford private healthcare and must access public healthcare in a congested and understaffed public sector, contributing to slower, less responsive services. According to section 27.1(a) of the South African Constitution, "Everyone has the right to have access to health services, including reproductive healthcare…" (Constitution of the Republic of South Africa, 1996). The South African Government, through the NDoH, is committed to moving the country towards the goal of Universal Health Coverage (UHC), which is being pursued in South Africa through implementation of National Health Insurance (NHI), as articulated in the Draft NHI Bill. The NHI Bill lays the foundation for providing mandatory healthcare services in South Africa (Republic of South Africa, 2018).

The NHI is being implemented by the National Department of Health (NDoH) through a gradual process, over three phases. These three phases are each implemented over a period of five years each. Phase 1 commenced in 2012 and was completed in 2017. **The first phase of NHI did not involve developing new funding arrangements for health care in South Africa, but rather piloted various health system strengthening interventions focused at the primary health care (PHC) level**. The interventions implemented during this phase were mainly funded by a direct NHI Conditional Grant to provinces, although there were other funding mechanisms. The NDoH established work streams to develop and refine NHI related policy and incorporate feedback from the phased NHI implementation. **This evaluation focused on the 10 PHC interventions in the 10+1 pilot districts. These are listed below.**

The 10 NHI Pilot districts were made up of one district in every province, except KwaZulu-Natal (KZN), which had two districts. Subsequently, KZN included a third district which was solely funded through provincial funding. The NHI pilot districts were intended to become sites for innovation and testing throughout the implementation of NHI phase 1. The pilot districts were as follows: OR Tambo (Eastern Cape), Thabo Mofutsanyana (Free State), Tshwane (Gauteng), UMgungundlovu and uMzinyathi (KZN), Vhembe (Limpopo), Gert Sibande (Mpumalanga), Pixley ka Seme (Northern Cape), Dr Kenneth Kaunda (North West), Eden (Western Cape). Amajuba district was the additional district included by KZN.

The interventions were as follows: (1) Ward Based Primary Healthcare Outreach Teams (WBPHCOTS), which were responsible for the provision of promotive and preventative health care to households; (2) The Integrated School Health Programme (ISHP), which aimed to provide a range of health promotion and preventative services to school going children at their place of learning; (3) General Practitioner (GP) contracting, which aimed to increase the number of GPs at primary healthcare (PHC) facilities to improve the quality and acceptability of care; (4) the Ideal Clinic Realisation and Maintenance Model (ICRM), which aimed to increase quality of services through the establishment of minimum standards; (5) District Clinical Specialist Teams (DCST) responsible for supporting clinical governance, undertaking clinical work and undertaking research and training; (6). Centralised Chronic Medicine Dispensing and Distribution (CCMDD), which aimed to improve distribution of medicines to patients through the provision of chronic medication at designated pick up points closer to the communities;(7) the Health Patient Registration System (HPRS), which has the ultimate goal of a fully electronic patient record keeping system, but has started with data capturing of patients and generation of electronic files; (8) Stock Visibility System (SVS) aimed to improve oversight of stock through an electronic stock monitoring system, and thereby reduce stockouts by allowing for appropriate and timely ordering; (9) Infrastructure projects, implemented to improve health infrastructure to ensure increased access and quality of

care and lastly; (10) Workload Indicator for Staffing Needs (WISN), which is a WHO planning tool conducted to help facility managers make more efficient staffing decisions.

The aim of this evaluation was to evaluate the progress made in implementing these programmes in the pilot districts, focusing on the perceptions of staff and patients regarding the success and challenges with these programmes in the initial 5 years of implementation. Specifically, the approach was to provide a national level overview of the progress made during NHI phase 1. While provinces and districts were visited during the evaluation, it was not the intention to provide reports specific to each province or report province-specific findings in detail. It is acknowledged that there were differences in implementation between provinces, and that there may have been some developments that have not been completely captured in this report.

## Methods

The evaluation was undertaken between November 2017 and December 2018. The first phase of the evaluation was the inception phase, which involved refining the objectives of the evaluation with the NDoH. The second phase comprised the ethics application processes and the completion of the literature reviews. Ethical approval was obtained from the University of the Witwatersrand and further provincial permission was obtained through the NDoH National Health Research Database (NHRD) application process.

The third phase of the evaluation included primary and secondary data collection. Primary data collection included in-depth interviews (IDIs) at four levels; National level interviews (22) were undertaken with stakeholders within the NDoH and the Department of Basic Education, National Treasury and Department of Planning Monitoring and Evaluation; provincial level interviews (20) were conducted with Department of Health (DoH) stakeholders in all nine provinces; district level interviews (31) were undertaken with DoH stakeholders in 10 districts; and facility level interviews were conducted in 40 facilities in the pilot districts. In addition to the in-depth interviews, two surveys were completed. We conducted telephonic interviews with facility managers, and also a limited survey of facility users was completed at each facility visited. A total of 208 surveys were completed with facility users. In total, 468 interviews and surveys were completed by the end of the data collection phase. Evaluation case studies were developed using the primary data. These case studies were used to highlight instructive in-depth stories reflecting different aspects of Phase 1 implementation. Ten case studies were developed in total.

Secondary data collection formed a significant part of the evaluation. A review of the annual NHI rapid assessments was undertaken. The purpose was to obtain an historical overview of the successes and challenges of each intervention. A comparative review of international literature was also completed to provide evidence on the impact of selected NHI pilot interventions, and factors facilitating or hindering their success in low- to- middle income countries (LMIC). Finally, a review of routine and outcomes data was undertaken to compare performance of indicators over the past five years across pilot and non-pilot districts.

The fourth phase was a rigorous data analysis and synthesis process. Initial themes were established, and Atlas ti was used to extract themes across the numerous transcripts. The two surveys were analysed in parallel. The findings from the various methods were compared and collated, and revisited in workshops with the consortium for validation. The analysis of the DHIS data and financial data was then completed. The Technical Working Group (TWG) and project Steering Committee provided inputs throughout the process of analysis and synthesis. The final deliverable for the NHI Phase 1 evaluation is this evaluation report, which includes recommendations for further implementation of NHI in South Africa.

The evaluation team appreciates that this evaluation focused on interventions and programmes which are constantly changing, and many of the programmes have already been adapted in line with learnings and reviews.

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## Findings and Discussion

Overall, the implementation of the pilot interventions had mixed success across the pilot districts. Where successful, we identified a few common factors: **strong political will, adequate human and financial resources for implementation, good coordination and communication, and good monitoring systems put in place at the time of implementation.** However, the interventions also faced a number of challenges, and, to varying degrees, these factors hindered their success: **inadequate planning, lack of resources, inconsistent communication, a lack of coordination where necessary and insufficient mechanisms to monitor progress to ensure course correction. Error! Not a valid bookmark self-reference.** below highlights some of the successes and challenges of each intervention.

**Table 1: Successes and challenges of NHI Phase 1 interventions**

| Intervention | Intervention Successes | Intervention challenges |
|---|---|---|
| **WBPHCOTS** | 1. In 2016/2017 a reported 3519 WBPHCOTs were covering 12 816 152 households.<br>2. There was a total of 3 323 WBPHCOTs providing basic health services to children and adults at the end of 2017/18.<br>3. These teams were able to successfully fulfil their mandate to provide outreach health services within the community.<br>4. WBPHCOTs did not only complete community visits but they were also able to report on the ill health or wellbeing of the individuals at the households visited. | 1. Teams often lacked the envisioned team composition, with many teams lacking outreach team leaders.<br>2. Data collection was insufficient to adequately monitor the effectiveness of the referral systems and follow up processes.<br>3. At times there were insufficient funds for transport and equipment; this impacted the team's ability to successfully undertake their work. |
| **ISHP** | 1. A total of 4 339 875 learners had been screened through ISHP since 2012, of these 504 803 were identified to have various health barriers and referred for treatment.<br>2. This intervention is particularly successful in its ability to demonstrate good inter-departmental collaboration between the NDoH and Department of Basic Education (DBE). | 1. There is a lack of data to support the effectiveness of the referrals and a lack of feedback mechanisms between school teams and facilities.<br>2. The lack of sufficient equipment, such as measurement scales and transport to travel to schools, often impacted its success.<br>3. There was a lack of prioritisation and targeting of learners within this intervention was evident during NHI phase 1 implementation. |
| **GP Contracting** | 1. A total of 330 GPs had been contracted by end of 2017/2018.<br>2. Where contracting general practitioners (GPs) was implemented successfully, it is evident that the access to doctors improved at facilities.<br>3. Patient perception was that the quality of care improved at facilities due to the presence of GPs. | 1. Inadequate monitoring of these GPs caused some challenges during implementation.<br>2. Unforeseen contractual challenges during the implementation of this intervention, resulted in GPs having substantially higher expense claims than expected. |
| **ICRM** | 1. A total of 3434 facilities had been assessed and of these 1507 had attained ideal clinic status at end of 2017/2018.<br>2. ICRM is seen to have improved the ability of facilities to procure much needed equipment.<br>3. Where ICRM was believed to have been implemented as planned, there was a | 1. The changing manual and frequent change of standards which made it difficult for managers to keep up and resulted in frustration among them.<br>2. ICRM limited flexibility and the ability for managers to adapt it to the local context and to the needs of the facilities at the time. |

| | | |
|---|---|---|
| | perceived improvement in quality of care by both facility managers and patients.<br>4. ICRM limited flexibility and the ability for managers to adapt it to the local context and to the needs of the facilities at the time. | |
| **DCST** | 1. At the end of March 2017, 45 of 52 districts in nine provinces had functional DCSTs with at least three members per team.<br>2. The DCSTs, where available, were able to provide specialist oversight within the districts.<br>3. The introduction of these teams was perceived by some stakeholders to have promoted clinical governance within the districts. | 1. The team composition, which often lacked critical specialists, limited their ability to provide the envisioned training and support structures.<br>2. The lack of gynaecologist and paediatricians meant that DCSTs were not able to adequately improve child and maternal health as envisioned.<br>3. Not all specialist are necessarily good mentors and may be unable to provide adequate support.<br>4. The DCST model is a costly model and stretches the limited specialist resources in the public sector. |
| **CCMDD** | 1. A total of 2 182 422 patients enrolled on the CCMDD, collecting medicines in over 855 PUPs at the end of 2017/2018.<br>2. The strong political leadership and will behind CCMDD contributed towards its successful implementation.<br>3. CCMDD was scaled up beyond target and the consistent monitoring of the programme contributed to the availability of reliable data to support continued implementation | 1. The change of service provides threatened the intervention's continuity.<br>2. The lack of sufficient integration between CCMDD pick up points and facilities resulted in inadequate tracking of patients between the two systems. |
| **HPRS** | 1. At the end of 2017/2018, 2968 PHC facilities were using HPRS and there were over 20 million (20 700 149) people registered on the system.<br>2. Good communication and feedback loops are seen to have facilitated implementation success. | 1. The poor connectivity at some facilities and challenges with hardware have contributed to the challenges experienced during NHI phase 1 implementation.<br>2. The lack of human resources and lack of capacity to implement affected the success of HPRS |
| **SVS** | 1. At the end of 2017/2018, SVS was being implemented in 3167 clinics and community health centres (92% coverage).<br>2. The successful training of available staff, which led to an in-depth understanding of the system at facility level.<br>3. The introduction of SVS led to reduced stock outs and improved efficiency at facilities | 1. The lack of reliable internet connectivity and hardware, impacted its success.<br>2. The minimal number of available pharmacists and pharmacy assistants limited facilities ability to ensure the smooth running of the system.<br>3. The sustainability of this intervention poses a challenge as implementation during NHI phase1 relied heavily on the support from external funders. |
| **Infrastructure** | 1. Since 2013/2014, work in 139 of 140 identified CHCs and clinics has been completed through the NHI rehabilitation projects.<br>2. In 2017/2018 alone, 107 facilities were maintained, repaired and/or refurbished in NHI districts. | 1. Projects were rarely implemented or completed due to the lack of planning capacity to release the assigned funds.<br>2. Funds which were released were used mainly for new infrastructure projects and insufficient attention was paid to |

| | | |
|---|---|---|
| | 3. Where completed, patients perceived an improvement in the quality of care as a result.<br>4. Small infrastructure changes had a positive impact on the overall environment at facilities. | the maintenance of facilities, which is critical to both access and the provision of quality services and preventing unnecessary new-build costs due to deterioration because of a lack of basic maintenance. |
| **Human Resources for Health** | 1. The introduction of WISN provided a standardised, evidence-based staffing needs assessment at facility level.<br>2. These assessments were implemented widely across the pilot districts | 1. The resource constrained environment meant that hiring of staff had been frozen and as a result the WISN findings were not always implementable and caused further frustration among facility managers who had done the assessment. |

**The evaluation findings highlighted the importance of strong leadership and good governance in order to drive a successful and effective health system**. There are four main components of governance which are critical for the successful implementation of NHI: **clarity of vision, setting appropriate priorities, performance management and accountability.**

In many interventions, the presence of strong champions who held the vision of NHI, and of that specific programme, ensured that there was robust implementation. However, this was not evident in some the interventions. **In many cases managers implemented the interventions in silos, and seemed to lose the overall objective of the NHI process, which was to improve access to and the quality of services at facilities**. In these cases, there was lack of regular communication at different departmental levels about progress toward meeting the objectives of NHI phase 1. In addition, while interventions were often well designed to meet objectives, the allocated budgets did not always follow priorities and at times led to the interventions going underfunded. The rationalisation of budget allocations and intentions was not always well-understood or aligned to the contextual needs at a provincial and district level. Some performance management structures were put into place during implementation but there was not always an adequate amount of upward feedback. Overall there was insufficient monitoring, and course correction was insufficient in some interventions.

Finally, the organisational culture within some parts of the department is perceived by staff to be overly bureaucratic. The culture is often not supportive of problem solving and leaves little room for creativity or innovation. There is also little recourse for consequences of poor performance, a lack of accountability and insufficient use of data to monitor progress. Likewise, there is little incentive for high performance and to encourage staff to produce high quality data.

**There is a need to strengthen health system governance during NHI phase 2, otherwise there is the potential for new interventions to continue to have varied implementation success across the country.**

### Overall Impact

It was difficult for the evaluation team to assess the **overall impact** of the implementation of the health systems strengthening interventions in the pilot districts on the access to and quality of services, because of various important factors. These include: a lack of control group due to the interventions being implemented in both pilot districts and non-pilot districts; a lack of baseline measures, and the variation of performance indicators which made it difficult to identify clear trends in performance over time.

However, almost all of the interventions were appropriately designed to either improve access to services, or improve quality. Most were implemented at scale, and in many cases, there were qualitative findings of significant improvement in the delivery of PHC across the pilot districts where the interventions were

successfully implemented. However, it must be noted that public health services face well documented systemic challenges, included planning and budgeting weaknesses, a lack of qualified staff at all levels, and weak governance systems. These hindered the implementation of NHI Phase 1 interventions.

## Strategic recommendations for NHI Phase 2

- Make the vision of NHI "real" for all stakeholders and communicate this vision clearly and regularly. For example, the Health Summit was used to create support and share the vision for health systems strengthening. Similarly, NHI Phase 2 should be launched with a clear vision and plan, which includes plans to realistically address weaknesses in the public health sector. The plan needs to include a clear theory of change which clearly illustrates the how change is envisioned; a results chain to link the various inputs, activities, outputs and outcomes leading to achievement of the overall impact; a set of defined indicators of success which will be used to measure improvement over time, and baseline measurement to ensure that before and after comparisons can be made to ascertain the programme success. The plan needs to be clearly communicated, so as to ensure that all stakeholders are clear about the vision of NHI and the goals of phase 2.

- Bring all stakeholders on board, especially provinces and districts, through cooperative governance and intergovernmental collaboration between all levels. Provide regular feedback to encourage common purpose and continued commitment to the NHI programme.

- Identify champions and intervention leaders at all levels, provide them with clearly defined roles and responsibilities. Leverage these champions and leaders to drive the vision and programme.

- Develop implementation plans with milestones and targets that are linked to Conditional Grant business plans and Annual Performance Plans (APPs). These milestones and targets should be used to identify key performance indicators (KPIs) for personnel performance management to encourage accountability.

- Define clear metrics for success, which are measured and reported on regularly to enable continuous improvement and stronger accountability. These should include measures of access to and the quality of health services.

- Develop a problem-solving, innovative and high-performance culture. Managers' leadership styles need to be assessed and mentorship should be made available to support a change in culture.

- Allow for incremental implementation and learn from successes and challenges. Monitor for unintended consequences during programme implementation and course correct throughout.

- Have feedback loops between all stakeholder levels that allow for course correction throughout the system.

- Hold all staff accountable for programme delivery through measurable and actioned KPIs, and incentivise good performance.

- Celebrate successes and progress towards milestones and targets.

## Intervention-specific recommendations for NHI Phase 2

**Table 2: Intervention specific recommendations for NHI Phase 2**

| Intervention | Recommendations |
|---|---|
| Ward-Based Primary Healthcare Outreach Teams (WBPHCOTs) | 1. WBPHCOTs need regular and appropriate supervision<br>2. Transport and equipment should be planned and adequately budgeted for<br>3. Scope of practice should be revisited to explore the possibility of expansion to more than health promotion and referrals<br>4. Referrals from WBPHCOTs should be prioritised by the facility<br>5. Electronic systems should allow for WBPHCOTs to report on household data<br>**This is a critical programme that should be continued and strengthened** |
| Integrated School Health Programme (ISHP) | 1. For primary schools, screening programmes need to have a close link to services, which are ideally delivered on site, or referrals should be standardised and include effective feedback systems.<br>2. For high schools, the priority should be on sexual and reproductive health services, with nurses referring to care<br>3. Transport and equipment (both capex and maintenance) should be adequately budgeted for<br>**The weaknesses and design issues should be addressed before this programme is expanded** |
| General Practitioner (GP) Contracting | 1. Contracting of GPs needs to shift from contracting GPs to work sessions at public sector facilities to contracting GPs to work in their own facilities, but seeing all patients and being reimbursed by the state. This could be using a capitation model which has been supported by Provinces, or other outcomes-based reimbursement schemes, but ideally not fee-for-service payment models.<br>2. Healthcare professional (HCP) salaries should be benchmarked and consistent so as to not shift resources and to ensure the sustainability of the intervention<br>3. HCP contracts need to be carefully monitored and processes should be put in place for regular supervision and oversight. For example, there should be regular auditing to ensure there is no fraudulent activity. There should also be clear performance indicators a mentioned by the Eastern Cape Province.<br>**The capitation model should be implemented sequentially, but oversight will need to be strengthened at a district level** |
| Ideal Clinic Realisation and Maintenance (ICRM) | 1. There should be a limited set of core ICRM standards for all facilities. A flexible set of standards based on conditions and needs at specific facilities<br>2. Simplify procurement mechanisms at a facility level, especially for routine maintenance through delegations<br>3. ICRM standards should be set for a 2-year period and reviewed after that or longer for example 3 years as suggested by the Free State Province.<br>**This programme should continue with modifications as suggested** |
| District Clinical Specialist Teams (DCSTs) | 1. The DCST model should be reviewed, through a cost effectiveness analysis, to determine if it is the most cost-effective and highest impact method for improving clinical governance and quality of services and whether or not the model is appropriate to be implemented in different settings.<br>2. Clearly define and communicate the primary role of DCSTs as improving the quality of care at PHC facilities, rather than providing services themselves<br>3. Salaries should be benchmarked and consistent with specialist services in the rest of the public service sector<br>**The model for clinical governance needs to be reviewed, and possibly adapted to focus on basing specialists at regional or district hospitals** |

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| Centralised Chronic Medicine Dispensing and Distribution (CCMDD) | 1. Systems must be in place to ensure coordination between CCMDD pick up points and facilities to ensure no patients are lost to care. Furthermore, PUPs should be stationed at clinics in remote/rural areas where service providers are unable to provide standalone PUPs[1]. <br> 2. There needs to be planned transition of service providers, if and when there is a change in service providers <br> 3. As the system grows, it will require additional oversight and management support <br> **This is an important programme with potential, as long as costs can be managed** |
| Health Patient Registration System (HPRS) | 1. The programme requires holistic budgeting for hardware, software, connectivity and staffing to ensure it can be expanded to the Electronic Medical Record (EMR) stage across all health facilities as mentioned by the KwaZulu Natal Province. <br> 2. Duplication of processes (paper based and online registration) needs to be avoided through robust system architecture <br> 3. Expertise needs to be sourced to strengthen the inter-operability of various IT systems (as supported in the Kwa Zulu Natal pilot report), including HPRS. <br> **An evaluation of HPRS is warranted, given the feedback about this system, in order to fix ongoing issues** |
| Stock Visibility System (SVS) | 1. Requires continuous training so that pharmacists and pharmacy assistants at facilities understand and can use the system <br> 2. Funding needs to be allocated for software, hardware, connectivity and staffing to ensure efficient continuity of SVS for all PHC Facilities throughout the country. <br> 3. Planning needs to take place to ensure sufficient domestic funding is available, if required <br> 4. Future focus on stock control managements so as to enable more dynamic stock management on include warning for low stock and better forecasting for medicines needs at facilities. <br> **This is a critical programme that should be continued and strengthened** |
| Infrastructure | 1. Differentiate funding for maintenance versus funding for infrastructure development, and funding mechanisms need to be put in place for both these activities this may be the need for multiple funding sources <br> 2. District and facility managers need capacity building around planning for procurement of infrastructure, and maintenance <br> **There is an urgent need to address aging and inadequate infrastructure, and develop a process that is streamlined but still complies with state procurement standards and the PFMA. Greater control should devolve to District and Facility managers, with support and training** |
| Human Resources for Health: Workload Indicators for Staffing Needs (WISN) | 1. Any assessment of staffing norms should take place within the broader context of a review of workloads e.g. the number of patients seen per day and performance management of staff <br> 2. Communication between the NDOH relevant stakeholders such as National Treasury should take place before an assessment of staffing norms takes place to ensure alignment with the financial realities which impact staffing <br> **Programmes which address staff needs need to be done in close consultation with provinces and districts, to ensure the findings are actionable** |

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[1] Eastern Cape

# CHAPTER 1: INTRODUCTION

## 1. BACKGROUND TO NHI AND NHI PHASE 1

In early 2012, the NDOH began a detailed process of research, diagnostics and planning, in preparation for the initiation of National Health Insurance in South Africa. Experts, both local and international, were consulted, and the best available evidence was used both to design the interventions and to select the pilot districts. Experts and DOH managers were organised into workstreams, and their recommendations culminated in the Green Paper and White Paper on the NHI. This process revealed the importance of incremental implementation, resulting in the phased design and selection of pilot districts. Additionally, the NDOH recognised through this process that the full implementation of NHI necessarily involves stakeholders beyond the health system, in order to deploy holistic solutions for health systems strengthening. As the policy process unfurled, discussions became broader, including more voices and perspectives. The policy context and decision-making boundaries also continuously shifted. This diminished the imperative for incremental implementation and collaboration beyond the health system, which has, however, not been totally lost. This evaluation aims to ensure that the spirit of learning from pilots and deploying these lessons across incremental phases of implementation is reignited.

South Africa faces numerous challenges in delivering high quality health services to the majority of its population. This is despite South Africa spending close to 8.9% of Gross Domestic Product (GDP) on healthcare (National Treasury, 2017). However, over half of this expenditure occurs within the private health sector, which serves less than one-fifth (16%) of the South African population (National Department of Health, 2017). Likewise, a skewed distribution of key healthcare professionals (HCPs) between the public and private sectors, and between urban and rural areas put strain on public sector health services to provide healthcare services to the majority of the population (Kahn, 2017). The majority of the population in South Africa cannot afford private healthcare and must access public healthcare in an already congested public sector, contributing to slower, less responsive services. This has contributed towards health transforming into a commodity rather than a social investment or human right. Those who need health services the most are less likely to access quality healthcare than those who are able to pay for services in the private sector. The NHI aims to address these disparities by strengthen the South African health system and developing an NHI Fund to deliver quality, affordable healthcare.

South Africa also faces a quadruple burden of disease: the HIV/AIDS epidemic alongside a high burden of tuberculosis (TB); high maternal and child mortality; high levels of violence and injuries; and a growing burden of non-communicable diseases (NCDs). Chronic diseases place a burden on the healthcare system and infrastructure will need to be strengthened to accommodate the rising number of cases. Consequently, the poor and vulnerable in South Africa have disproportionately poor health outcomes that threatens the achievement of the health Sustainable Development Goals (SDGs) by 2030 (United Nations, 2015).

According to section 27.1(a) of the South African Constitution, "Everyone has the right to have access to health services, including reproductive healthcare…" (Constitution of the Republic of South Africa, 1996). The National Development Plan (NDP) 2030 also indicates that the country should deal with the high cost of private healthcare and address the problems of quality of public healthcare (Planning Commission, 2017). The increasingly high costs of private healthcare are yet to be regulated by legislation, while the NHI is addressing both quality of care and affordability of care through health systems strengthening activities and by establishing an NHI Fund (National Department of Health., 2017). The South African Government, through NDoH, is

committed to moving the country towards the goal of Universal Health Coverage (UHC). UHC is an aspirational goal that all people use the promotive, preventative, curative and rehabilitative health services they need, of sufficient quality to be effective without suffering financial hardship (World Health Organization, 2000). UHC is being pursued in South Africa through the NHI policy, as articulated in the Draft NHI Bill. The NHI Bill lays the foundation for providing mandatory healthcare services in South Africa, for establishing an NHI Fund, for providing a framework for active purchasing of healthcare services on behalf of users, for creating mechanisms for the equitable, effective and efficient utilisation of resources to meet the health needs of users, and for limiting undesirable, unethical and unlawful practices in relation to users (Republic of South Africa, 2018).

The policy papers that led up to the Draft NHI Bill, the Green, Draft White and White Papers, clearly illustrate the need for NHI in South Africa. These documents articulate how NHI incorporates both a structural shift for the sector away from the existing two-tiered health system to a single unified health system; and the introduction of an innovative health financing system to support the shift. Implementation of NHI is part of the NDP 2030 to improve the performance of the national healthcare system, as outlined in Box 1 below (Planning Commission, 2017). NHI will extend population coverage, improve the quality and quantity of services that the population will be entitled to, as well as provide financial risk protection to individuals and households while reducing the direct costs that the population will be exposed to when accessing healthcare (National Department of Health., 2017). The implementation of NHI is a priority of government as articulated in government's Programme of Action to contribute towards achieving "*A Long and Healthy Life for All South Africans"* (Planning Commission, 2017).

**Box 1: Objectives of NHI in South Africa**

NHI seeks to achieve the following objectives:

1. Ensure UHC for all South Africans;

2. Improve access to quality of health services irrespective of socio-economic status;

3. Promote equity and social solidarity through the pooling of risks and funds;

4. Create a single, publicly owned and administered health fund with adequate reserves and funds to plan for and effectively meet the health needs of the entire population;

5. Accelerate national health system transformation;

6. Create a single health purchaser that will ensure that health services and health products are purchased and procured at reasonable costs that recognise healthcare as a public good;

7. Promote efficient and effective service delivery in both public and private sectors that will be achieved through evidence-based interventions;

8. Strengthen the under-resourced and strained public sector so as to improve health systems performance;

9. Adopt appropriate, innovative health service delivery models to respond to local needs; and

10. Ensure continuity and portability of health service benefits across the country.

*Sources: NHI Green Paper, 2011; NHI White Paper 2017; NHI Bill, 2018*

NHI is being implemented gradually in three phases (National Department of Health., 2017):

- **Phase 1 (2012/2013 – 2016/2017):** This phase included piloting of various interventions in preparation for the full implementation of NHI. These activities were funded directly and indirectly through the NHI Conditional Grants and Health Infrastructure Grants. Work-streams were established to further refine the policy and incorporate feedback from phased NHI implementation. Reviews were conducted annually and some important lessons were learned from NHI phase 1, which has informed decisions for integrated school

health services, maternal and child health initiatives, district clinical specialist teams (DCSTs) and primary healthcare (PHC) outreach teams (National Department of Health, 2017). These learnings were applied as implementation progressed and will be considered for scale-up in the next phase of implementation

- **Phase 2 (2017/2018 – 2021/2022):** This phase focuses on the development of the NHI legislation and amendments to other legislation. Initiatives will be undertaken that are aimed at establishing institutions that will form the foundation of a fully functional NHI Fund. Activities in this phase will also entail purchasing personal healthcare services from Emergency Medical Services (EMS) and National Laboratory Health Services (NHLS) for vulnerable groups such as children, women, people with disability and the elderly. HSS initiatives will continue to be implemented based on lessons learned in NHI phase 1. (National Department of Health, 2017).

- **Phase 3 (2022/2023 – 2025/2026):** In this phase, HSS activities are an ongoing process and will be undertaken throughout the lifecycle of the health system in perpetuity. In other words, HSS activities will become "business as usual" in the health system. Other activities will be to initiate the mobilisation of additional resources, such as fiscal revenue to be allocated to the NHI Fund. Selective contracting of healthcare services from private providers will be undertaken. The following activities will be undertaken in the third phase; introduction of mandatory payment for the NHI through NHI-specific taxes into prevailing tax policies, and contracting of accredited private hospital and specialist services (National Department of Health, 2017).

NHI Phase 1 pilot interventions began in 2012, where ten districts were selected according to burden of disease, socio-economic indicators, health service performance and district management capacity to implement NHI phase 1. KwaZulu-Natal Provincial Department of Health included an additional district to bring the number of pilot districts to eleven in total.

The overall objective of the pilot interventions (real-life demonstrations) was to improve access to quality healthcare and to assess whether the new HSS interventions can reduce the burden of disease and improve health outcomes, especially those of mothers, children and infants.

The specific NHI phase 1 interventions aimed to (National Department of Health., 2017):

1. Establish Ward-Based Primary Healthcare Outreach Teams (WBPHCOTS) to improve community outreach services, promote health and prevent ill health.
2. Improve quality of services through the Ideal Clinics Realisation and Maintenance Model (ICRM);
3. Roll out the Integrated School Health Programme (ISHP) to eliminate barriers to accessing healthcare, thus ensuring the general state of physical and mental health and well-being of school going children is achieved in order to maximise learning outcomes;
4. Introduce DCSTs to address high levels of maternal and child mortality and to improve health outcomes;
5. Contract general practitioners (GPs) and other private primary HCPs to address capacity constraints within public clinics and improve the clinical quality of care;
6. Implement the Centralised Chronic Medicine Dispensing and Distribution (CCMDD) programme to improve patient access to medicines, especially for patients on chronic medication, as well as to assist with decongesting PHCs and community health centres (CHC);
7. Use the e-Health Strategy, including the Health Patient Registration System (HPRS), to identify the population with the greatest health needs, in order to contribute towards improved targeting of healthcare over time;
8. Use the electronic medicine Stock Visibility System (SVS) and medicine availability surveillance report to monitor stock availability in facilities and serve as an early warning system when stocks are not available;

9.  Undertake health facilities infrastructural investment to address the backlog on existing and preventative maintenance; and,
10. Strengthen human resources for health (HRH) by increasing incoming and current workforce and to ensure current workforce is working efficiently through the introduction of Human Resources (HR) systems e.g. Workload Indicators of Staffing Need (WISN) which provides health managers a systematic way to assess their staffing needs.

# 2. NHI PHASE 1 PILOT DISTRICTS AND INTERVENTIONS

The purpose of NHI phase 1 interventions was to strengthen health systems in preparation for the full NHI roll out. This phase focused on improving and strengthening the health system prior to the introduction of an NHI Fund by implementing specific interventions in selected pilot districts. The NHI pilot districts were intended to become sites for innovation and testing throughout NHI phase 1 implementation.

The NHI pilot interventions were rolled out in an incremental manner starting from 2012, after the release of the NHI Green Paper. The NHI pilot districts were chosen to reflect criteria relating to location, burden of disease, performance and other key indicators relevant to describe the population currently accessing public sector services. The NDoH undertook a formal process to select pilots ensuring that there was a mix of both well performing and poor performing districts included as pilots. However, there was a focus on including districts that were identified as in need of support. Therefore, the big Metros such as the City if Johannesburg and the City of Cape town were deliberately not chosen as pilots. Ten districts were originally chosen, one in every province except KwaZulu-Natal (KZN), which had two. Subsequently, KZN added a third NHI pilot district, Amajuba, which the province is currently funding themselves. Amajuba district, implemented the same interventions as the other districts however, it was difficult to try and compare it with the others because of the different funding mechanism. Thus, Amajuba was not included as part of the full evaluation, instead this district was assessed separately as a case study. The rest of the districts were funded via a Conditional Grant and were the focus of the evaluation. The full list of the NHI Pilot districts is provided in Table 3 below.

**Table 3: NHI phase 1 pilot districts**

| Province | District |
|---|---|
| **Eastern Cape** | OR Tambo |
| **Free State** | Thabo Mofutsanyana |
| **Gauteng** | Tshwane |
| **KwaZulu-Natal** | Amajuba |
| **KwaZulu-Natal** | uMgungundlovu |
| **KwaZulu-Natal** | uMzinyathi |
| **Limpopo** | Vhembe |
| **Mpumalanga** | Gert Sibande |
| **Northern Cape** | Pixley ka Seme |
| **North West** | Dr Kenneth Kaunda |
| **Western Cape** | Eden |

# CHAPTER 2: APPROACH AND METHODS

This chapter provides an outline on the evaluation approach and methods. Full details of the approach and methods can be found in Appendix 1.

## 3. EVALUATION AIM, OBJECTIVES AND QUESTIONS

The overall aim of this evaluation is to evaluate the inputs invested, outputs made and intermediate outcomes of the service delivery improvement and interventions, which were implemented as part of NHI Phase 1 pilot districts. Additionally, the evaluation aims to make recommendations to inform the implementation of NHI phase 2 of NHI. The specific objectives of the evaluation are to:

- Evaluate progress made during NHI Phase 1 against the objectives and targets set for the NHI initiative;
- Identify NHI phase 1 interventions (or aspects thereof) that are working and analyse the factors that promoted their successful implementation;
- Identify NHI phase 1 interventions (or aspects thereof) that are not working and analyse the factors (causal links/relationships) that have been barriers to successful implementation, as well as identifying possible unintended consequences of the implementation of the phase 1 interventions;
- Assess the effect/s of interventions on service delivery in the pilot districts;
- Identify best practices in the implementation of NHI phase 1;
- Assess the required coordination and collaboration mechanisms that should have been put in place to enhance coherence in the implementation of identified interventions;
- Assess sustainability measures that could facilitate phased implementation of NHI, with a particular focus on NHI phase 2;
- Describe what would be required to scale-up successful interventions in NHI phase 2; and,
- Make recommendations that are actionable, realistic and feasible to implement.

Specifically, the aim is to provide a National-level overview of the progress made during NHI phase 1. While provinces and districts were visited during the evaluation, it was not the intention to provide reports specific to each province or report province-specific findings in separate chapters within this report. We acknowledge that there may have been nuanced differences in implementation between provinces and that there may have been some developments that have not been captured in this report. However, this reflects the evaluation scope which was squarely focused on the ten NHI interventions.

Part of the evaluation includes undertaking:

- A systematic review of reviews/assessments/evaluations that have been conducted in the NHI pilot districts; and,
- A comparative literature review of the evaluation of NHI implementation between South Africa and other developing countries.

## 3.1. ESTABLISHING INITIAL THEMES AND DEVELOPING EVALUATION QUESTIONS

The evaluation team made use of the implementation science framework by Damschroder et al. (2009) to establish initial themes related to implementation success, namely reach, effectiveness, adoption, implementation and maintenance.

The evaluation questions were aligned to these themes and are distinguishable across three levels of enquiry, namely overarching, cross-cutting and intervention-specific.

# 4. EVALUATION APPROACH

This evaluation made use of mixed methods to assess the NHI Phase 1 pilot districts and NHI Phase 1 interventions. In general, the qualitative approaches have been used to understand why interventions have succeeded and what has impeded the success of other interventions. Quantitative methods have been used to show by how much the interventions made a difference to the health system according to health indicator outcomes.

National ethics approval was obtained from the University of the Witwatersrand's Human Research Ethics Committee (HREC) (non-medical) (protocol number: H18/04/06). The evaluation team also obtained provincial access approval through the National Health Research Database (NHRD). Certificates for national research ethics approval and for provincial access approval are provided in Annexures 1-2.

## 4.1. SAMPLE AND SITE SELECTION

The evaluation team has used carefully selected sampling approaches to sample at different levels. The first step in the approach was sampling of facilities from the ten pilot districts. Following this, the evaluation team identified a sample of representatives for the interviews and surveys (national, provincial, district and facility level) as per

Table 4 below.

**Table 4: Evaluation population at different levels and number of interviews completed**

| Level | Evaluation population | Breakdown of representation | Type of sampling | Sampling size |
|---|---|---|---|---|
| **National** | DG, DDGs, DoH programme managers, Government stakeholders (18) | DG (1), DDGs (3)<br><br>NHI (1), DHS (1), Affordable Medicine (1), WISN (2), HPRS (1), CCMDD (1), GP Contracting (1), ICRM (2), ISHP (1), DCST (3) | Purposive sampling | Dependent on the number of stakeholders who had the appropriate designation and role. And on willingness and availability of these stakeholders to participate |
| **Provincial** | Provincial Heads of Department (HoD), District Health Services (DHS) programme managers, NHI Coordinators (20) | Eastern Cape (3), Free State (1), Gauteng (1), KwaZulu-Natal (2), Limpopo (2), Mpumalanga (2), Northern Cape (3), North West (2), Western Cape (4). | Purposive sampling | |
| **District** | District Health Management Teams (DHMT), District Managers (DM), DCST members (31) | OR Tambo (8), Thabo Mofutsanyana (1), City of Tshwane (2), uMzinyathi (3), uMgungundlovu (4), Vhembe (2), Gert Sibande (3), Pixley ka Seme (2), Dr Kenneth Kaunda (2), Eden (4) | Purposive sampling | |
| **Facility** | Facility Managers (40) | | Purposive sampling | One PHC/CHC facility manager per facility, a total of 40 for in-person interviews |
| | Facility Managers (60) | Eastern Cape (5), Free State (5), Gauteng (6), KwaZulu-Natal (9), Limpopo (8), Mpumalanga (5), Northern | Convenience sampling | One PHC/CHC facility manager per facility, a total of 60 for telephonic interview. |

| | | Cape (8), North West (3), Western Cape (11) | | |
|---|---|---|---|---|
| | WBPHCOTs GPs, Clinic committee members ISHP nurses, Pharmacists, Clerks, (87) | | Purposive sampling | Dependent on the number of stakeholders who had the appropriate designation and role. And on willingness and availability of these stakeholders to participate |
| | Facility-users (visiting the PHC/CHC facility on the day that the evaluation team visits and who have made regular use of that facility over the last three years) (224) | Male (50) Female (174) | Systematic random sampling | Five patients per facility, 20 per district, 200 in total |

# 5. EVALUATION TOOLS

The qualitative and quantitative data collection tools, were derived from the evaluation framework (Annexure 3) to ensure that the data collected is meaningful and not transitionary. The evaluation framework, in turn, was developed from the evaluation aim, objectives and questions. This guaranteed that the evaluation tools were made to answer the questions and achieve the evaluation aim and objectives. The evaluation tools and their purpose are described in Table 5, below.

**Table 5: Qualitative and quantitative evaluation tools and their purpose in this evaluation**

| Evaluation tool | Purpose |
|---|---|
| NHI Rapid Assessment review and comparative literature review outlines | Gather national and international information to inform the evaluation throughout |
| Qualitative key informant interview (KII) guides (Annexures 4) | Guide discussions at national, provincial, district and facility levels to gain insights into NHI Phase 1 implementation success and challenges. |
| Quantitative facility manager survey questionnaire (Annexure 5) | Conduct telephonic surveys to collect information on NHI Phase1 implementation success and challenges |
| Quantitative facility-user survey questionnaire (Annexure 6) | Conduct in-person surveys to collect information on perceptions of improved quality and access over time. |
| Routine and outcomes data dashboards | Demonstrate the performance on selected routinely collected and other indicators of each pilot district compared to other districts within the same province and compared to other pilot districts |

The qualitative interview guides and quantitative survey questionnaires were developed using a platform called Survey Gizmo, which is an appropriate and efficient tool for survey design and data collection. Language considerations were accounted for as information sheets and consent forms were translated into five languages (Afrikaans, Sesotho, Setswana, isiXhosa and isiZulu) and evaluators were selected with language preferences in mind.

The evaluation team used health information data and financial data for the quantitative analysis. Data management and quality. The process to mapping, ranking and developing dashboards can be found in *Chapter 3: Findings and discussion, Section 9: Trends in key health indicators, Sub-section 9.4: Process to develop the dashboards*

# 6. DATA COLLECTION

## 6.1.1. Qualitative interviews and quantitative surveys

Quantitative and qualitative primary data collection was completed by conducting interviews and surveys at national, provincial, district and facility levels. All evaluators were provided with training and a fieldwork protocol prior to data collection. Evaluation teams made in-person visits to the 10 districts between 11 June and 27 July 2018. The 11th district was retained as a case study with its own round of data collection, which was conducted telephonically. The evaluation team consisted of a senior-level evaluator who was responsible for facilitating the interview and mid-level evaluator who was responsible for note taking during the interview. Telephonic interviews were conducted in Johannesburg by a mid-level evaluator. All data was collected on a digital platform called Survey Gizmo. In-person interviews were audio recorded on a laptop, if consent was given.

The primary data collection was pre-tested in a one district, uMzinyathi, before data collection continued in other districts. The purpose of the pre-test was to test the proposed fieldwork methods and processes, and the appropriateness, understandability and usability of the evaluation tools. Pre-testing allowed the evaluation team to make amendments prior to the commencement of the main fieldwork. The uMzinyathi pre-test district was not revisited and data collected from this district is included in the final analysis, as it was felt that these changes were minor and did not impact on the quality of data. The full pre-test report can be found in Annexure 7.

Both in-person and telephonic methods were used to gather all the data A total of 463 stakeholders were interviewed during primary data collection. Table 5 above provides details on the number of stakeholders interviewed and surveyed at each level.

## 6.1.2. Data management

Data was managed in such a manner to uphold ethical standards. All data was collected only from individuals who gave informed consent to participate in the research process, and where the data was of a sensitive nature, this data was anonymised such that all identifying information was removed.

Softcopy data is stored on internal servers and on Survey Gizmo, which are platforms restricted to Genesis staff members only. Prior to fieldwork, all fieldworkers were trained in the appropriate storage and management of data on a day-to-day basis while in the field, and the project manager was responsible for monitoring the effective management and storage of data on internal servers.

The Information Security Policy (ISP) for the PwC global network is aligned to the control requirements of ISO27002:2013. The Member Firms are expected to comply with the requirements of this policy and are audited to the requirements of the ISP by the PwC Global Risk & Quality- Information Security Compliance which is independent from member firms. The security practices and methods used by the PwC Global Risk & Quality Security – Information Security Compliance team have been independently audited by the British Standards Institution (BSI) to ensure compatibility with and conformity to ISO/IEC 27001:2013. An annual review of these processes is conducted by BSI.

## 6.1.3. Data quality

At the end of each day, the notes were checked and collated with the recordings. The transcriptions were contained within a web-enabled tracking tool, enabling efficient quality assurance processes and easy collaboration between evaluation team members. Once data collection complete, the interviews were downloaded and saved on the Genesis internal server for protection. Qualitative were then analysed using Atlas.ti v 7.5, while quantitative data was analysed using Microsoft Excel 2016.

## 6.2. PROCESS FOR ANALYSIS AND SYNTHESIS

The following steps describes the process that the evaluation team followed for the analysis and synthesise the data:

1. A full consortium meeting was held to establish the initial themes that were surfacing from both the qualitative and quantitative primary data

2. Evaluators received training on how to conduct a qualitative data analysis, which was important to drive consistency in the data analysis process

3.  Evaluators used Atlas.ti v7.5 to extract the themes across the qualitative interview transcripts, while Microsoft Excel 2016 was used for the quantitative analysis of the facility manager and PHC user survey data sets, and Tableau was used to analyse the quantitative routine and outcome data

4.  The data was then interpreted and aligned to the objectives of the evaluation. This involved extensive synthesis meetings with the full complement of the consortium. Some of the fieldworkers were also present in these meetings so as to provide deeper context to the findings.

5.  A validation meeting was held with the consortium, which was used to interrogate common findings arising from the different data sources and assess the value of the findings. Findings were interpreted according to overarching, cross-cutting and intervention specific themes as defined in *Chapter 3: Findings ANd* Discussion

# 7.  TRENDS IN KEY HEALTH INDICATORS PERFORMANCE

## 7.1.  PURPOSE OF HEALTH INDICATOR DASHBOARDS

The dashboards aim to demonstrate the performance of each pilot district over time as well as the general trend of the indicators. While many of the routine DHIS indicators cannot be directly linked to the specific intervention and therefore one should be cautious of over interpretation, the dashboards provide evidence of trends in key health indicators in each district and province. This evidence helps to ascertain whether a district showed improvement over the period of the NHI pilot phase1 across the various indicators.

## 7.2.  LIMITATIONS

The DHIS indicators allow for a fuller picture, showing progress in the health system and the fidelity of the NHI pilot projects. However, the routine DHIS indicators cannot be directly linked to a specific intervention and therefore one should be cautious of over interpretation. Rather, the dashboards can give insight into the strength of the health system in each district and whether a district showed improvement over the pilot phase.

The team did not attempt to amend any data, as it was important that the dashboards reflected audited results, accepted by the provinces and the NDoH. The sector is aware of the need for strengthening data quality and one of the NHI interventions, focusing on e-Health, aims to do this through better patient record keeping and data management. Improved data quality will allow for more reliable data analysis and results.

## 7.3.  DESCRIPTION OF DATA SOURCES

The evaluation team used health information data and financial data for the quantitative analysis. We received data from 2013/14 to 2017/18 for as many of the indicators as possible, however some data was not available for all the years. We received the complete DHIS data from the NDoH, which has data at the facility level. We aggregated the facility level data up to a district level, by summing the raw data and then calculated the performance for the financial year as a whole, using the standard indicator calculations.

**Health information data:** The team used District Health Information System (DHIS) data received from the NDoH. Supplementary data was also received for the SVS, WBPHCOT and ISHP.

# 7.4.  PROCESS TO DEVELOP THE DASHBOARDS

## 7.4.1. Mapping indicators to interventions

### 7.4.1.1.  DHIS routine indicators

The team initially mapped the available DHIS data indicators to the interventions, as far as possible. This is shown in Table 6 below. This was only possible for WBPHCOT, SVS and the DCSTs.

**Table 6: Mapping DHIS routine indicators to relevant NHI Phase 1 interventions**

| DHIS routine indicators | WBPHCOT | SVS | DCST |
|---|---|---|---|
| Antenatal 1st visit 20 weeks or later | x | | |
| Antenatal 1st visit before 20 weeks | x | | x |
| Antenatal 1st visit total | x | | x |
| Any tracer item drug stock out (clinic/CHC/CDC) | | x | |
| ART adult naive start ART in month | | | |
| ART adult remain on ART end of period | | | |
| ART child under 15 years naive start ART in month | | | |
| ART child under 15 years remain on ART end of period | | | |
| BCG dose | | | |
| Cervical cancer screening 30 years and older | x | | |
| Child under 2 years underweight - new (weight between -2 SD and -3 SD new) | x | | |
| Diarrhoea death under 5 years | x | | x |
| Diarrhoea separation under 5 years | | | |
| Diarrhoea with dehydration new in child under 5 years | x | | |
| HIV positive client screened for TB | x | | |
| HIV positive new eligible client initiated on IPT | | | |
| Immunised fully under 1 year new | x | | |
| Inpatient death neonatal total | | | x |
| Inpatient death under 1-year total | | | x |
| Inpatient death under 5 years total | | | x |
| Inpatient deaths – total | | | |
| Maternal mortality in facility ratio | | | X |

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

| DHIS routine indicators | WBPHCOT | SVS | DCST |
|---|---|---|---|
| Measles 1st dose | | | |
| Measles 2nd dose | | | |
| Medical male circumcision performed | | | |
| Mother postnatal visit within 6 days after delivery | x | | |
| PHC client seen by public doctor | | | |
| PHC headcount 5 years and older | | | |
| PHC headcount under 5 years | x | | |
| Pneumonia death under 5 years | | | x |
| Pneumonia separation under 5 years | | | |
| Severe acute malnutrition (SAM) death under 5 years | | | x |
| Severe acute malnutrition (SAM) inpatient under 5 years | | | |
| Still birth in facility | | | |
| TB AFB sputum result received within 48 hours | | | |
| Total births in facility | | | x |

The evaluation team then mapped out additional data received from the NDoH for the WBPHCOT, which included additional outreach household (OHH) data, ISHP data and additional CCMDD data, as well as SVS specific data were also received. The indicators for these data sets are provided in Table 7 below.

**Table 7: Mapping data to NHI Phase 1 interventions**

| Additional Indicators | WBPHCOT | SVS | ISHP | CCMDD |
|---|---|---|---|---|
| OHH client referred to facility rate | x | | | |
| OHH follow up visit rate | x | | | |
| OHH headcount total | x | | | |
| OHH headcount under 5 years coverage | x | | | |
| OHH registration visit rate | x | | | |
| OHH visits total | x | | | |
| OHH with postnatal care rate | x | | | |
| Clinic drug availability reports (FY '17 and FY'18) | | x | | |
| School Grade 1 screening coverage (annualised) | | | x | |
| School Grade 10 screening coverage (annualised) | | | x | |

| | | | | |
|---|---|---|---|---|
| School Grade 4 screening coverage (annualised) | 5 | | x | |
| School Grade 8 screening coverage (annualised) | | | x | |
| School Grade R screening coverage (annualised) | | | x | |
| School ISHP coverage (annualised) | | | x | |
| School learner referred rate (sum of eye, hearing, oral, speech and TB) | | | x | |
| School learner screening coverage (annualised) | | | x | |
| Total patients registered on CCMDD | | | | x |
| Total facilities registered for CCMDD | | | | x |
| Total medicine parcels delivered via CCMDD | | | | x |

# 7.5. RESULTS

The aim of analysing indicators in the pilot districts over the period of the pilots was to try and determine whether the various phase 1 interventions had a measurable impact. Additional analysis was completed, which included pilot and non-pilot districts in the same graphs (see annexure 12). These districts should not be directly compared. The reason for this is that there is enormous variability between districts, and the pilot districts were often selected because they were started off from a lower base than other districts. However, we think examining trends across indicators, years and districts can be instructive.

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

## 7.5.1. Indicator specific results

**Figure 1: Top 10 performing indicators in the NHI Pilot districts over time (FY 2013 – FY 2017)**



<div style="background-color:#e8f0e0;">

**KEY OBSERVATIONS:**

4. The Average medicine parcel per uninsured was the highest ranked by the end of 2017 (With measurement commencing in 2016)
5. Of the top 10 indicators, 2 showed a constant improvement year on year:
    - Diarrhoea with dehydration in child under 5 years incidence
    - School learner screening coverage (annualised)
6. "Still birth in facility rates" and "School learner referred for suspected TB rate" showed erratic decreases and increases. This could be a reporting anomaly.

</div>

## 7.5.2. District Specific Results

The team's data analysis intended to highlight specific success items and possible areas requiring improvement for each of the pilot districts. The dashboard tool allows the user to drill down into the detail for each indicator for each district and also allows for comparison between pilot districts and also a comparison between the pilot district in a Province and the non-pilot districts in a Province.

## 7.5.2.1.      uMzinyathi District

**Figure 2: Antenatal visit before 20 weeks. uMzinyathi compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**Figure 3: Immunisation under the age of 1. uMzinyathi compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Huge improvement for this indicator. Qualitative information indicated that mother and child health was prioritised as the focus for the district

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018
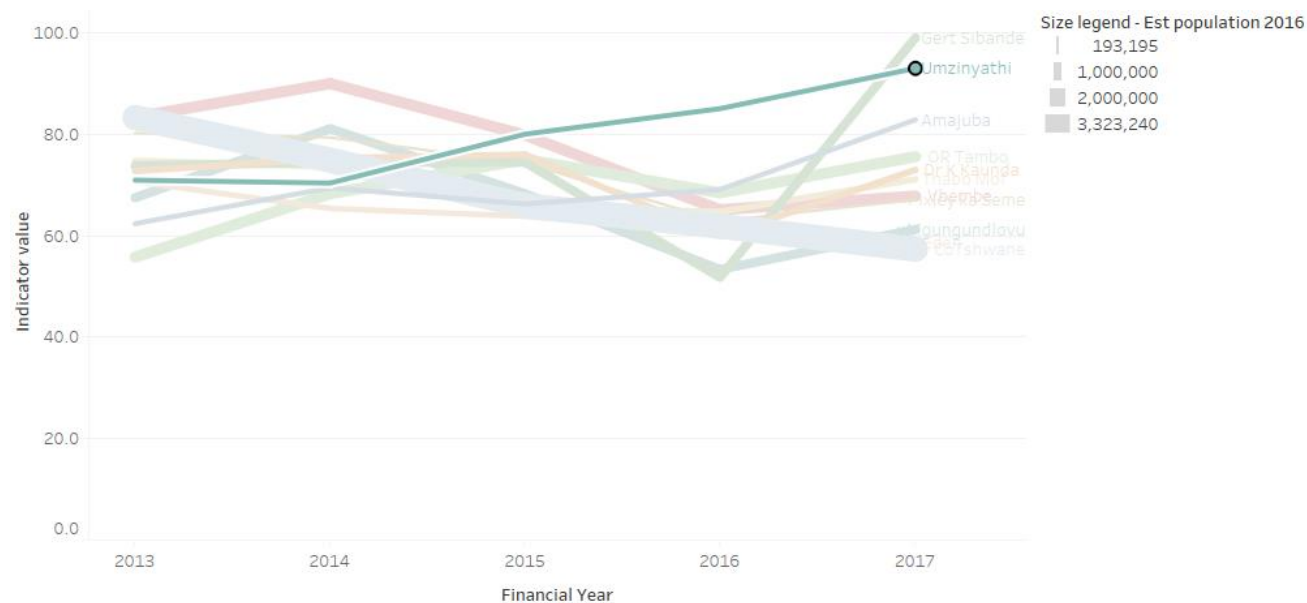
**Figure 4: School learner screening coverage. uMzinyathi compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



## 7.5.2.2.  OR Tambo District

**Figure 5: Cervical cancer screening over 30. OR Tambo compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Consistent improvement shown year on year and increase in ranking compared to other pilot districts.

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

**Figure 6: Diarrhoea with dehydration under 5. OR Tambo compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
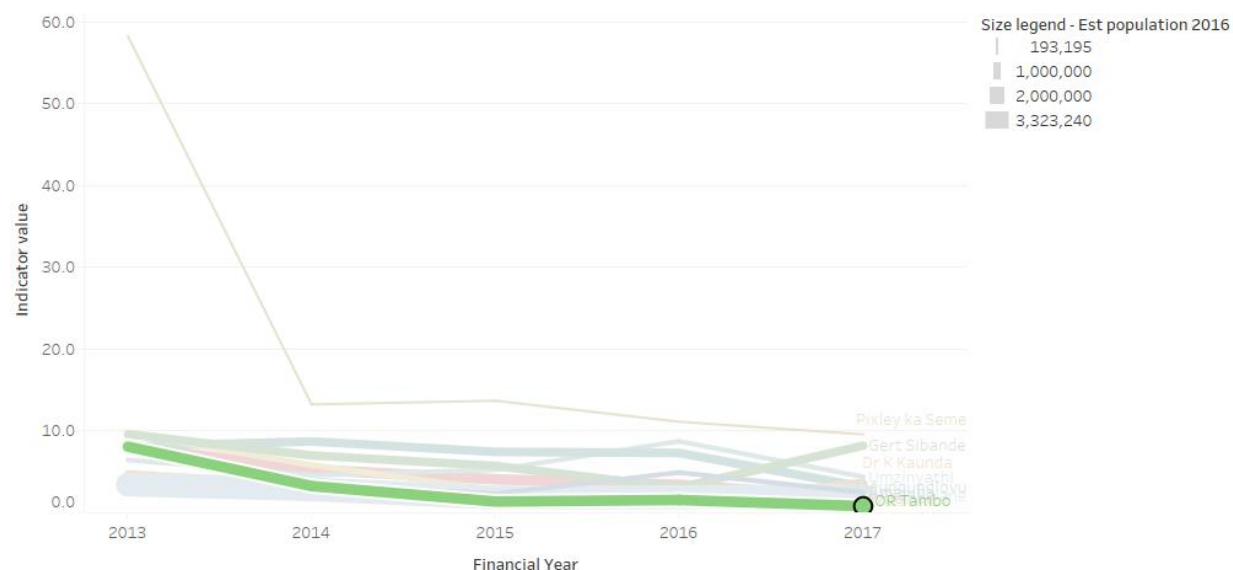


**Figure 7: OHH Total visits. OR Tambo compared to other Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Average improvement compared to other NHI pilot districts. Qualitative data indicated that WBPHCOT's were not consistent.

## 7.5.2.3. uMgungundlovu

**Figure 8: Measles 2nd dose. uMgungundlovu compared to other NHI Pilot Districts (FY 2013 – FY 2017)**

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018
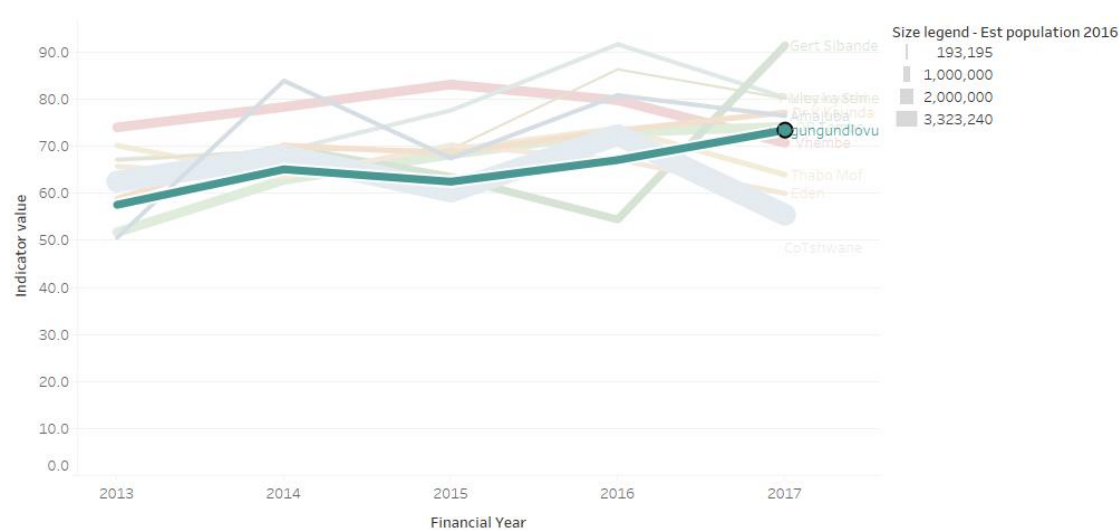


**Figure 9: OHH Headcount. uMgungundlovu compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
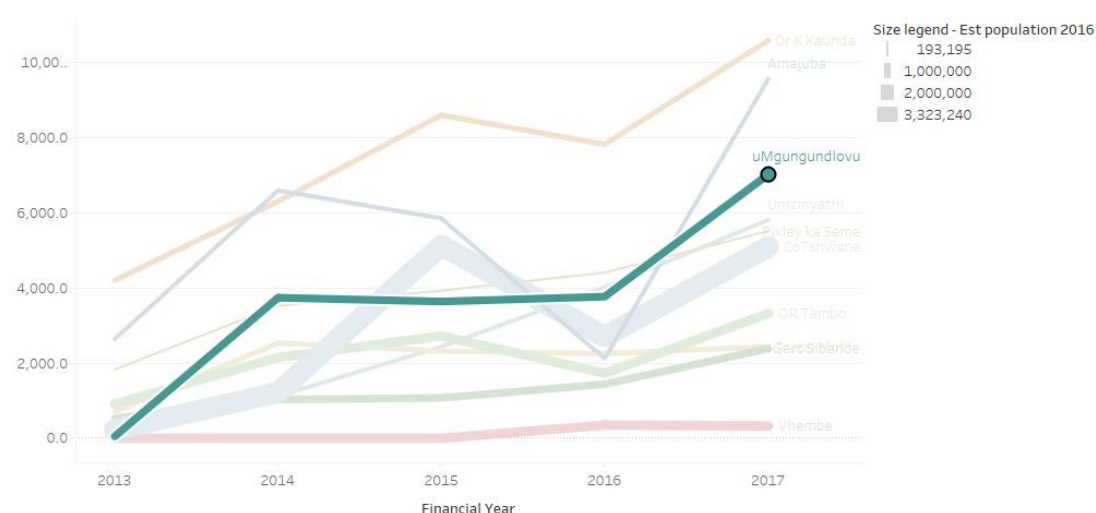


**KEY OBSERVATIONS:**

Improvement shown compared to other pilot districts. Qualitative commentary reflected the lack of capacitated WBPHCOTs.

## 7.5.2.4. Gert Sibande District

**Figure 10: Immunisation under 1 year. Gert Sibande compared to other NHI Pilot Districts (FY 2013 – FY 2017)**

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018



<div style="background-color:#eaf2e0">

**KEY OBSERVATIONS:**

Huge improvement from 2016 to 2017 and ending 2017 as the best of the pilot districts.

</div>

**Figure 11: OHH headcount total. Gert Sibande compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



<div style="background-color:#eaf2e0">

**KEY OBSERVATIONS:**

Not sufficient improvement and a drop in the rank for this indicator. Qualitative data reflects the WBPHCOT's not being a success as it was difficult to recruit and keep staff.

</div>

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

**Figure 12:School learner referred for suspected TB. Gert Sibande compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Good improvement ending '17 as the 2nd best pilot.

## 7.5.2.5.    Amajuba District

**Figure 13: Antenatal first visit before 20 weeks. Amajuba compared to other NHI Pilot Districts (FY 2013 – FY 2017)**

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

**Figure 14: HIV Positive on IPT. Amajuba compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

A perceived increase in 2015 however a decrease in 2016 and 2017

**Figure 15: Immunisation under 1 year. Amajuba compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

An increase with the district ending 2017 as 3rd best of the pilots.

**Figure 16: OHH Total visits. Amajuba compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Huge improvement from 2016 to 2017 and ending 2017 as the best of the pilot districts,

## 7.5.2.6. Vhembe District

**Figure 17: Diarrhoea with dehydration under 5. Vhembe compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

There was an improvement in this indicator with the district ending 2017, 2nd best of the pilots.

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

**Figure 18: Immunisation under 1. Vhembe compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

There was sharp decrease in the performance of this indicator. Qualitative information revealed the lack of DCST's being functional and the speculation that they need to be dismantled and a new solution found. This is potentially problematic because with poor immunisation coverage, there is a higher risk for poor child health- DCSTs will then be critical to ensure child mortality does not increase.

**Figure 19: OHH follow up rate. Vhembe compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

A large improvement from 2015 to 2017 with the district ending 2017 as the highest of the pilots.

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

## 7.5.2.7.    Dr K Kaunda District

**Figure 20: Cervical cancer screening over 30. Dr K Kaunda compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**Figure 21:OHH Total visits. Dr K Kaunda compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

There was an improvement in this indicator with the district ending '17 as it performed 2nd best of the NHI pilot districts.

## 7.5.2.8. Eden District

**Figure 22: Antenatal first visit after 20 weeks. Eden compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
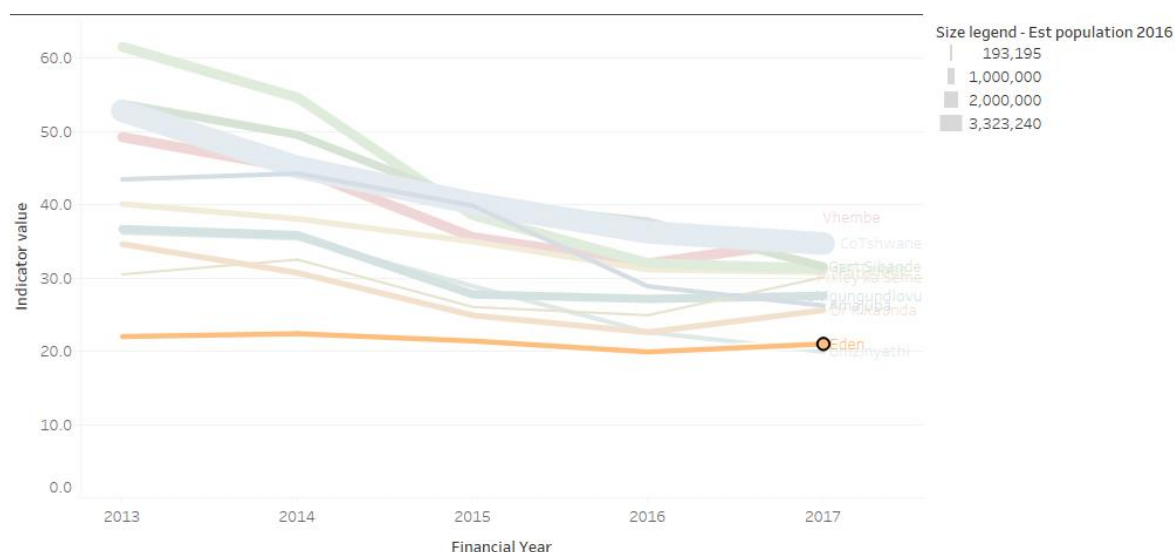


**Figure 23: Tracer drugs stock outs. Eden compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
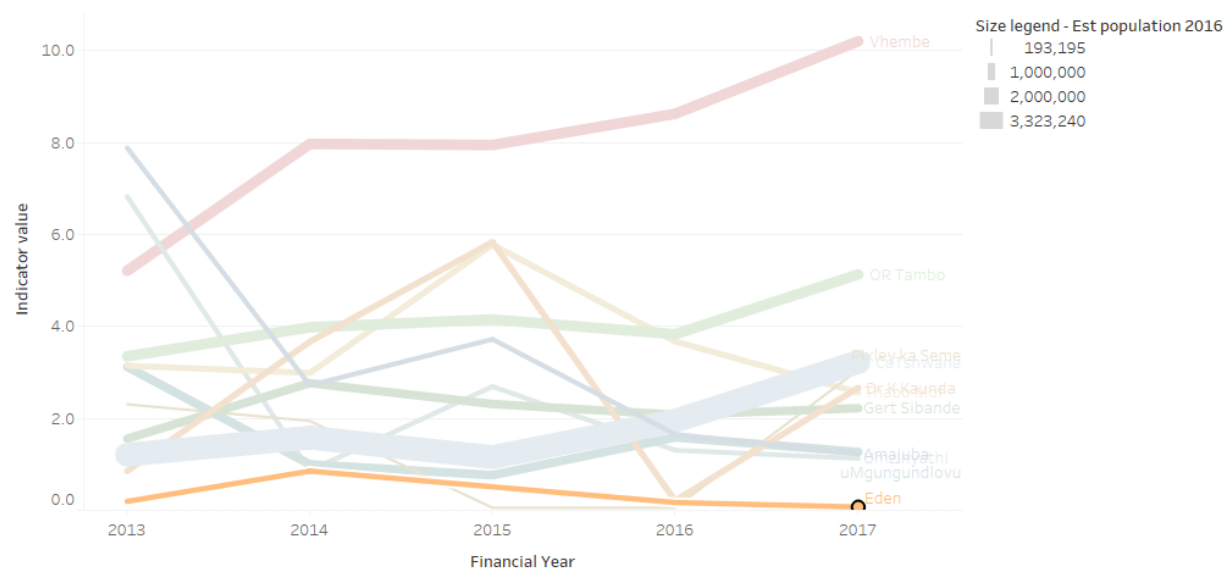


**KEY OBSERVATIONS:**

Consistently the lowest stock out rates of the pilot districts.

## 7.5.2.9. Thabo Mofutsanyana District

**Figure 24: Diarrhoea with dehydration under 5 years. Thabo Mofutsanyana compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

A large improvement with this indicator ending 2017 as the best pilot district.

**Figure 25: School learner screening coverage. Thabo Mofutsanyana compared to other NHI Pilot Districts (FY 2013 – FY 2017)**

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

## 7.5.2.10.  Pixley ka Seme District

**Figure 26: BCG Dose coverage. Pixley Ka Seme compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Best performer of the pilots and but reduced coverage.

**Figure 27: HIV positive on IPT. Pixley Ka Seme compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Consistently the lowest performer in the NHI pilot districts.

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

**Figure 28: OHH headcount under 5. Pixley Ka Seme compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

One of the best indicators in the pilot districts and could be the reason the BCG indicator is also performing

## 7.5.2.11.    City of Tshwane District

**Figure 29: Antenatal visit before 20 weeks. City of Tshwane compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

The lowest performer of the NHI pilot districts.

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018
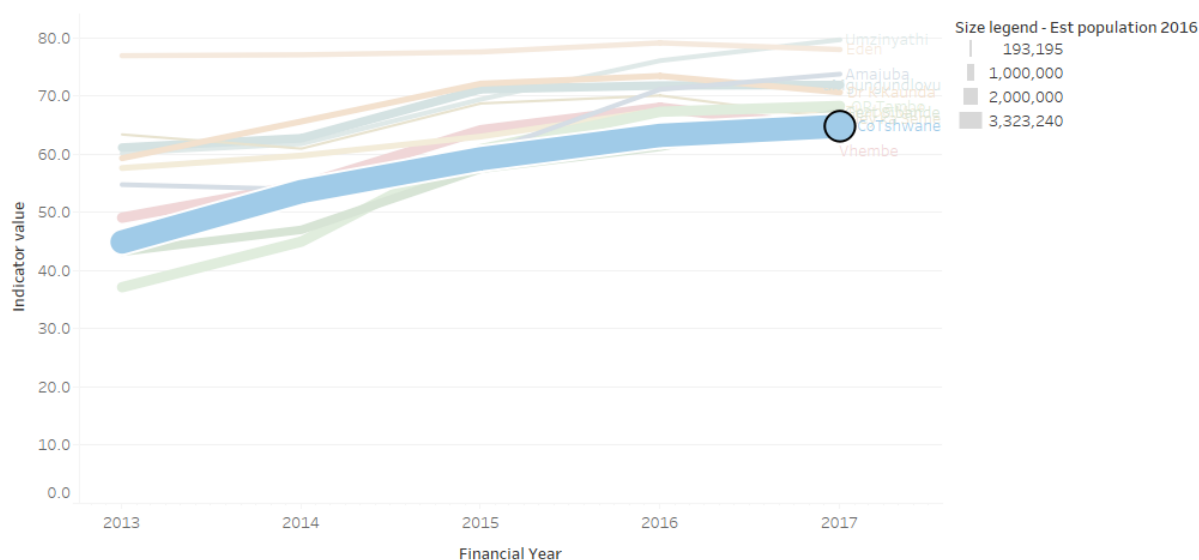
**Figure 30: Diarrhoea with dehydration under 5 years. City of Tshwane compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
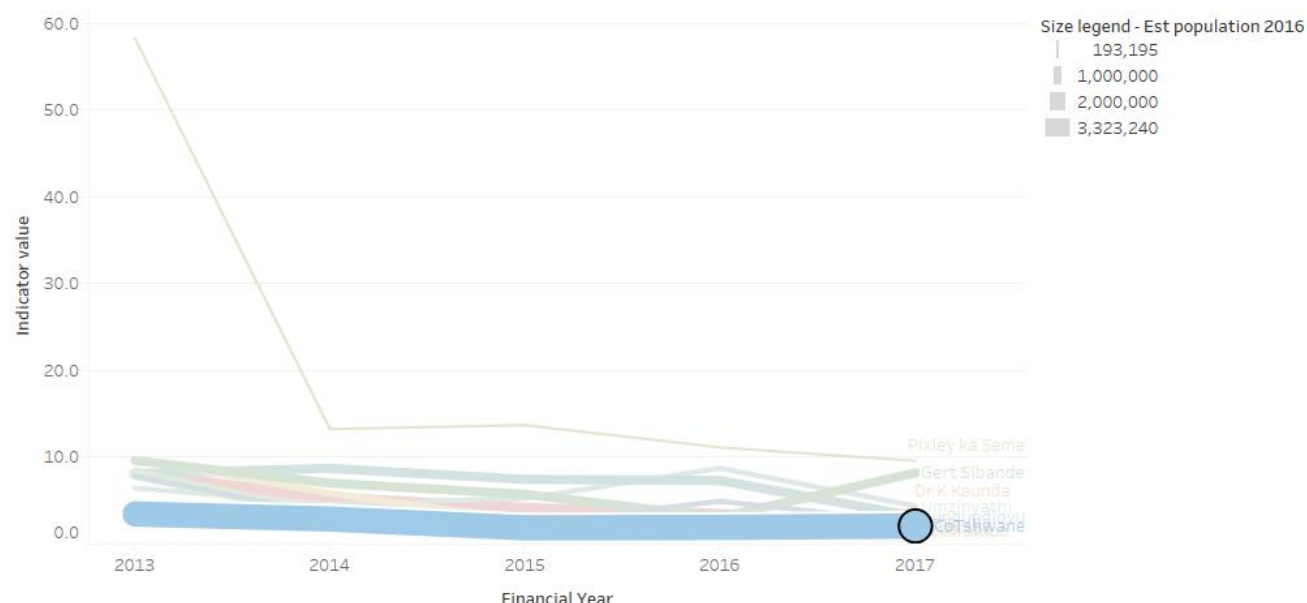


**KEY OBSERVATIONS:**

One of the best indicators for this district.

# 8.   ONGOING USE OF THE DASHBOARD

The development of the dashboard tool has allowed key health indicators to be analysed and compared across the pilot districts and across non-pilot districts in the same Province. This has allowed for areas of improvement to be recognised and success stories to be used as lessons learned for other districts. The dashboards have shown that there is no consistent trend of the pilot districts performing better than non-pilot districts however there are several encouraging improvements in the key health indicators as highlighted in the graphs above.

The dashboard tool has been made available to the NDoH and will allow for ongoing further analysis and comparison between the various health indicators, the key NHI programmes and the performance of the districts. It is advised that the NDoH continue with this analysis and refine the dashboards in line with the upscaling and implementation of the NHI phase 2 initiative. This will allow for the NHI project office to proactively identify areas requiring improvement and additional assistance, as well as areas / initiatives that are showing marked improvement in line with the targets set. The dashboard is merely a reflection of the data in the DHIS however through the functionality of the Tableau software the user will be able to rapidly analyse the data in a meaningful and proactive manner making ongoing performance tracking and reporting more effective.

*6.* Effectiveness of NHI Phase 1.

7. The preliminary findings were presented to the TWG, and then the evaluation team was able to refine the findings and fill data gaps based on these discussions. For example, the routine and outcomes data were used to locate findings within the sector trends.

8. Case studies were developed that highlight the success stories of NHI phase 1 and the factors that contributed towards intervention successes. A total of 10 case studies were developed, and can be found in Annexure 12. The additional district, Amajuba, is one of these case studies

9. This led to the development of recommendations, making use of all three data sources. The recommendations were again presented to the TWG and refined according to these discussions.

10. The final recommendations are presented in this evaluation report under *Strategic recommendations for NHI Phase 2.*

# 9. LIMITATIONS OF THE EVALUATION APPROACH AND METHOD

The factors discussed in this section pose limitations to this evaluation, which are outlined below:

- Some stakeholders sited that they had not been involved from the onset of NHI Phase 1, therefore may have had limited understanding of NHI Phase 1 and unable to make the links between the interventions.
- Self-reported information is often subject to recall error or misreporting. Furthermore, the data is considered subjective as experiences are perceived differently by individuals.
- A lack of disaggregated financial data also presented as a limitation to the routine and outcome data dashboard development.
- The scale up of interventions beyond pilot districts made it difficult to assess difference between pilot and non-pilot districts during Phase1 implementation.

Despite these limitations, the evaluation team is confident that the quality of the evaluation has not been adversely affected, and that the evaluation aim and objectives were achieved, and the questions answered.

# CHAPTER 3: FINDINGS AND DISCUSSION

## 10. TRENDS IN KEY HEALTH INDICATORS PERFORMANCE

### 10.1. PURPOSE OF HEALTH INDICATOR DASHBOARDS

The dashboards aim to demonstrate the performance of each pilot district over time as well as the general trend of the indicators. While many of the routine DHIS indicators cannot be directly linked to the specific intervention and therefore one should be cautious of over interpretation, the dashboards provide evidence of trends in key health indicators in each district and province. This evidence helps to ascertain whether a district showed improvement over the period of the NHI pilot phase1 across the various indicators.

### 10.2. LIMITATIONS

The DHIS indicators allow for a fuller picture, showing progress in the health system and the fidelity of the NHI pilot projects. However, the routine DHIS indicators cannot be directly linked to a specific intervention and therefore one should be cautious of over interpretation. Rather, the dashboards can give insight into the strength of the health system in each district and whether a district showed improvement over the pilot phase.

The team did not attempt to amend any data, as it was important that the dashboards reflected audited results, accepted by the provinces and the NDoH. The sector is aware of the need for strengthening data quality and one of the NHI interventions, focusing on e-Health, aims to do this through better patient record keeping and data management. Improved data quality will allow for more reliable data analysis and results.

### 10.3. DESCRIPTION OF DATA SOURCES

The evaluation team used health information data and financial data for the quantitative analysis. We received data from 2013/14 to 2017/18 for as many of the indicators as possible, however some data was not available for all the years. We received the complete DHIS data from the NDoH, which has data at the facility level. We aggregated the facility level data up to a district level, by summing the raw data and then calculated the performance for the financial year as a whole, using the standard indicator calculations.

**Health information data:** The team used District Health Information System (DHIS) data received from the NDoH. Supplementary data was also received for the SVS, WBPHCOT and ISHP.

# 10.4.    PROCESS TO DEVELOP THE DASHBOARDS

## 10.4.1.    Mapping indicators to interventions

### 10.4.1.1.    DHIS routine indicators

The team initially mapped the available DHIS data indicators to the interventions, as far as possible. This is shown in Table 6 below. This was only possible for WBPHCOT, SVS and the DCSTs.

**Table 6: Mapping DHIS routine indicators to relevant NHI Phase 1 interventions**

| DHIS routine indicators | WBPHCOT | SVS | DCST |
|---|---|---|---|
| Antenatal 1st visit 20 weeks or later | x | | |
| Antenatal 1st visit before 20 weeks | x | | x |
| Antenatal 1st visit total | x | | x |
| Any tracer item drug stock out (clinic/CHC/CDC) | | x | |
| ART adult naive start ART in month | | | |
| ART adult remain on ART end of period | | | |
| ART child under 15 years naive start ART in month | | | |
| ART child under 15 years remain on ART end of period | | | |
| BCG dose | | | |
| Cervical cancer screening 30 years and older | x | | |
| Child under 2 years underweight - new (weight between -2 SD and -3 SD new) | x | | |
| Diarrhoea death under 5 years | x | | x |
| Diarrhoea separation under 5 years | | | |
| Diarrhoea with dehydration new in child under 5 years | x | | |
| HIV positive client screened for TB | x | | |
| HIV positive new eligible client initiated on IPT | | | |
| Immunised fully under 1 year new | x | | |
| Inpatient death neonatal total | | | x |
| Inpatient death under 1-year total | | | x |
| Inpatient death under 5 years total | | | x |
| Inpatient deaths – total | | | |
| Maternal mortality in facility ratio | | | X |

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

| DHIS routine indicators | WBPHCOT | SVS | DCST |
|---|---|---|---|
| Measles 1st dose | | | |
| Measles 2nd dose | | | |
| Medical male circumcision performed | | | |
| Mother postnatal visit within 6 days after delivery | x | | |
| PHC client seen by public doctor | | | |
| PHC headcount 5 years and older | | | |
| PHC headcount under 5 years | x | | |
| Pneumonia death under 5 years | | | x |
| Pneumonia separation under 5 years | | | |
| Severe acute malnutrition (SAM) death under 5 years | | | x |
| Severe acute malnutrition (SAM) inpatient under 5 years | | | |
| Still birth in facility | | | |
| TB AFB sputum result received within 48 hours | | | |
| Total births in facility | | | x |

The evaluation team then mapped out additional data received from the NDoH for the WBPHCOT, which included additional outreach household (OHH) data, ISHP data and additional CCMDD data, as well as SVS specific data were also received. The indicators for these data sets are provided in Table 7 below.

**Table 7: Mapping data to NHI Phase 1 interventions**

| Additional Indicators | WBPHCOT | SVS | ISHP | CCMDD |
|---|---|---|---|---|
| OHH client referred to facility rate | x | | | |
| OHH follow up visit rate | x | | | |
| OHH headcount total | x | | | |
| OHH headcount under 5 years coverage | x | | | |
| OHH registration visit rate | x | | | |
| OHH visits total | x | | | |
| OHH with postnatal care rate | x | | | |
| Clinic drug availability reports (FY '17 and FY'18) | | x | | |
| School Grade 1 screening coverage (annualised) | | | x | |
| School Grade 10 screening coverage (annualised) | | | x | |

| | | | | |
|---|---|---|---|---|
| School Grade 4 screening coverage (annualised) | 26 | | x | |
| School Grade 8 screening coverage (annualised) | | | x | |
| School Grade R screening coverage (annualised) | | | x | |
| School ISHP coverage (annualised) | | | x | |
| School learner referred rate (sum of eye, hearing, oral, speech and TB) | | | x | |
| School learner screening coverage (annualised) | | | x | |
| Total patients registered on CCMDD | | | | x |
| Total facilities registered for CCMDD | | | | x |
| Total medicine parcels delivered via CCMDD | | | | x |

# 10.5. RESULTS

The aim of analysing indicators in the pilot districts over the period of the pilots was to try and determine whether the various phase 1 interventions had a measurable impact. Additional analysis was completed, which included pilot and non-pilot districts in the same graphs (see annexure 12). These districts should not be directly compared. The reason for this is that there is enormous variability between districts, and the pilot districts were often selected because they were started off from a lower base than other districts. However, we think examining trends across indicators, years and districts can be instructive.

## 10.5.1. Indicator specific results

**Figure 1: Top 10 performing indicators in the NHI Pilot districts over time (FY 2013 – FY 2017)**
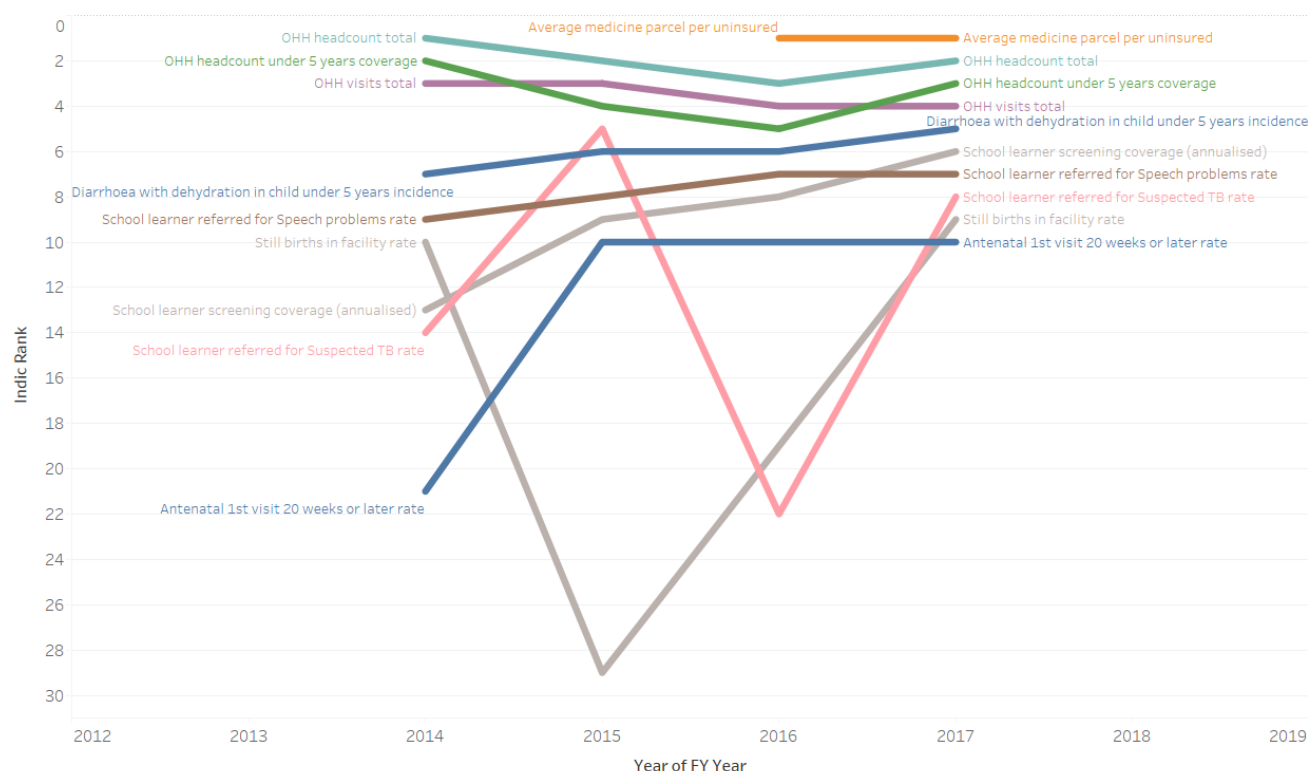


**KEY OBSERVATIONS:**

1. The Average medicine parcel per uninsured was the highest ranked by the end of 2017 (With measurement commencing in 2016)
2. Of the top 10 indicators, 2 showed a constant improvement year on year:
   - Diarrhoea with dehydration in child under 5 years incidence
   - School learner screening coverage (annualised)
3. "Still birth in facility rates" and "School learner referred for suspected TB rate" showed erratic decreases and increases. This could be a reporting anomaly.

## 10.5.2. District Specific Results

The team's data analysis intended to highlight specific success items and possible areas requiring improvement for each of the pilot districts. The dashboard tool allows the user to drill down into the detail for each indicator for each district and also allows for comparison between pilot districts and also a comparison between the pilot district in a Province and the non-pilot districts in a Province.

## 10.5.2.1.     uMzinyathi District

**Figure 2: Antenatal visit before 20 weeks. uMzinyathi compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
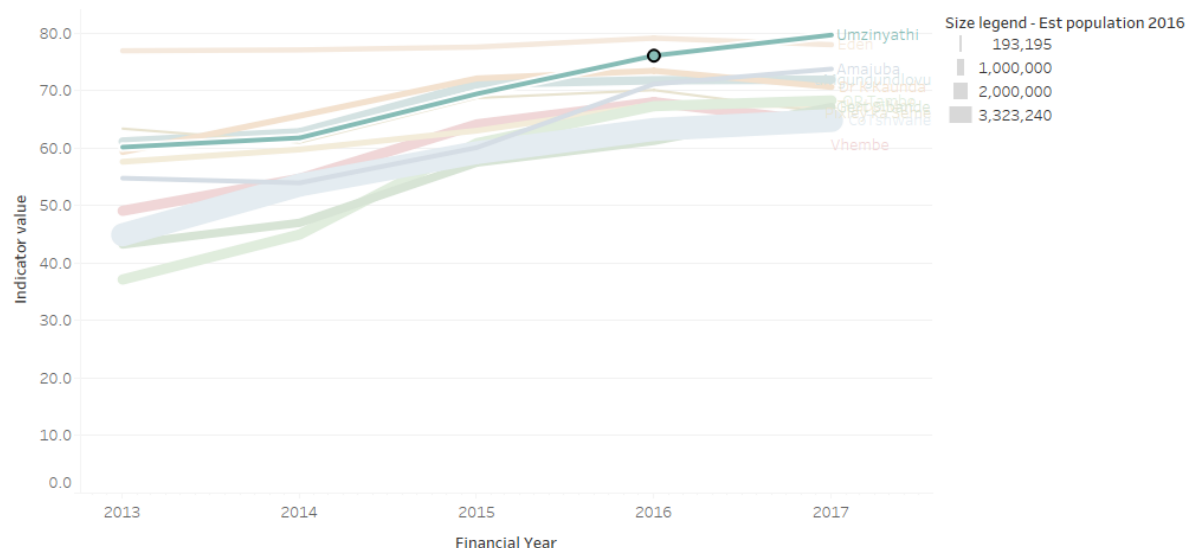


**KEY OBSERVATIONS:**

Huge improvement and uMzinyathi ended 2017 as the highest NHI pilot district, Qualitative information indicated that bottom up planning and preparation with a focus on maternal health was key to the success.

**Figure 3: Immunisation under the age of 1. uMzinyathi compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Huge improvement for this indicator. Qualitative information indicated that mother and child health was prioritised as the focus for the district

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018
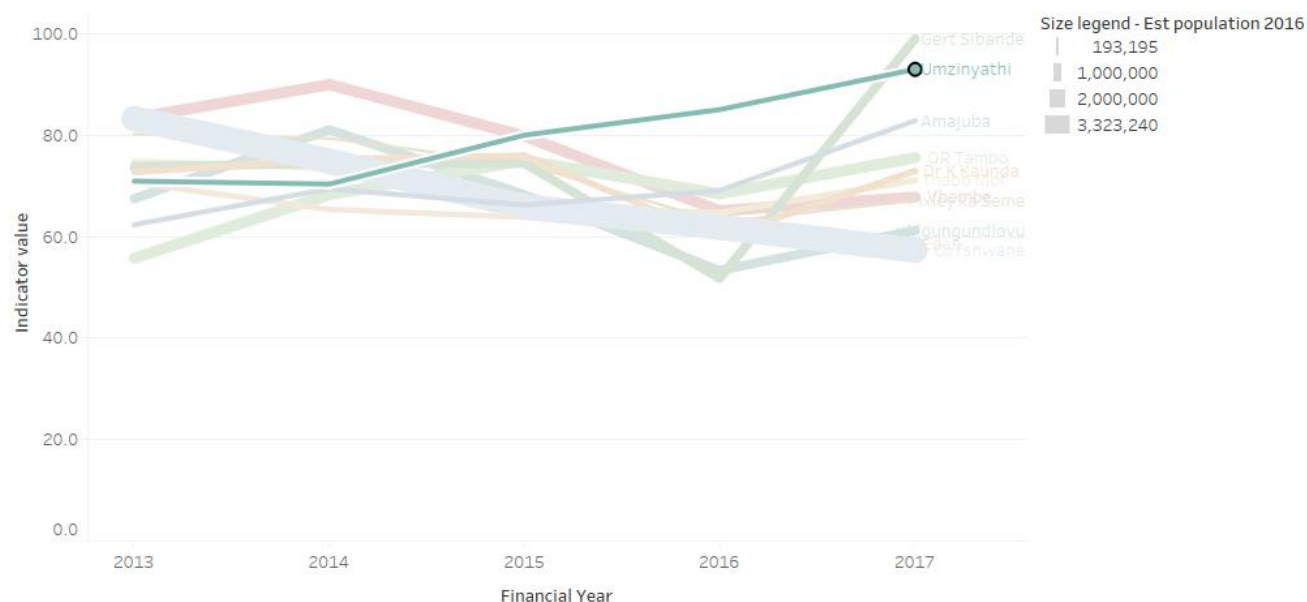
**Figure 4: School learner screening coverage. uMzinyathi compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
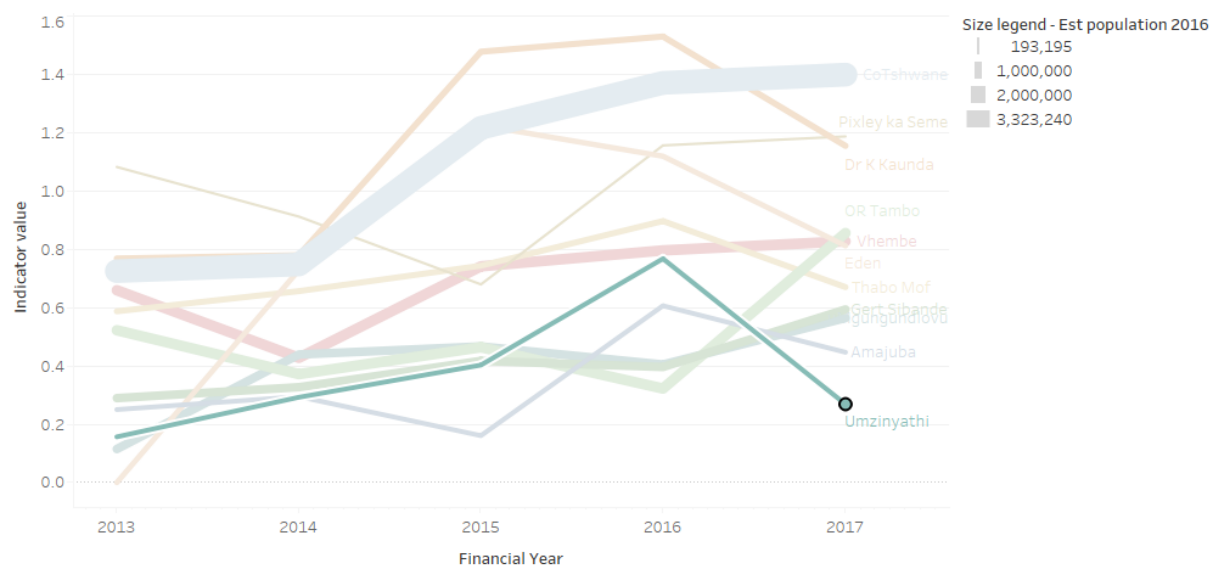


**KEY OBSERVATIONS:**

There was a decrease in this indicator from 2016 to 2017 and uMzinyathi ended 2017 as the worst of the pilots for this indicator. Qualitative information indicated that certain areas in the district do not have functioning ISHP's

## 10.5.2.2.    OR Tambo District

**Figure 5: Cervical cancer screening over 30. OR Tambo compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Consistent improvement shown year on year and increase in ranking compared to other pilot districts.

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018
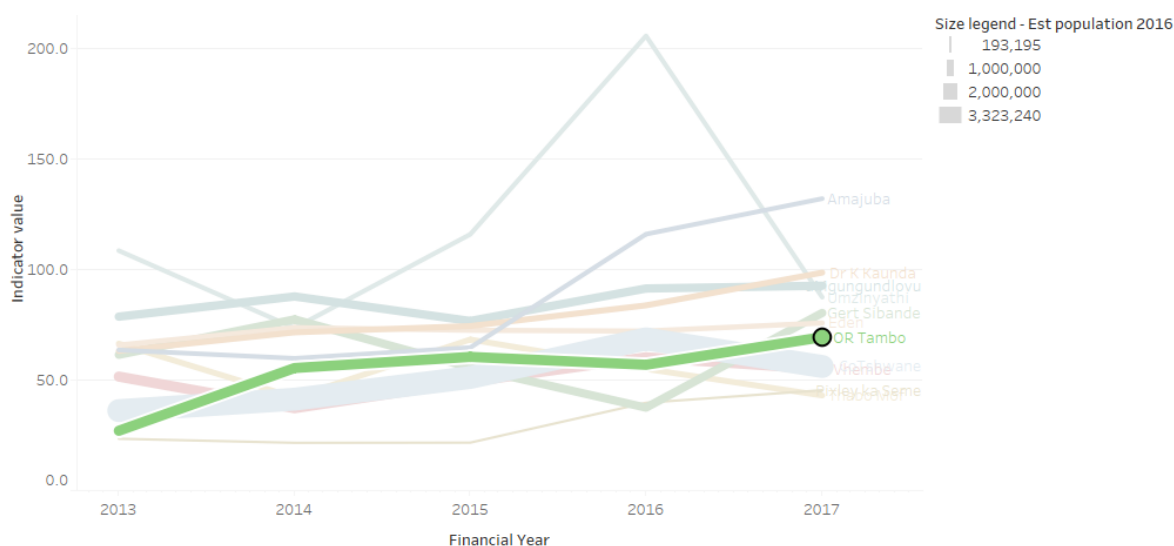
**Figure 6: Diarrhoea with dehydration under 5. OR Tambo compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
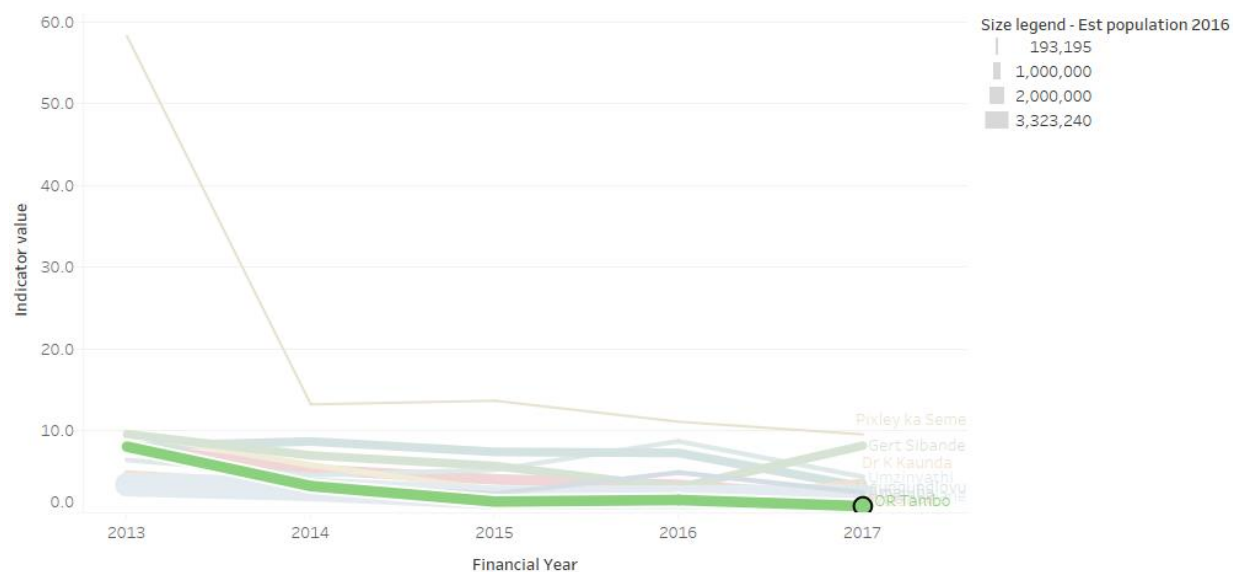


**KEY OBSERVATIONS:**

Consistent improvement shown year on year and increase in ranking compared to other pilot districts.

**Figure 7: OHH Total visits. OR Tambo compared to other Pilot Districts (FY 2013 – FY 2017)**
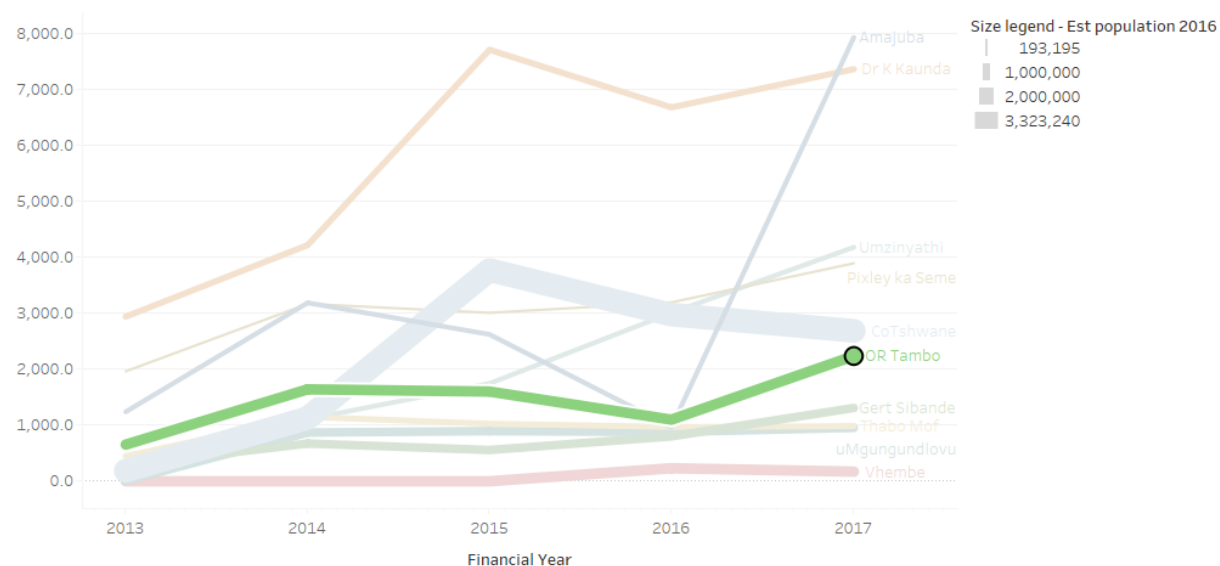


**KEY OBSERVATIONS:**

Average improvement compared to other NHI pilot districts. Qualitative data indicated that WBPHCOT's were not consistent.

### 10.5.2.3. uMgungundlovu

**Figure 8: Measles 2nd dose. uMgungundlovu compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
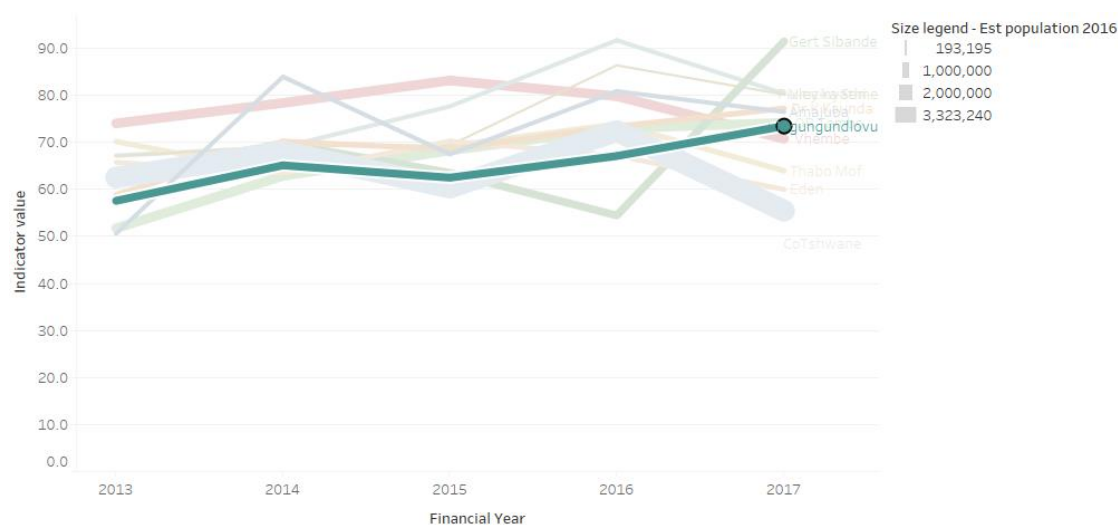


**KEY OBSERVATIONS:**

Improvement shown year on year and increase in ranking compared to other pilot districts.

**Figure 9: OHH Headcount. uMgungundlovu compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
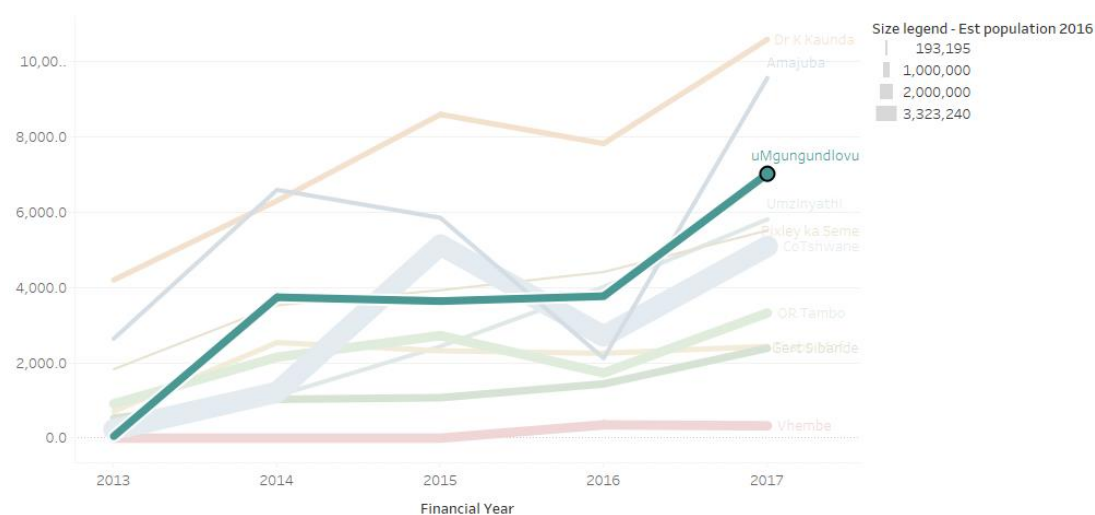


**KEY OBSERVATIONS:**

Improvement shown compared to other pilot districts. Qualitative commentary reflected the lack of capacitated WBPHCOTs.

## 10.5.2.4. Gert Sibande District

**Figure 10: Immunisation under 1 year. Gert Sibande compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



### KEY OBSERVATIONS:

Huge improvement from 2016 to 2017 and ending 2017 as the best of the pilot districts.

**Figure 11: OHH headcount total. Gert Sibande compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



### KEY OBSERVATIONS:

Not sufficient improvement and a drop in the rank for this indicator. Qualitative data reflects the WBPHCOT's not being a success as it was difficult to recruit and keep staff.

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018
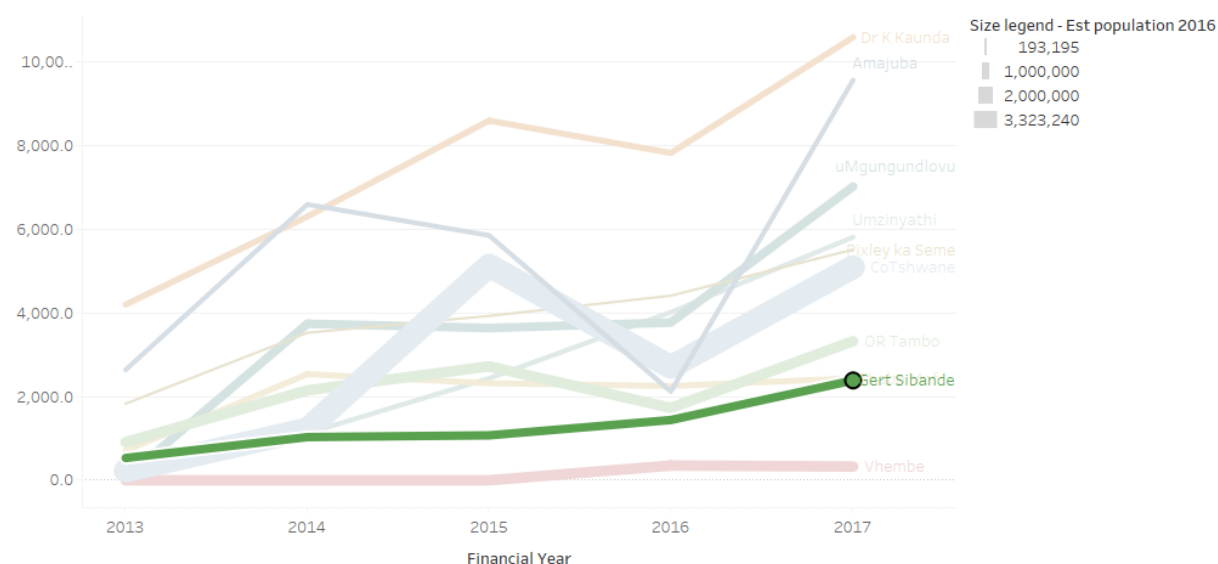
**Figure 12:School learner referred for suspected TB. Gert Sibande compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Good improvement ending '17 as the 2$^{nd}$ best pilot.

## 10.5.2.5.    Amajuba District

**Figure 13: Antenatal first visit before 20 weeks. Amajuba compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
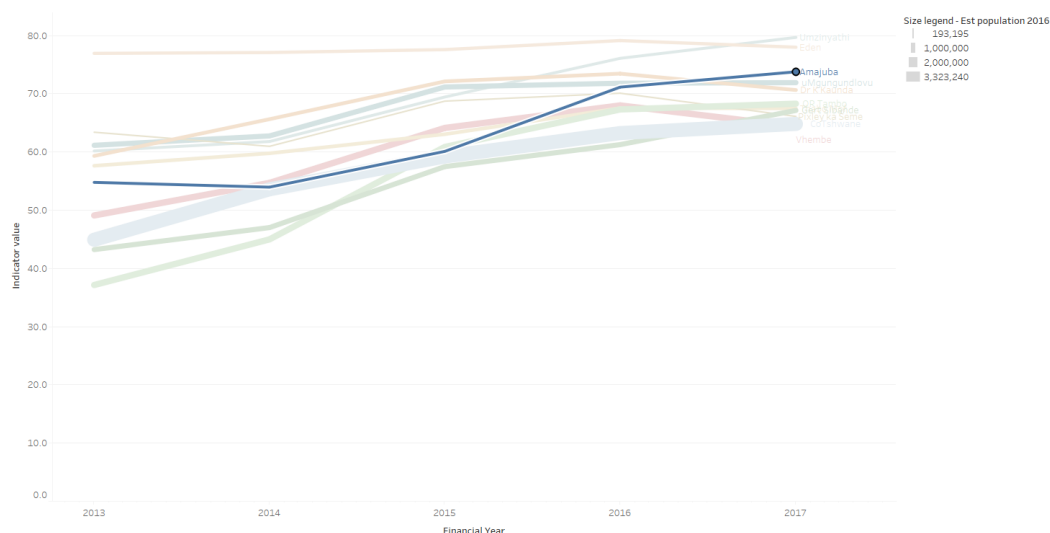


**KEY OBSERVATIONS:**

An improvement in this indicator however WBPHCOT's need to follow up to ensure better referral and adherence.

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

**Figure 14: HIV Positive on IPT. Amajuba compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

A perceived increase in 2015 however a decrease in 2016 and 2017

**Figure 15: Immunisation under 1 year. Amajuba compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
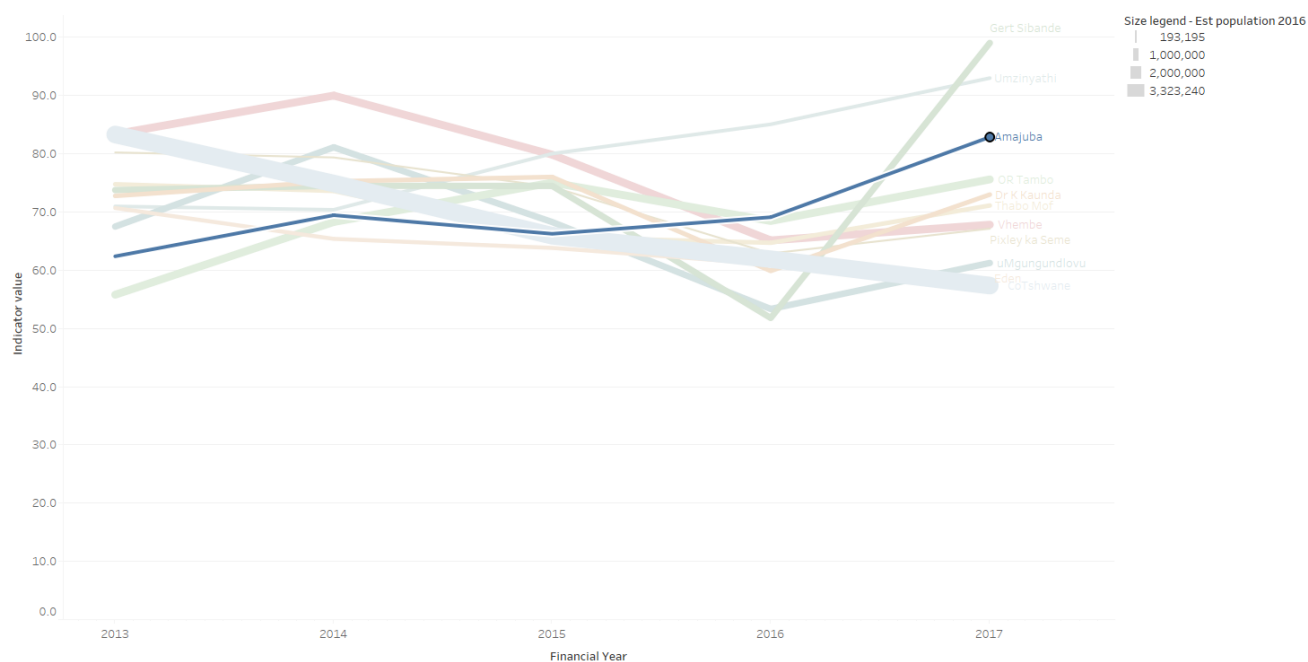


**KEY OBSERVATIONS:**

An increase with the district ending 2017 as 3rd best of the pilots.

**Figure 16: OHH Total visits. Amajuba compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Huge improvement from 2016 to 2017 and ending 2017 as the best of the pilot districts,

## 10.5.2.6. Vhembe District

**Figure 17: Diarrhoea with dehydration under 5. Vhembe compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

There was an improvement in this indicator with the district ending 2017, $2^{nd}$ best of the pilots.

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

**Figure 18: Immunisation under 1. Vhembe compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

There was sharp decrease in the performance of this indicator. Qualitative information revealed the lack of DCST's being functional and the speculation that they need to be dismantled and a new solution found. This is potentially problematic because with poor immunisation coverage, there is a higher risk for poor child health- DCSTs will then be critical to ensure child mortality does not increase.

**Figure 19: OHH follow up rate. Vhembe compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

A large improvement from 2015 to 2017 with the district ending 2017 as the highest of the pilots.

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## 10.5.2.7.    Dr K Kaunda District

**Figure 20: Cervical cancer screening over 30. Dr K Kaunda compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

There was an improvement in this indicator with the district ending 2017, ranked the 3rd best of the pilots

**Figure 21:OHH Total visits. Dr K Kaunda compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
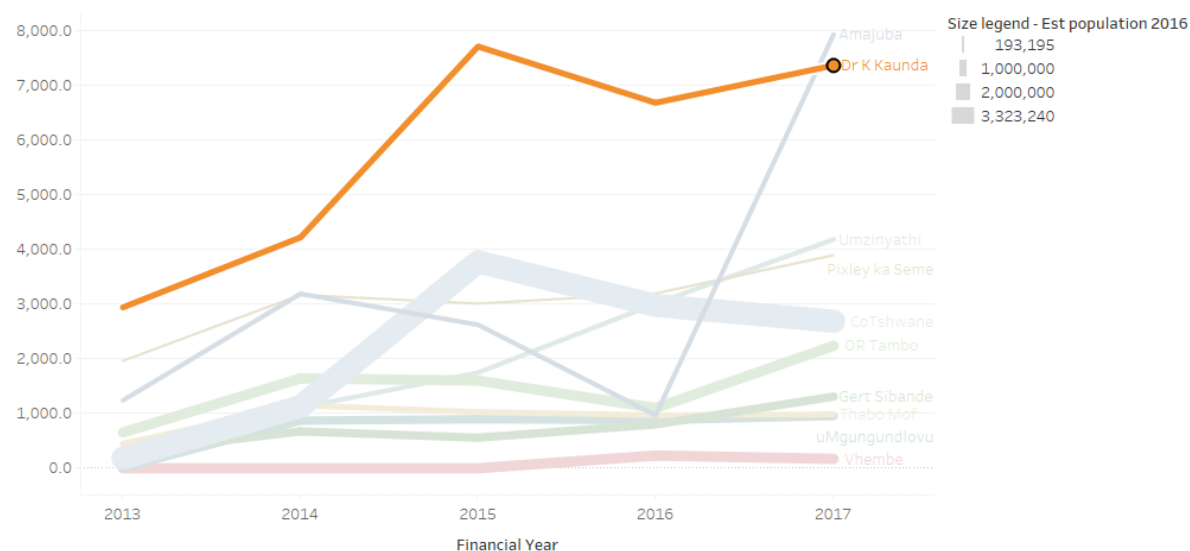


**KEY OBSERVATIONS:**

There was an improvement in this indicator with the district ending '17 as it performed 2nd best of the NHI pilot districts.

## 10.5.2.8. Eden District

**Figure 22: Antenatal first visit after 20 weeks. Eden compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
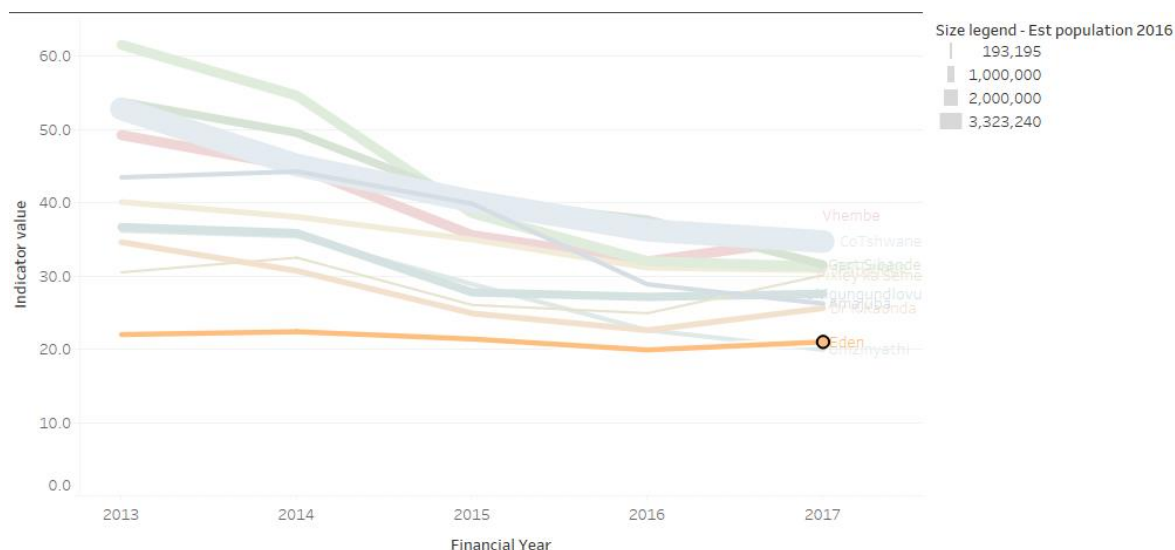


**KEY OBSERVATIONS:**

Eden District has shown a consistent trend over the period of a very high antenatal first visit before 20 weeks (almost 80%). This correlates with the antenatal first visit after 20 weeks of around 21%. This has been consistently the best in Eden when compared to other pilot districts.

**Figure 23: Tracer drugs stock outs. Eden compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Consistently the lowest stock out rates of the pilot districts.

38
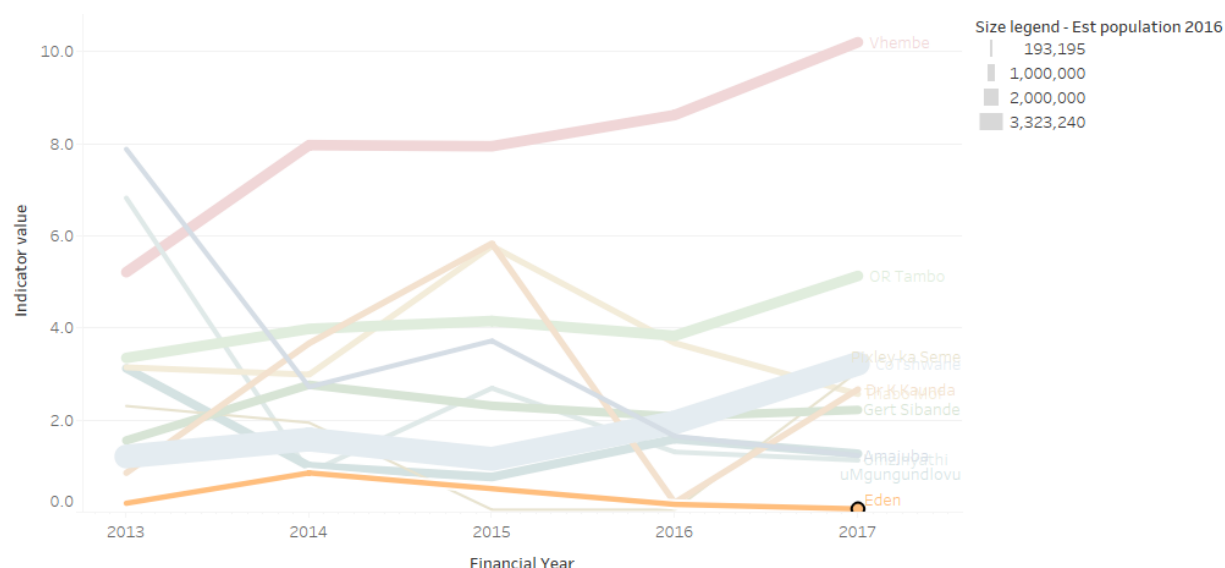
## 10.5.2.9.   Thabo Mofutsanyana District

**Figure 24: Diarrhoea with dehydration under 5 years. Thabo Mofutsanyana compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
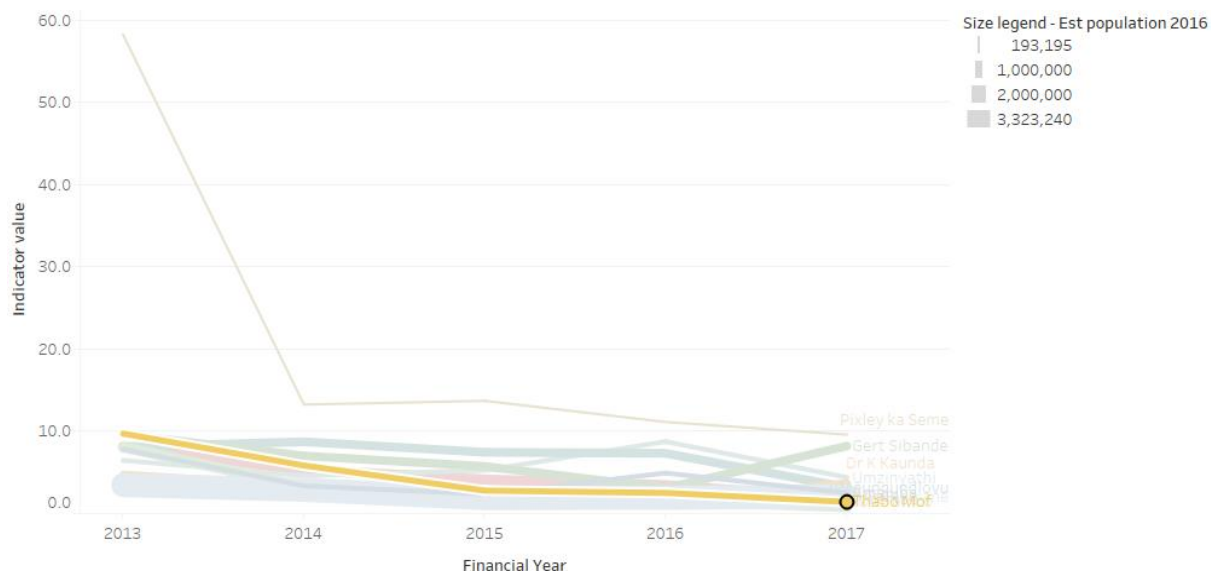


**KEY OBSERVATIONS:**

A large improvement with this indicator ending 2017 as the best pilot district.

**Figure 25: School learner screening coverage. Thabo Mofutsanyana compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
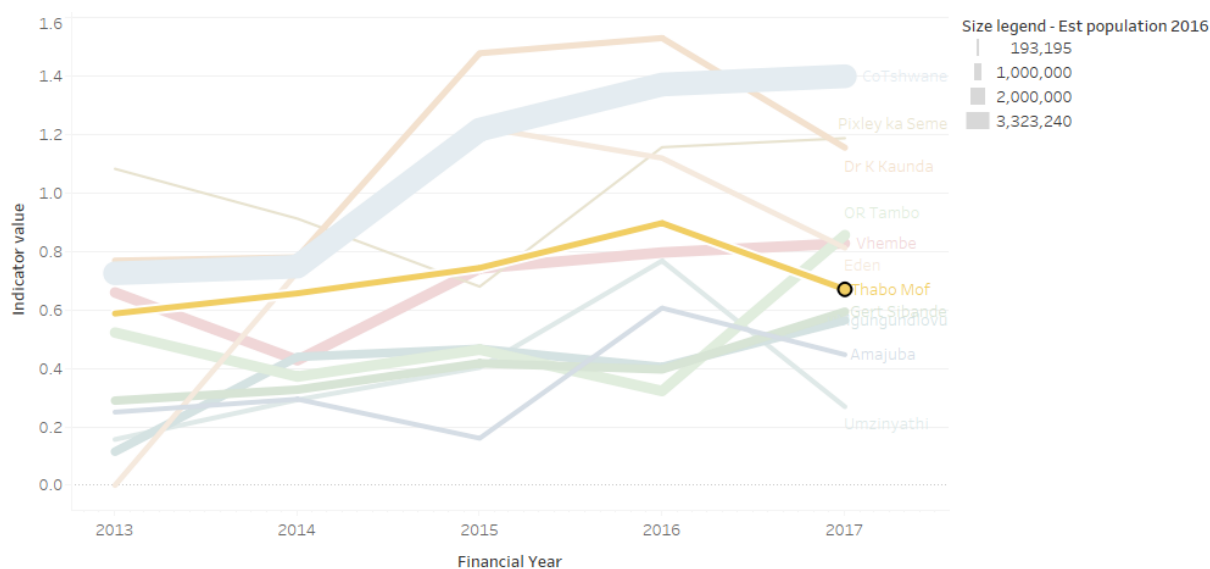


**KEY OBSERVATIONS:**

A decrease from 2016 to 2017. Qualitative data mentions the problem with not being able to reach all schools with the resources available.

## 10.5.2.10.  Pixley ka Seme District

**Figure 26: BCG Dose coverage. Pixley Ka Seme compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Best performer of the pilots and but reduced coverage.

**Figure 27: HIV positive on IPT. Pixley Ka Seme compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Consistently the lowest performer in the NHI pilot districts.

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018
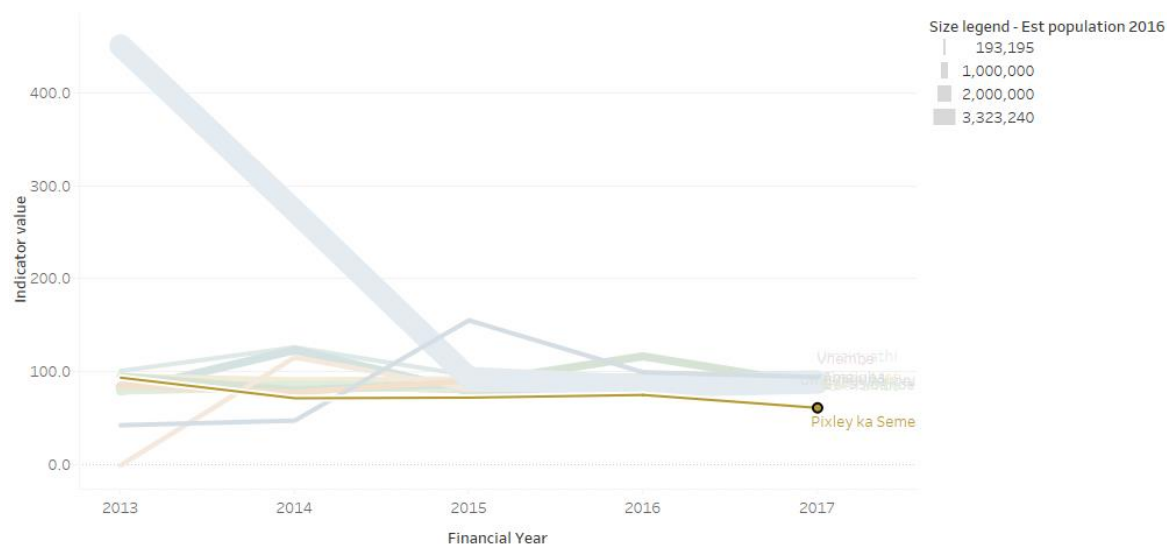
**Figure 28: OHH headcount under 5. Pixley Ka Seme compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

One of the best indicators in the pilot districts and could be the reason the BCG indicator is also performing

## 10.5.2.11. City of Tshwane District

**Figure 29: Antenatal visit before 20 weeks. City of Tshwane compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

The lowest performer of the NHI pilot districts.

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

**Figure 30: Diarrhoea with dehydration under 5 years. City of Tshwane compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



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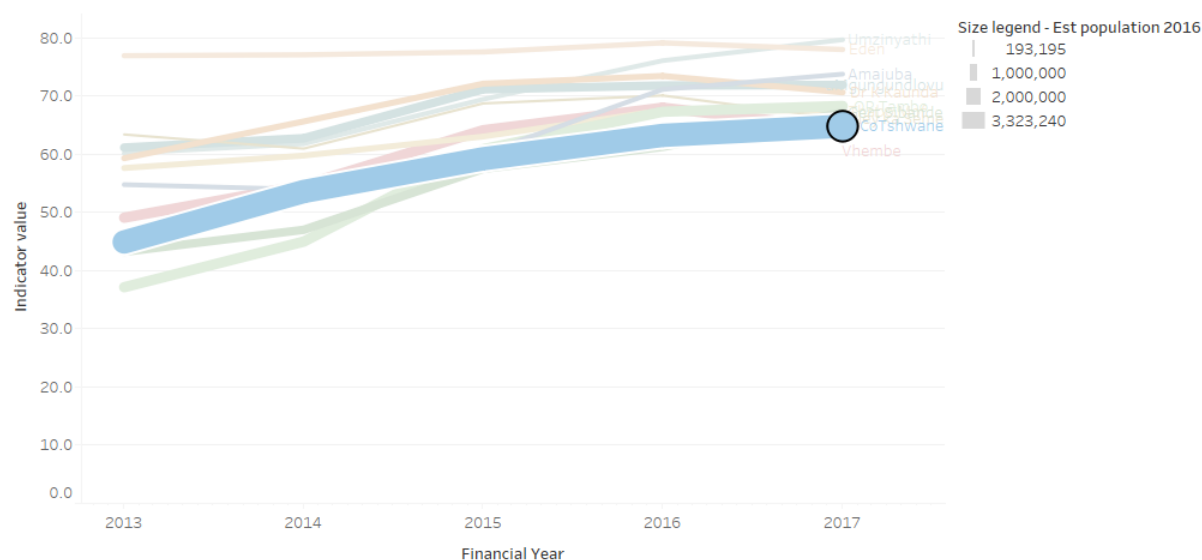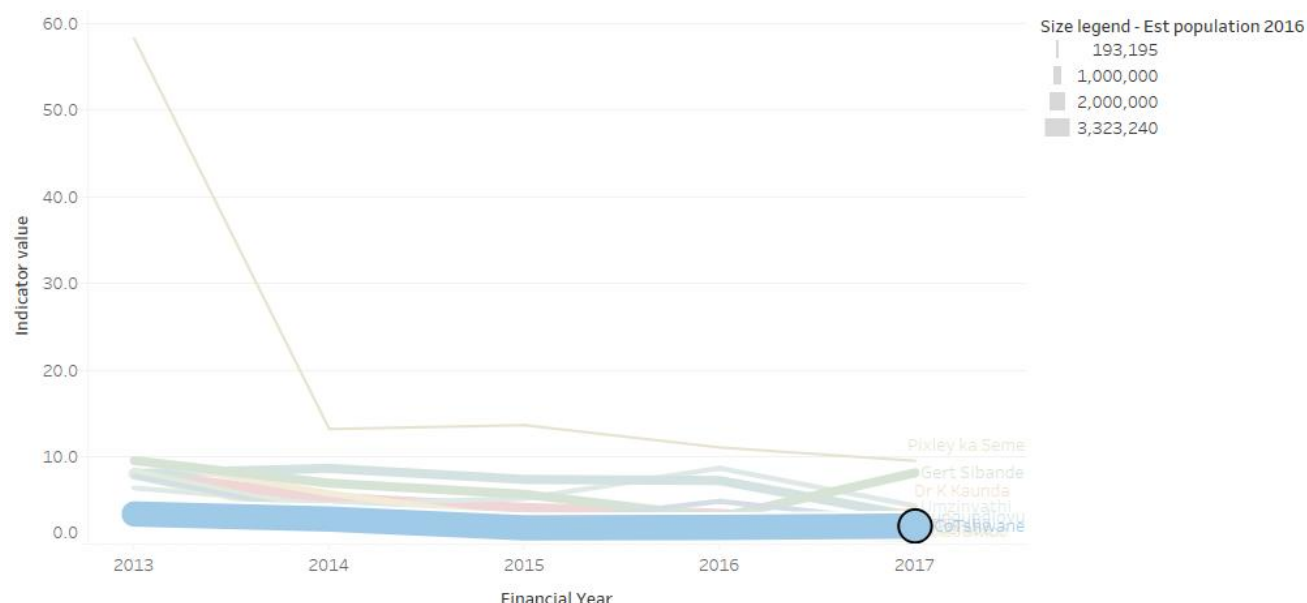
**KEY OBSERVATIONS:**

One of the best indicators for this district.

# 11. ONGOING USE OF THE DASHBOARD

The development of the dashboard tool has allowed key health indicators to be analysed and compared across the pilot districts and across non-pilot districts in the same Province. This has allowed for areas of improvement to be recognised and success stories to be used as lessons learned for other districts. The dashboards have shown that there is no consistent trend of the pilot districts performing better than non-pilot districts however there are several encouraging improvements in the key health indicators as highlighted in the graphs above.

The dashboard tool has been made available to the NDoH and will allow for ongoing further analysis and comparison between the various health indicators, the key NHI programmes and the performance of the districts. It is advised that the NDoH continue with this analysis and refine the dashboards in line with the upscaling and implementation of the NHI phase 2 initiative. This will allow for the NHI project office to proactively identify areas requiring improvement and additional assistance, as well as areas / initiatives that are showing marked improvement in line with the targets set. The dashboard is merely a reflection of the data in the DHIS however through the functionality of the Tableau software the user will be able to rapidly analyse the data in a meaningful and proactive manner making ongoing performance tracking and reporting more effective.

# 12. EFFECTIVENESS OF NHI PHASE 1

## 12.1. WARD-BASED PRIMARY HEALTHCARE OUTREACH TEAMS (WBPHCOTS)

In South Africa, WBPHCOTs refer to teams based in PHC facilities and offer integrated services to households and individuals within its catchment area (National Department of Health, 2018). The team is responsible for the provision of primary healthcare to families/households; community outreach services; preventative, promotive, curative, rehabilitative and palliative services (National Department of Health, 2018).

The teams are comprised of six to ten community health workers (CHWs), one outreach team leader (OTL) who is an enrolled nurse and one data capturer. The OTL is responsible for ensuring that the work of the WBPHCOT is linked to service delivery targets and that team members are adequately supported and supervised to meet these (National Department of Health, 2018).

The WBPHCOT intervention is currently underpinned by the Policy Framework and Strategy for Ward Based Primary Healthcare Outreach Teams 2018/19-2023/24 (National Department of Health, 2018), aimed at ensuring the successful implementation of the teams and overall success of NHI implementation in South Africa.However, this policy was not in place at the time of implementation of NHI phase 1 in 2012.

The implementation of this intervention in the NHI pilot districts is understood to be largely successful, despite experiencing difficulty in the early days of implementation. In September 2017 a reported 3519 WBPHCOTs were covering 12 816 152 households (National Department of Health, 2017).At the end of 2017/18, there were a total of 3 323 WBPHCOTs providing basic health services to children and adults (National Department of Health, 2018)The WBPHCOTs were attached to facilities in their identified catchment areas but not fully intergrated into PHC facilities, resulting in misaligment regarding the role of WBPHCOTs. Additionally, according to national stakeholders "provinces implemented the intervention as they saw fit", and as a result the standardisation of these teams was difficult to manage. Implementing effective monitoring mechanisms proved to be even more challenging .

> *"WBPHCOTs started off slowly: the programme runs differently and under different names and there was a need to audit all the teams and activities per province and category."*
>
> National Department of Health official
>
> *"There should be a tracking system for WBPHCOTs to see if they do the work."*
>
> District official

However, since its inception in 2012, the WBPHCOTs have been widely acknowleged by stakeholders interveiwed as a key link between communities and the PHC facilities across the country. WBPHCOTs have been able to extend healthcare beyond individuals who access services at facilities, with the ablility to reach people in their homes.This is evident in the common perception among stakeholders that WBPHCOTs have been successfully able to reach a large number of communities who have not been accessing healthcare services as and when needed.

> *"WBPHCOTs are an important component of PHCs and reach people who do not access the clinics. They can be very helpfuland give practical health advice."*

National Department of Health official

*"WBPHCOTs are the soldiers in the community"*

District official

The WBPHCOTs ability to link communities to facilities has been widely recognised and this intervention has been identified by national stakeholders as one of the key interventions in improving access to healthcare in the country,and will continue to be key to the successful implementation of NHI in South Africa in the next phases.

*This was key in strengthening the extension of PHC to communities. The introduction and training of CHW played a critical role in PHC."*

National Department of Health official

The perceived value of WBPHCOTs is evident in the large scale implementation across the country. A notable 75% of facility managers surveyed, reported having WBPHCOTs attached to their facilitesHowever, it is difficult to assess whether the managers fully understood the role of WBPHCOTs, particularly the teams'responsibility to refer patients to their facilities. This is because a large proportion of the facility managers who reported having WBPHCOTs (48%) also reported that they had seen a decreased patient load (62%) in their facilities since the introduction of these teams, which is not the intention of implementing WBPHCOTs. The decreased patient load could be due to the fact that the WBPHCOTs are able to deal with some of the patients, however it is more likely that the referral and follow up is not tightly governed and monitored.

While WBPHCOTs are recognised as playing a vital role in promoting access to care among communities, it is evident that there is room for increased provision of healthcare services at the community level.There is an apparent mismatch between the teams' intended role and community expectations. The teams are seen to have limited capabilites by communities, as they are not able to provide medicines to them .This was not the intention of the introduction of  the WBPHCOTs in NHI phase 1 implementation as they were invisioned to provide health advice or education to communities.  Patients were asked which services they had received when they were visited by a member of an outreach team in their homes.While a minority of patients reported that they had not been visited at home before, of those visited, 28 of 54 (52%) indicated that they received advice on how to stay healthy.Figure 31 indicates that WBPHCOTs were indeed providing the intended services to communities during NHI phase 1.

**Figure 31: Services received by patients at home during household visits from outreach team members**
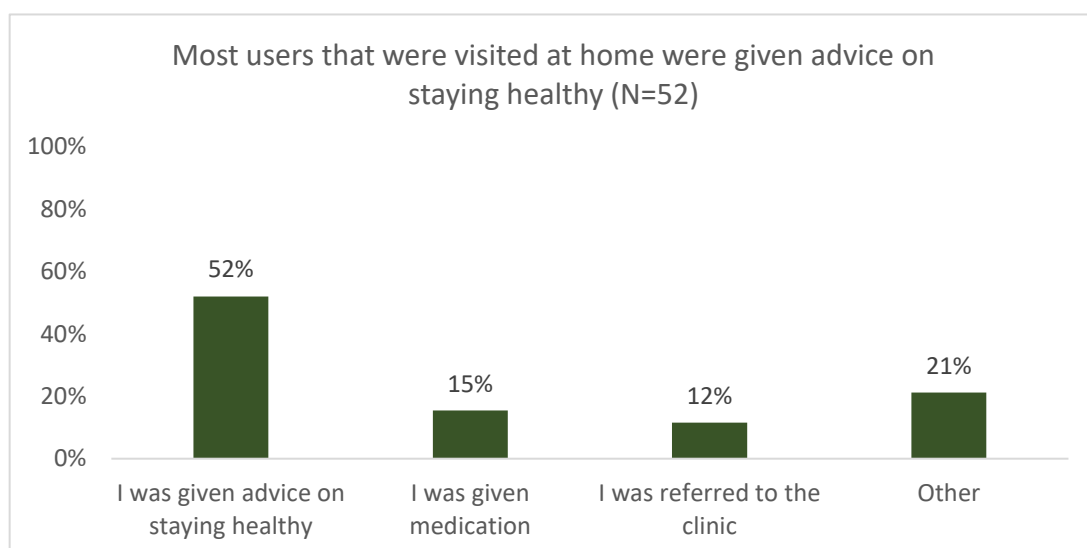
However, it is evident that patients would like to receive services that reach beyond health education. Figure 32 below specifies the variety of services which patients mentioned that they would like to receive at home.Most patients (23%) would like to receive their chronic medication during the home visits.While this may be useful to the user, it is beyond the intended scope of services of WBPHCOTs.

**Figure 32: Services patients would like to receive at home**



Users suggested a variety of services they would like to receive at home (N=158)
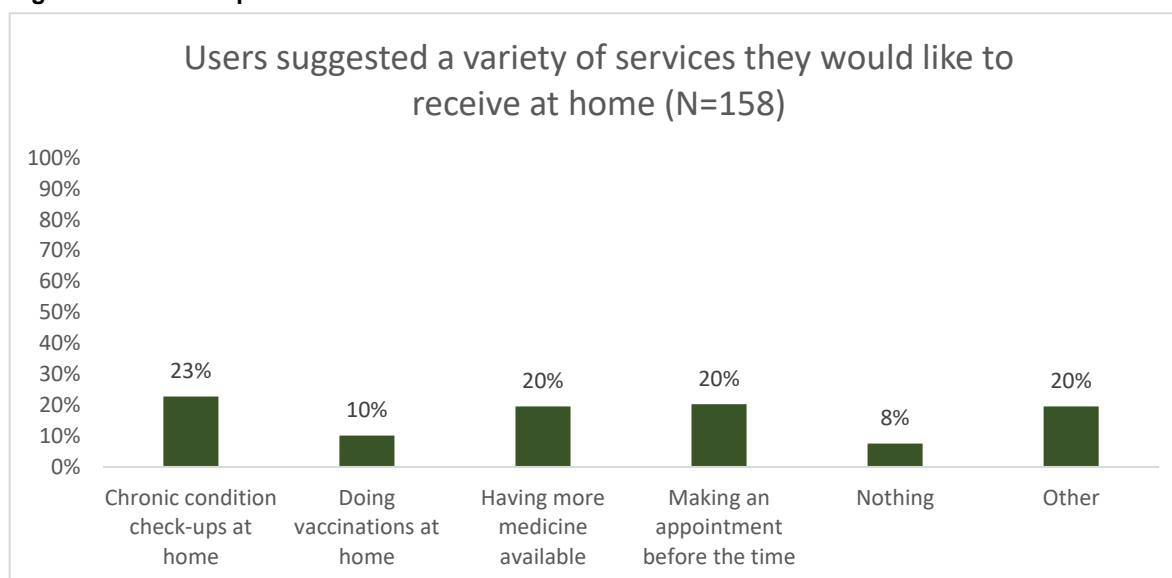
WBPHCOTs were envisioned to comprise a team CHWs lead by an OTL. However, the evaluation findings indicate that many teams did not have a OTL .District stakeholders mentioned that one of the challenges with the WBPHCOTs is that the staff composition was not always implemented as envisioned, and most often missing a OTL, which is seen to impact the delivery of quality health information to communities, and as a result create mistrust between the teams and the communities. Evidence from the literature shows that outreach programmes without community buy-in have little to no impact (Glenton, 2013) and therefore, it is critical that the WBPHCOTs are trusted by the community and viewed as skilled healthcare professionals, capable of providing adequate health advice and services.

Good management is a critical component for a successful HR dependent intervention. One of the main challenges in the introduction of WBPHCOTs has been the lack of management of these teams at the district level or the lack of clarity regarding whom the teams report to. Stakeholders at provincial and district levels mentioned that the unclear line of reporting for WBPHCOTs adversely affected their success. Some members of the WBPHCOTs also reported that there was confusion with regards to their line of reporting. The WBPHCOT members mentioned that they reported to both the facility manager at the facility they were attached to and a manager at the district office. This caused confusion for the team members and made them feel that they were consistently duplicating efforts.

Role clarification is a critical component to ensure motivation among staff, particularly in the implementation of community outreach programmes. Previous studies shown uncertainty of roles among CHW has resulted in the compromised success of outreach programmes (Perry, 2012). Role clarification is also essential for consistent and effective governance of NHI and PHC into the future, and as such, it is clear that governance structures need attention (see *Section 13.4:Accountability*).

> *"There wasn't a specific and clear team leader. Supervision was very difficult on the ground."*
>
> Provincial Department of Health official

> *"There is no appointed manager for WBPHCOTS at the districts"*
>
> District official
>
> *"The manager at the district tells you one thing and the facility manager expects another, it becomes confusing"*
>
> WBPHCOT member

In addition to lack of management, provincial stakeholders identified the lack of resources as a challenge adversely affecting the success of WBPHCOTs. Similarly, to a study which found that CHWs are ineffective when they lack resources to complete their work (Health Communication Capacity Collaboration., 2015) the lack of resources (such as vehicles and scales) is understood by stakeholders to have negatively influenced the teams' ability to successfully undertake their jobs during NHI phase 1 implementation. This challenge was noted by all stakeholders including members of WBPHCOTs who indicated that this resulted in low morale among the teams as they felt that they were expected to support the communities yet not provided with a supportive environment to effectively discharge this mandate.

> *"WBPHCOTs/ISHP do not have vehicles or proper uniforms or mobile equipment needed to do their job"*
>
> Provincial Department of Health official

The findings suggest that the WBPHCOTs intervention is critical in the re-engineering of PHC system. If implemented correctly, WBPHCOTs have the potential to greatly improve service coverage for PHC, particularly in rural and hard-to-reach areas; to provide much needed health services or linkages to health services where appropriate. It must be noted that the challenges including lack of management and supervision, unclear roles, and lack of resources which are impacting success are not unique to South Africa and therefore there are lessons to be learned from other CHW programmes. There is a need for WBPHCOTs to be able to track referrals into facilities to assess whether they have been able to positively impact access to quality services from populations that previously would have experienced constrained access. The impact of WBPHCOTs is difficult to measure principally because the information needed to assess this, is not currently easily available thus their true value to date is unknown.

## 12.2. INTEGRATED SCHOOL HEALTH PROGRAMME (ISHP)

The aim of the ISHP intervention is to provide a range of health promotion and preventative services to school-going children particularly focused on screening of health-related barriers to learning such as vision, hearing, cognitive, and related developmental impairments (National Department of Health, 2017).

The programme is underpinned by the Integrated School Health Policy which outlines the complementary roles of each government department responsible for addressing the needs of learners with the aim of ensuring that strong school health services operate according to clear and uniform standards across the country (National Department of Health, 2013).

This intervention is implemented by NDoH in collaboration with the DBE and holds important lessons with regards to inter-departmental collaboration and coordination during implementation. National stakeholders believed that overall, there was good collaboration between the National Departments in implementing ISHP.

> *"There is an ISHP policy between DBE, NDoH and DSD to work together as partners and form a task team*

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Provincial stakeholders identified the importance of strong collaboration, although they mention the need for improvement, as the roles of the departments seems to be unclear.

*"Is it that the Department of Health should be the one providing the resources for the school health programme or should the Department of Education?"*

Provincial Department of Health official

*"Collaboration with the education department has to be strengthened"*

Provincial Department of Health official

The successful ways in which the departments have been able to collaborate should be used to inform other interventions which require strong inter-departmental collaboration, while the challenges need to be highlighted as lessons learned for these programmes. This intervention stands out as one which has the potential to be well co-ordinated with other HSS interventions. However, stakeholders felt that the value of coordination and integration between interventions has gone unrealised during NHI phase 1.

*"ISHP and WBPHCOTs work in silos, integration is needed, coordination of the information between these has to be efficient"*

Provincial Department of Health official.

*"Integrate the resources so that there is a comprehensive team every time there are school visits"*

Provincial Department of Health official.

Some stakeholders strongly believe that this intervention is successful because it has improved the lives of learners through bridging the gaps between learners and much needed health services. This perception of success is aligned with the intended objectives of this intervention.

"*ISHP - takes services directly to learners*"

National Department of Health official

*"Overall it was very successful"*

Provincial Department of Health official.

*"School health programme was also good programme"*

Provincial Department of Health official.

While these stakeholder's perception is that the intervention has been successful, there have been some notable challenges which are believed to have hindered this intervention full potential. National stakeholders are mindful of the challenges in implementing this intervention, stating "the policy is good on paper, but we were not smart in implementation."

ISHP has been particularly successful in screening a vast number of learners for health-related learning barriers including: vision, hearing screening. At the end of 2017/2018 a cumulative total of 4 339 875 learners have been screened through the ISHP since 2012 (National Department of Health, 2018). Moreover, from the learners who have been screened 504 803 were identified to have various health barriers and were subsequently referred for

treatment (National Department of Health, 2018). In 2014, the NDoH and DBE launched the HPV vaccination campaign, as part of the ISHP. To date, out of 2 289 699 girls in grade 4, 1 934 635 girls have received HPV vaccines (Delany-Moretlwe S, 2018).

The success of ISHP in this regard is indisputable; however, the main challenge in implementation of this intervention has been the challenge of tracking referrals. Referrals have not been tracked efficiently, therefore the contribution of ISHP in improving health outcomes is limited to what can be observed based on incomplete data. Screening of learners does not translate to uptake of services. In the absence of an effective referral system and without strong linkages to facilities to support the screening services, few learners are able to access the much-needed services.

*"Referral systems (ISHP) are in place but the problem is closing the referral book. We do not get feedback from a clinic on the outcome of the child"*

National Department of Health official

Additional challenges with the School Health Teams (SHTs) include a shortage of HR and equipment to provide screenings at schools adequately.HR is understood to be a major challenge across stakeholder levels; sufficient human resources are critical in the implementation of this intervention and the lack thereof is evident in the inability for the programme to provide adequate coverage of schools. National stakeholders were among those who noted that the lack of SHTs meant that schools were seldom visited and thus not benefiting from the intervention.

*"Availability of staff is a problem; we only have 600 ISHP teams who are expected to reach 24 000 schools. As a result, a school is visited once in a year and there are some schools that haven't been visited yet." There must be dedicated funding and more staff to strengthen facilities and then the school health can be addressed when this is sufficient"*

National Stakeholder

*"The only issue is still the human resources - we have many schools but very little resources to meet the needs"*

Provincial Department of Health officials

While majority of facility managers interviewed reported that ISHP had been implemented in the community around their facility (78%), ISHP is intended to cover the whole district. Similarly, to other stakeholders, facility managers mentioned insufficient staff and coverage as the main challenges of this intervention.

In addition to insufficient coverage due to minimal human resources, the district stakeholders mentioned that the lack of equipment hindered the team's ability to complete required tasks at schools. Vehicles were mentioned as the main challenge with many teams not having adequate transportation to travel around the district. This was supported by facility managers, who mentioned vehicle procurement as one of the challenges experienced during implementation.

*""There were no vehicles provided to transport patients…lack of vehicles makes referral system poor"*

District official

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

> *"There is a severe problem of theft so computers, phones and vehicles are stolen and not replaced"*
>
> District official

National stakeholders were well aware of the challenges in relation to lack of resources during implementation and endeavoured to obtain additional funding to increase the number of vehicles in districts to support the successful implementation of ISHP.

> *"Initially, ISHP was implemented with existing resources, however once the challenges became evident, we worked to more funding and we got funding from European Union (EU) which allowed us to purchase 77 additional mobiles for oral health services, PHC services optometry services."*
>
> National Stakeholder

Figure 33: Facility managers perception of impact of ISHP on the wellbeing of childrenbelow indicates that most facility managers (61%) who reported implementation of ISHP believed that ISHP has increased the wellbeing of children in communities. The minority of facility managers surveyed (17%) reported that there has been no change in the wellbeing of school going children in their community, and a similar number reported that they did not know what had been the impact of the wellbeing of school going children in relation to the implementation of this intervention.

**Figure 33: Facility managers perception of impact of ISHP on the wellbeing of children**



Most managers believe that ISHP has increased the overall well-being of children (N=46)

- Improved general well-being of school-going children: 61%
- No change in well-being of school-going children: 17%
- Don't know: 22%
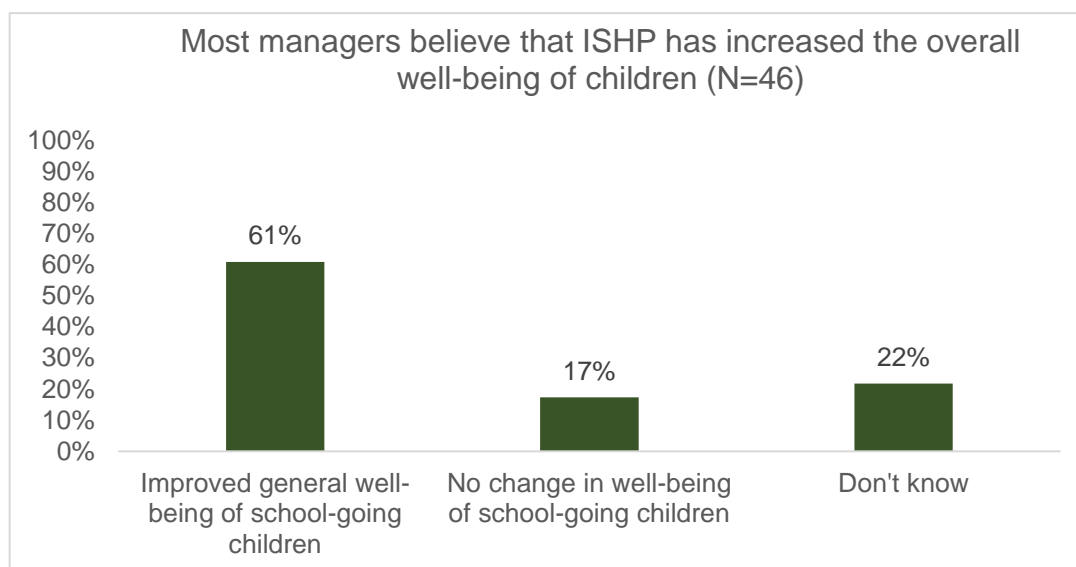
Figure 34 below indicates a decrease in uMzinyathi District from 2016 to 2017 for the school learner screening coverage indicator. Qualitative information indicated that certain areas in the district do not have functioning ISHP's.

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**Figure 34: School learner screening coverage indicator, pilot districts**
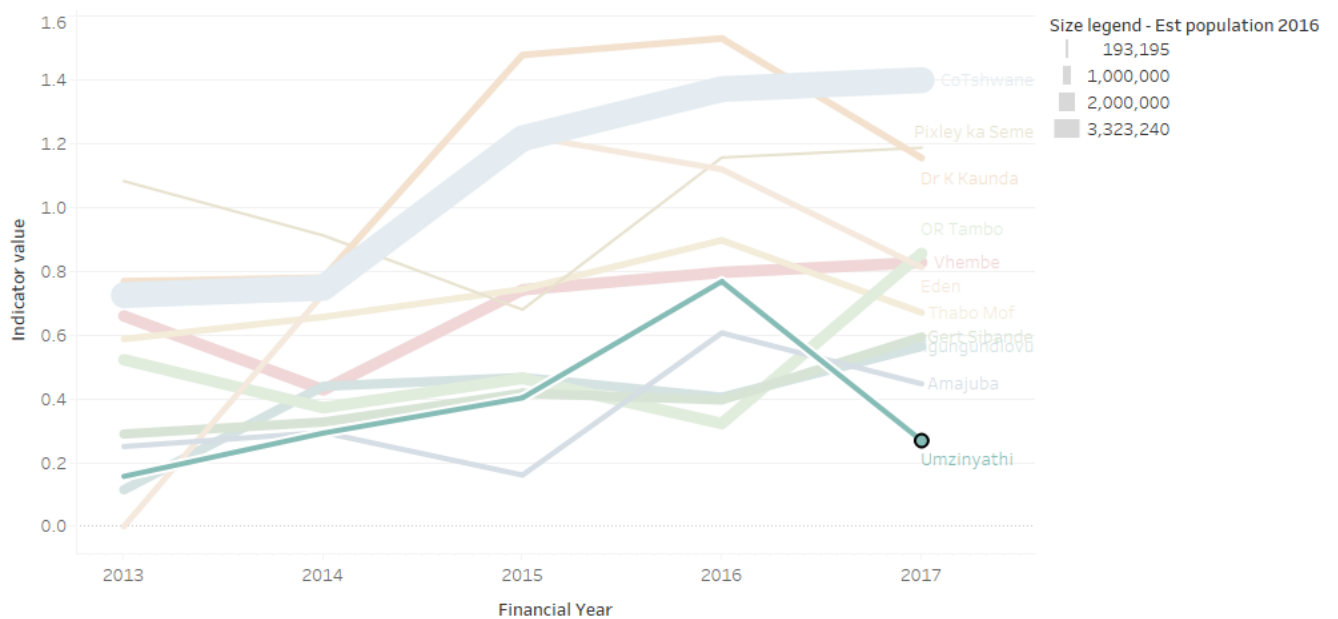
## 12.3. GENERAL PRACTITIONER (GP) CONTRACTING

HRH forms an important component of a well-functioning health system. The lack inequitable distribution human resources within the dual health system has been an ongoing challenge in South Africa. Historically, GPs have not been part of the staffing composition at public PHC facilities.

The lack of GPs in the public sector has impacted the system in a number of ways. Notably, this has impacted patients' perceptions of the quality of care received at PHC facilities. The perception of low quality of care results in patients bypassing PHC facilities, which are intended to be the entry point for healthcare, and present at secondary and tertiary facilities even when they have minor ailments. (Vissera, 2015).

NDoH's future goal is that every PHC facility should have access to a medical practitioner. The NHI White Paper identifies the need to strengthen the PHC system through the introduction of different contracting mechanisms with the aim of improving access and quality services to communities.

> *"An essential step in strengthening PHC and ensuring integrated services at PHC-level is the contracting-in and contracting out of private health practitioners to address the health needs of the population and will be aimed not only at improving access but also at reducing the burden of disease. Contracting-in will be undertaken to reduce patient-overload in public health facilities while not depleting the numbers of salaried employees of the state. Contracting-out of PHC services will require that multi-disciplinary practices should be configured into horizontal networks that are contracted through the Contracting Unit for PHC (CUPs)."*
>
> (National Department of Health, 2017)

The contracting of GPs was introduced in 2012 as part of NHI phase 1 implementation and at the end of 2017/2018 330 GPs had been contracted (National Department of Health, 2018). GP contracting has been identified by stakeholders as one of the most important interventions to ensure HSS under the introduction of NHI in South Africa. The intended aims and objectives of contracting GPs are evidently clear and well understood among stakeholders. Stakeholders recognise that key objectives of GP contracting are to reduce over-utilisation of hospitals and to improve quality of care (and perceptions thereof) of public healthcare facilities.

> *This intervention was introduced to try and get GPs into PHC so that South Africans could have confidence in public health facilities"*
>
> National Department of Health

To a large extent, stakeholders believe that these objectives have been met through the implementation of this intervention.

> *"There was a shortage of the doctors, the introduction of the doctors alleviated that. There were a few clinicians, and large numbers of patients"*
>
> District official
>
> *"We are seeing reduction of patients referred coming to OPDs- GP contracting help with this"*
>
> "Provincial Department of Health official"

Facility managers who had identified that there was a contracted GP in their facility were asked whether or not the quality of care had improved as a result of this. Of the 35 facility managers who were identified that they had a contracted GP, 23 (68%) indicated that the quality of care had indeed improved in their facility

Interestingly, there seems to be the perception that contracting of private GPs highlights the strengths of the private healthcare sector and may result in some patients preferring to seek out private healthcare services over public sector healthcare. However, this perception was only evident among national stakeholders.

> "*GP contracting basically moves people to seek private healthcare, but the need is to strengthen public healthcare*"
>
> National Stakeholder

There appears to be good alignment among stakeholders regarding this intervention however, it is apparent that there is misalignment with GPs with regards to the vision of GP contracting and resolving this is viewed as critical for sustainability. Stakeholders perceived that GP contracting intervention was unintentionally driven by monetary incentives which were introduced to try and attract GPs across to the public sector and to increase uptake of rural postings. Stakeholders believe that this could be strengthened through further engagement and extensive consultations with private sector GPs to ensure complete buy-in into the overall purpose of the intervention to improve healthcare for all.

> "*Engagements with GPs and GP associations seemed limited. There was consultation but it seemed like there was misinformation.*"
>
> National Department of Health official
>
> "*Objectives were never achieved; 2 hours is not adequate to provide quality services in facilities.*"
>
> Provincial Department of Health official
>
> "*GP's had a bad perception of government*"
>
> District official

In addition to consultations, it is evident that implementation effectiveness could also be improved through the establishment of feedback mechanisms between GPs and NDoH managers. While, the feedback mechanisms between GPs and department stakeholders appear to be have been absent, feedback mechanisms are viewed by stakeholders as essential to improving implementation and sustainability of this intervention.

The success of the implementation of this intervention appears to have been impacted by the low number of GPs contracted during Phase 1. Stakeholders report that, in some districts, there were too few GPs resulting in contracted GPs working more hours than had been contracted.

> "*Some facilities don't have doctors because there (are) not enough (contracted).*"
>
> District official

Although 58% of the 60 facility managers interviewed, reported having had a GP available to support their facility, only 56% of patients reported ever being attended to by a GP at the facility as seen in the Figure 35.

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**Figure 35: Number of patients reporting being attended by GP**

The majority of users report being attended to by a GP (N=208)

44%

56%

■ I've not been attended to by doctors in this healthcare facility

■ I've been attended to by doctors in this healthcare facility
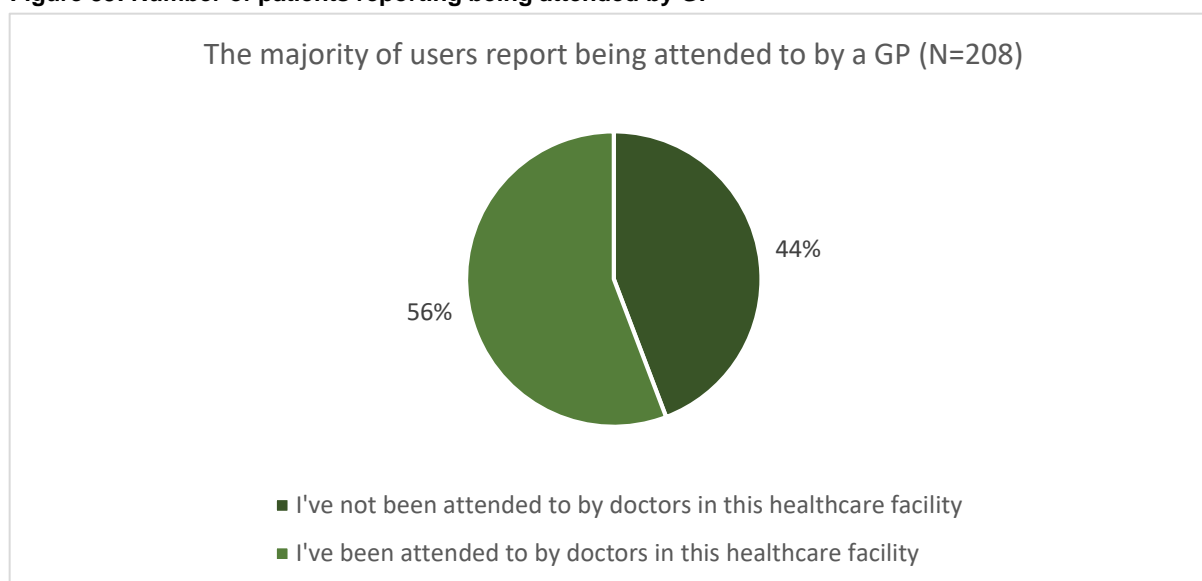
Provincial stakeholders perceive that the scalability of GP contracting is, to a large extent, dependent on better integration of GPs into PHC facilities governance structures. Moreover, provincial stakeholders believe that the allocation and management of GPs in districts would be more appropriate if it was undertaken at a provincial or district level.

*"We need to come up with an arrangement, to contract and retain GPs on a provincial level"*

Provincial Department of Health official

*"GPs are not fully integrated as part of the team"*

District official

While stakeholders generally express that this is an important intervention, GP contracting is understood to be an expensive model and poses difficulties in future sustainability. Contracted GPs were viewed as "consultants" and as such not integrated into the NDoH payment system. Also, this meant that NDoH policies were not always strictly applied to GPs, so GPs could claim much more than what had been budgeted for.

*"…Stick to the government rules so that GPs do not claim much more than what they should be (e.g. some travel claims from home to work). The Drs do not have anyone monitoring them about when they come in and leave yet they and they are being paid for working a certain number of hours. These are things that increasing the financial burden on the healthcare system."*

National Department of Health official

*"The doctors are contracted for few hours; the reasons given to us relate to the limited funding for these GPs and the necessary skills"*

Provincial Department of Health official

Overall the findings suggest the pressing need to strengthen this intervention during the next phases of implementation.

## 12.4. IDEAL CLINIC REALISATION AND MAINTENANCE (ICRM)

**Figure 36: The components of the ICRM Program**

| |
|---|
| Administration |
| Integrated Clinical Services Management |
| Medicianes, Supplies and Laboratory Services |
| Human Resources for Health |
| Support Services |
| Infrastructure |
| Health Information Management |
| Communication |
| District Health System support |
| Implementing Partners and Stakeholders |

ICRM was introduced in response to the existing insufficiencies in quality of PHC services and to lay the foundation for NHI implementation (Hunter, 2017).This intervention was introduced in South African facilities in July 2013 with the aim of improving quality of care, after a baseline audit commissioned by the NDoH in 2011 discovered that only one facility in the country met the required standards of a health facility (Hunter, 2017). An Ideal Clinic is defined as a clinic with good infrastructure, adequate staff, adequate medicine and supplies, good administrative processes, and sufficient adequate bulk supplies. It uses appropriate clinical policies, protocols and guidelines, and it harnesses partner and stakeholder support to ensure the provision of quality health services at PHC to communities (Hunter, 2017).There are 10 components of the ICRM programme Figure 36 all of which contain sub-components which specify the initiatives under each component.

The evaluation findings suggest the ICRM is an intervention that achieved considerable scale and reach during NHI Phase 1.,. At the end of 2017/2018 3434 facilities had been assessed and of these 1507 had attained ideal clinic status (National Department of Health, 2018). Of the facility managers surveyed, 51 of 60 (86%) report that ICRM is being implemented in their facility.

Moreover, the intervention is commonly understood to have significantly contributed to HSS in the last five years of implementation as a result if its initial large scale up across the country.

*"This intervention wasn't just for pilot districts it was rolled out country wide, this intervention aimed to fix PHC facility issues mentioned by GPs i.e. fixing equipment and making sure medicines were available"*

National Department of Health official

*"Quality of services improved through programmes such as ICRM"*

District official

The evaluation findings indicate that stakeholders are aware of the developments of ICRM since inception, as stakeholders understanding of the scalability of ICRM is that it has been implemented successfully to scale. However, stakeholders also acknowledge that the progress has regressed over the years and should facilities continue to regress it will ultimately have a negative impact on the ICRM projected targets.

*"Last year 77 facilities regressed (ICRM) - due to maintenance"*

National Department of Health official

Previously, PHC facilities have struggled to procure the necessary equipment to provide patients with adequate care. The success of ICRM is embedded in facilities' new-found ability to procure the required equipment for

the facilities in order to be able to improve the quality of care of patients. Stakeholders have directly linked the introduction of ICRM to the existence of well-equipped facilities.

> *"Improvements (of ICRM) were in the availability of medicines and equipment"*
>
> National Department of Health official
>
> *"There is better equipment in these clinics"*
>
> District Department of Health official
>
> *"The notion of ranking the clinic is not appropriate, rather strengthen the clinics for what they are supposed to do"*
>
> Provincial Department of Health official

While accurate, in some instances, ICRM didn't always reflect the contextual requirements or district and facility-based needs. As a result, facilities would purchase equipment irrespective of the need, in order to reach ideal clinic status.

> *"The ICRM checklist indicates that the Emergency trolley must have a Laryngoscope which is used to intubate, but a nurse can't intubate, so why did they buy certain equipment that was not needed"*
>
> District official

The ideal status of a clinic is not a permanent measurement of standards, rather, with the variations in the introduction of a new version of the ICRM manual, ideal clinic status is also bound to change if the new requirements are unmet. The manual is updated on an annual basis, including additional or different requirements from the previous version. This has resulted in some unforeseen challenges impacting the successful implementation of ICRM. Facility managers reported being demotivated by the continuous and short implementation window in which facilities had to adapt to new requirements to achieve the desired ideal clinic status.

In addition to the changing ICRM manual versions, the requirements to meet ideal clinic status did not appear to be aligned with the Office of Health Standards Compliance (OHSC) standards which were established for the inspection and certification of health facilities to ensure compliance with the norms and standards regulations (National Department of Health., 2017) thus making it even more difficult for facility managers to implement. Facility managers felt that they were duplicating efforts, while still having to manage their clinical work, often in resource constrained environments.

> *"This is very demotivating. It (ICRM) only highlighted the problems. The ideal clinic should be in line with the national core standard. It creates a problem when these standards are different and they (facility managers) get different sets of instructions."*
>
> *"Ideal clinic demotivated the staff and created huge complex systems that they had to implement."*
>
> Provincial Department of Health Officials

The implementation of ICRM is not perceived to be well aligned with existing funding constraints in the health system. Some stakeholders mentioned that limited budgets in the health system made it difficult to reach ideal clinic status because some equipment and requirements could not be procured or fulfilled due to the lack of

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> *"Ideal status should be combined with the availability of resources and there is no budget"*
>
> District Department of Health Official

The 2015/16 ICRM peer review results which demonstrated that of the 659-clinics accessed for compliance, 322 were met ideal clinics status while a similar number (337) had not reached ideal status (Hunter, 2017).

Facility Managed were asked about challenges to obtaining ideal status and it must be noted that managers' main reason for non-ideal status is funding constraints. Facility managers mentioned that there was limited funding availed to them to successfully implement a replacement and maintenance strategy in their facilities.

Obtaining ideal clinical status is understood by stakeholders to be affected by a variety of challenges. The most commonly mentioned by facility managers were human resource constraints and infrastructure. Facility managers mentioned that there were a few challenges which impeded their facilities achievement of the ideal clinic status, including the availability electricity and water, which undermined their ideal clinic status attainment. Both human resources and infrastructure are components which the ICRM programme aims to improve, however the findings suggest that without sufficient resources that are tailored to the PHC needs, ICRM will not be able to improve these components.

Ultimately, ICRM seeks to enhance patients' overall experience of the public sector PHC facilities. Of the 206 patients surveyed, at least 48% of patients felt that the conditions at facilities are good (17% reported that the facility conditions were excellent). The minority (10%) of patients reported that the conditions of the facility they had visited are poor, as shown in

Figure 37 below.

**Figure 37: Patients perceived condition of healthcare facilities**
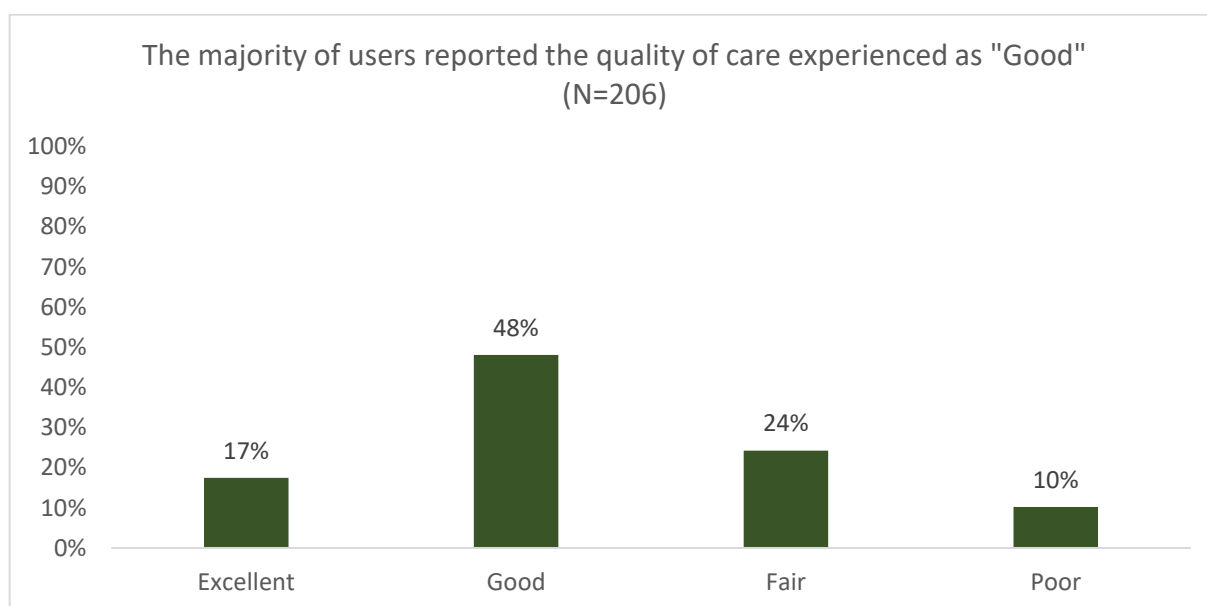
The evaluation also intended to determine patients' perceptions on which aspects of the facilities still needed improvement. Most evident to patients, is the need for infrastructure improvements at facilities.

Figure 38 below shows that 53% of patients reported the need for more consultation rooms, 50% mentioned the need for bigger waiting areas and 43% of patients desired better access for disabled and elderly people.

**Figure 38: Features which patients believe needed to be improved at facilities**
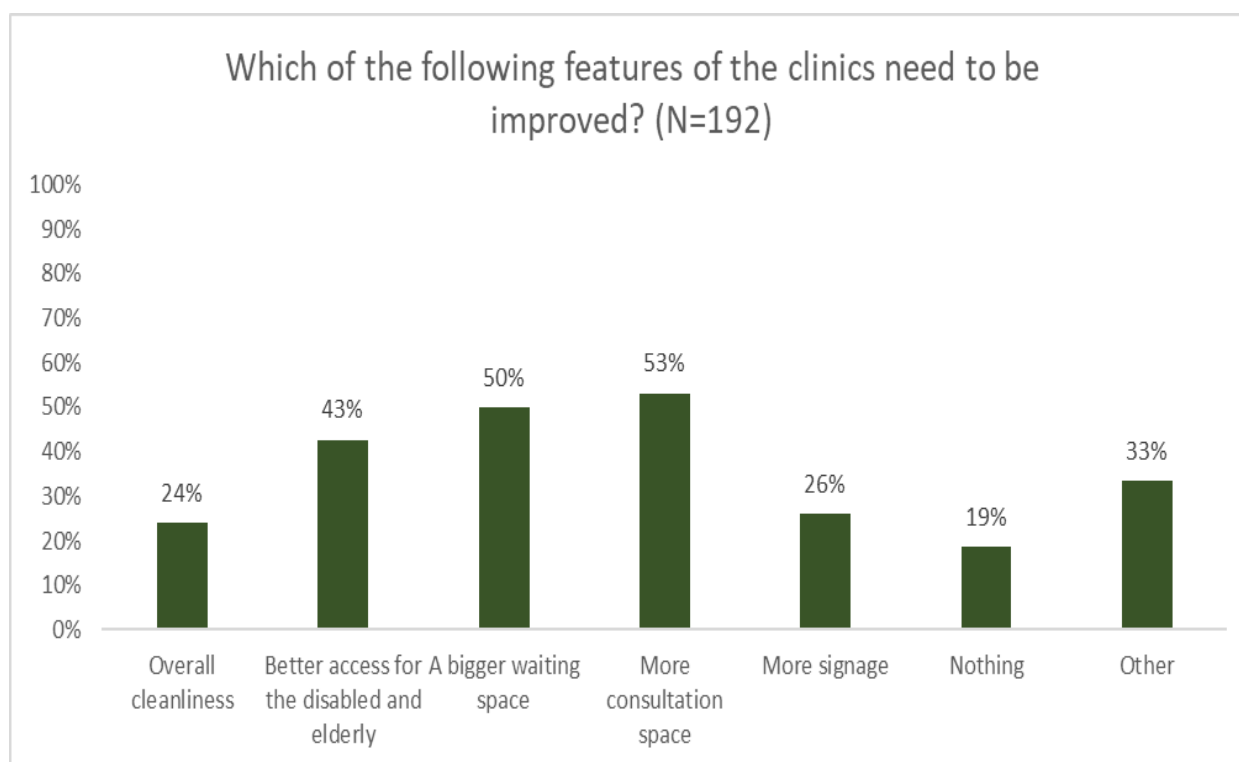


## 12.5. DISTRICT CLINICAL SPECIALIST TEAMS (DCSTS)

DCSTs were envisioned to comprise of highly specialised healthcare professionals including an obstetrician and gynaecologist; a paediatrician; a family physician; an anaesthetist; a midwife; and a professional nurse (National Department of Health, 2011). The DCSTs were expected to spend 70% of their time supporting clinical governance, 20% on clinical work and 10% on research and training (Connell, 2014).

Clinical governance encompasses the maintenance and improvement of standards for patient care at facilities (Connell, 2014). The various activities of clinical governance have been implemented to different extents in PHC facilities. The four major components of clinical governance are; role identification, improving care, improving patients' experiences and identifying good practice (Connell, 2014). The DCSTs were responsible for driving these components of clinical governance at district level. They are seen as an extension of the district management team and the team report directly to the district manager as well as the provincial DCST coordinator (Freucht, 2013).

The intention behind the introduction of DCSTs appears to be well understood by stakeholders. DCSTs are recognised by stakeholders across all levels of government as the promoters of health systems strengthening and improved clinical governance, with a specific focus on maternal, neonatal and child health services. This demonstrates alignment between the understanding of the DCSTs role by stakeholders and the intended objectives of DCSTs in NHI phase 1 implementation, as stipulated in the NHI white paper.

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> *"The focus was based on addressing infant and maternal mortality"*
>
> National Department of Health official
>
> *"They (DSCTs) assisted with clinical audits and established high risk clinics."*
>
> Provincial Department of Health official

While the intended role of the DCSTs role was clearly understood, stakeholders report that the role of DCSTs was not necessarily realised as planned. Stakeholders do not perceive that the implementation of DCSTs had the desired effect on clinical governance. National stakeholders identified that the difficulty with the introduction of these specialised teams was the unintended outcome that clinicians, who are understood to have the ability to implement clinical governance, stepped back from this because it was now thought to be designated to DCSTs.

> *"This is another unintended consequence as now, clinical governance is seen as the role of DCSTs only, it absolves clinicians of this responsibility"*
>
> National Department of Health official

This negatively affected the clinical governance improvement in facilities, particularly because the DCSTs were not implementing support at facilities in a standardised manner. Provincial stakeholders provided mixed feedback on the ability of DCSTs to provide adequate training to staff. While some felt DCSTs in their districts have been able to do so, some stakeholders felt that DCSTs were not able to adequately train staff due to the lack of sufficient time. District stakeholders also recognised that the DCSTs have not achieved desired results relating to clinical governance specifically identifying that the role of DCSTs was unclear resulting in a lack of accountability within the health system.

> *"The roles are blurred between DCSTs and facility managers, this leads to lack of accountability"*
>
> District official
>
> *"Not working well as doctors end up just doing clinical work instead of focusing on governance"*
>
> District official

DCSTs are understood to have the potential to improve alignment between the different levels of government but to date, this role has been limited. DCSTs mandate has been clinical governance; however, stakeholders reported that DCSTs were limited to identifying issues of clinical governance, reporting these issues and finally making recommendations to resolve issues in order to improve the wellbeing of patients. This was intended to be the extent of their role. From that point, it was intended that the relevant departmental authorities then take responsibility to decide whether the recommendations would be implemented or not.

> *"DCSTs are able to do the analysis and identify clinical care / governance issues make recommendations but could not implement as they had no authority."*
>
> National Department of Health official

National stakeholders believe that there was an adequate number of teams in each of the districts. This was supported by the findings from the facility managers surveyed during the evaluation; 68% of facility managers indicated having DCSTs supporting their facilities. However, underpinning the successful implementation of DCSTs is the composition of the team. In line with the findings from previous NHI status reports (National Department of Health, 2014), the evaluation findings suggest that specialists specifically linked to neonatal,

maternal, and child health outcomes were missing from these teams. Stakeholders at national level noted the challenge of having a limited number of gynaecologists, obstetricians and paediatricians in DCSTs across the country. This challenge was noted by district stakeholders too.

> *"While every district had at least seven district clinical specialist teams, there were very limited number of anaesthetists (2), obstetricians (18) and paediatricians (19)."*
>
> National Department of Health official
>
> *"District Specialists…there are only nurses and no doctors"*
>
> District official
>
> *"There is not a complete (DCST) team"*
>
> District

This perception is further supported by facility managers' who mentioned that most of the DCSTs were mostly missing the maternal, neonatal and child health practitioners as seen in

Figure 39 below.

**Figure 39: Healthcare specialists missing in DCST composition at districts, as reported by Facility Managers**
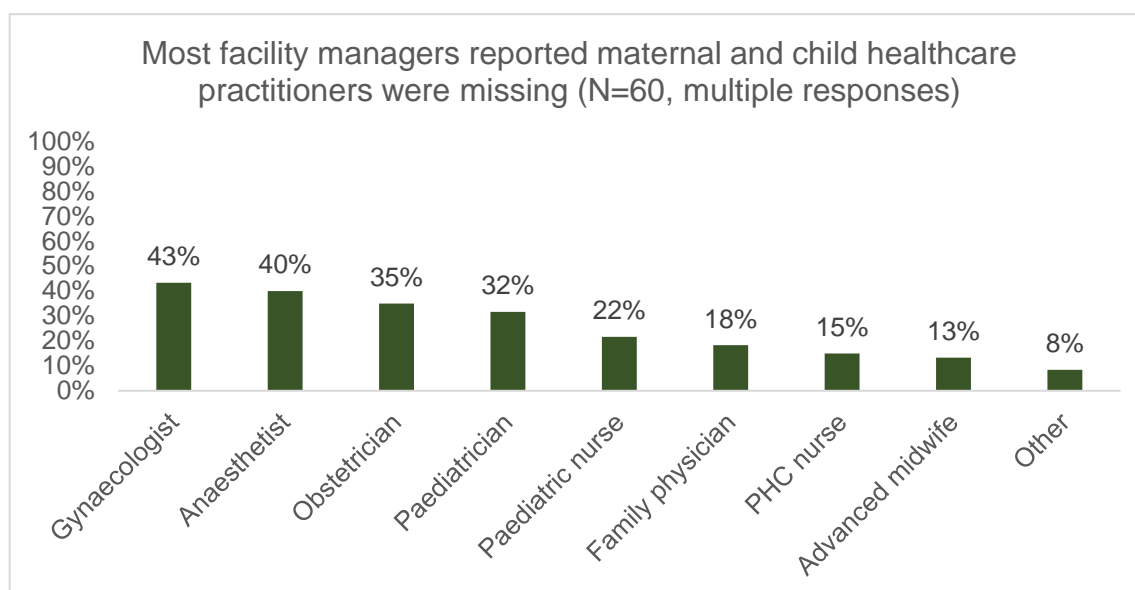


The challenge with incomplete teams, is that it made it difficult for DCSTs to provide adequate oversight over staff and more importantly successfully meet their objective to maternal, neonatal and child health outcomes in the districts. Figure 40 below shows that facility managers who reported having DCSTs supporting their facilities had varying views about whether or not having DCSTs had added value to their staff. Value, in this instance, value is the providing capacity, training and mentoring and specialist clinical services at facilities.

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**Figure 40: Facility managers belief of the extent to which DCST have added value to their facilities.**



Facility managers have varying opinions as to whether DCSTs add value to staff

| Category | Value |
|----------|-------|
| Add great value | 30% |
| Mostly add value | 28% |
| Sometimes add value | 28% |
| Do not add value | 15% |
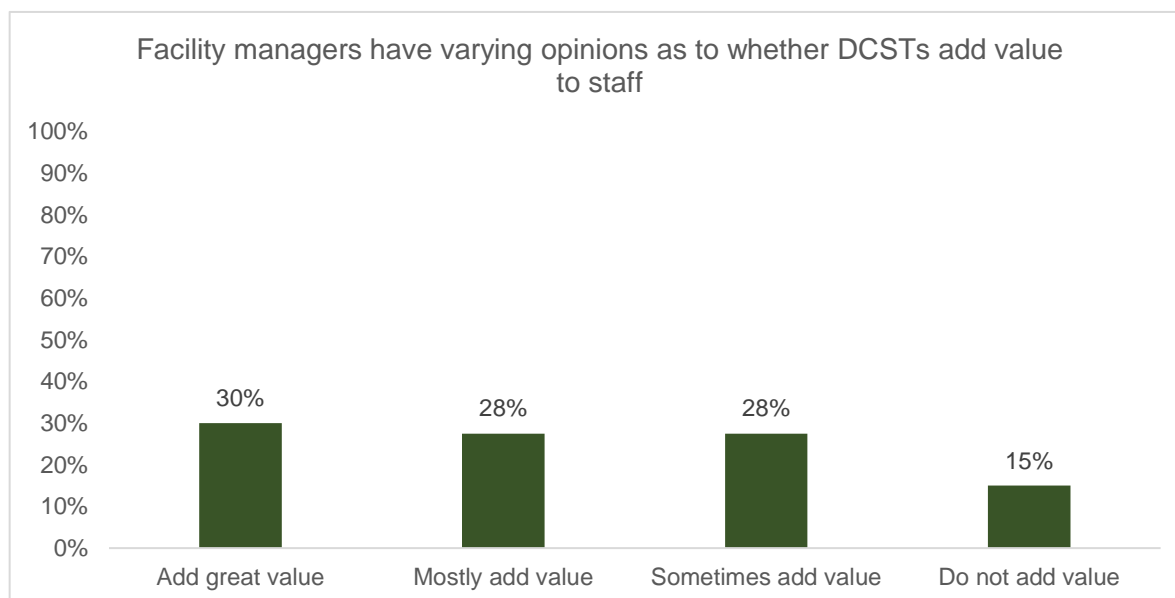
Similarly, patients' views on quality of care at facilities also varies. Some patients believe that quality of care has improved in the last five years while others report that they have seen no difference. While quality of care is influenced by many factors at facilities, one of these factors could very well be the introduction of effective and appropriately composed DCSTs to support staff and ensure that patient care and overall experience is improved.

*"I came here three weeks ago with a baby I care for and she had an emergency with blood in her diarrhoea and when I came here, they quickly helped"*

*"The quality of healthcare is always good in our clinic, but the waiting time is too much, some of the nurses who are on duty do not assist us."*

Patients at PHC facilities

Figure 41 below is for Vhembe district. It reflects a decrease in the number of immunisations under the age of 1. For this indicator Vhembe's performance has decreased compared to the other pilot sites. Qualitative information revealed the lack of DCST's being functional and the speculation that they need to be dismantled and a new solution found. This is potentially problematic because with poor immunisation coverage, there is a higher risk for poor child health- DCSTs will then be critical to ensure child mortality does not increase, through their maternal and child health focus.

**Figure 41: Immunisations under the age of 1, pilot districts**
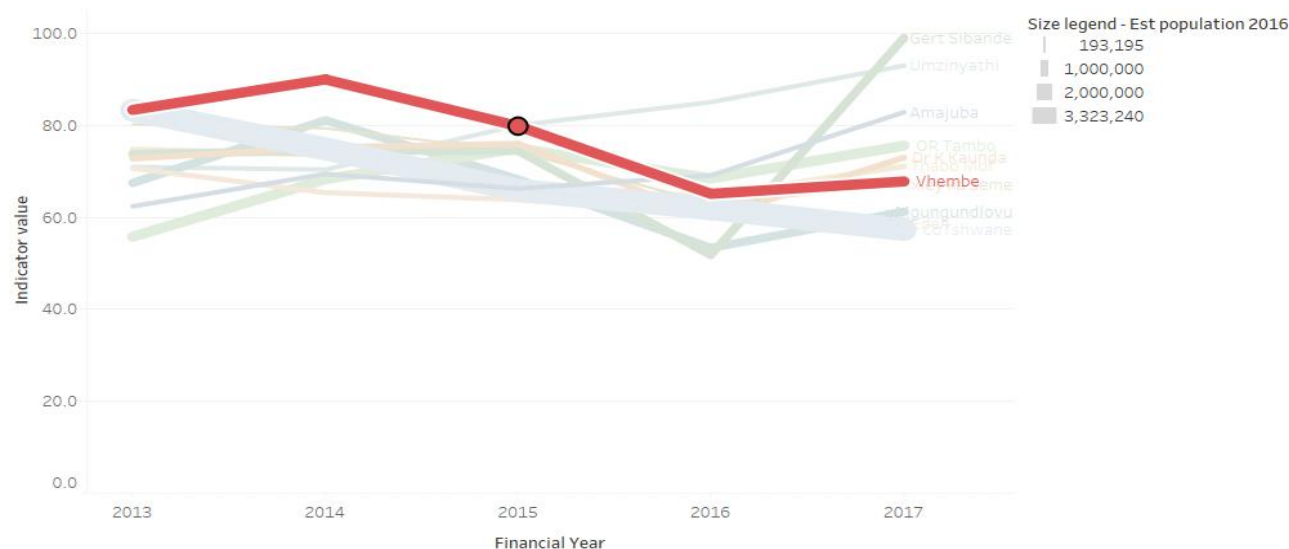


However, the scaling and sustainability of DCSTs and their contribution to the quality of patient care is influenced by affordability. These highly specialised teams are understood to be associated with high costs to the health system. Provincial stakeholders believe that the DSCTs is an expensive model and therefore the intervention will be difficult to sustain in the future. Their main concern was the lack of additional funding linked the implementation of DCSTs, these teams had to be funded from provinces' annual equitable share budget.

*"Affordability and the goals were a bit high to start with."*

Provincial Department of Health official

*"DCST is expensive and has to come from the normal (provincial) budget."*

Provincial Department of Health official

# 12.6. CENTRALISED CHRONIC MEDICINE DISPENSING AND DISTRIBUTION (CCMDD)

A model of medicines dispensing and distribution has been adopted in South Africa through the introduction of CCMDD which is led and implemented by the NDoH. CCMDD was introduced in 2012 to improve the successful distribution of medication to patients in the move towards providing UHC to all South Africans through the implementation of NHI. This intervention is made up of two components; CCMDD and Pick-Up-Points (PuPs) (National Department of Health, 2017):

These two components are envisioned to (a) improve quality of care of patients, as chronic patients will be accessing their medication from a private service provider rather than going into facilities, decreasing congestion at facilities making more staff time available and improving the staff's ability to provide quality services and (b) increase access for patients and also decrease patient waiting time as there is no need for patients to go to pick up medication at congested facilities (National Department of Health, 2014).

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During the implementation of NHI phase 1, CCMDD has been heavily focused on the provision of Antiretrovirals (ARVs), Fixed Dose Combination (FDC) in particular, to stable HIV patients receiving Antiretroviral Treatment (ART) (National Department of Health, 2017). The NDoH however, intends to expand the programme to include all stable patients with chronic conditions whose management consists of bi-annual clinical visits and check-ups in the future (National Department of Health, 2017) .

The evaluation findings suggest that CCMDD is overwhelmingly believed to be the NDoH's most successful intervention implemented during NHI phase 1. This has been identified as a flagship programme and for this reason, there are numerous valuable lessons to be learned from its implementation. These lessons will only apply to the continuation of the CCMDD programme but can be useful for the continued implementation of other interventions. Specifically, lessons around the issues of contracting private service providers which has been communicated by the NDoH to be a key component of NHI phase 2.

At the end of 2017/18, there were 2 182 422 patients enrolled on the CCMDD programme, collecting their medicines in over 855 pick-up points across the country (National Department of Health, 2018) .On balance, it is evident that CCMDD has indeed achieved its immediate aims of decongesting facilities which helps improve the availability of healthcare professionals time and as a result improving health outcomes. The success is largely reflected in the successful scale up of the programme, beyond the pilot districts and beyond the expectations of NHI phase 1 implementation plans.

*"CCMDD provides relief on patients and facilities"*

Provincial Department of Health official

*"It was successful because it reduced the workload of the clinic. The patients did not have to see a nurse at the clinic to give and advise him on the medicine"*

District Department of Health official

*"CCMDD is a huge success because we have even surpassed the targets set by national."*

Provincial Department of Health official

This is supported by the findings from the survey of facility managers, 53 out of 60 (90%) managers stated that CCMDD is being implemented in their facilities. Of these the majority of managers believe that CCMDD had greatly (65%) reduced in clinic congestion since its introduction as seen in Figure 42below.

**Figure 42: Facility managers perception on impact of CCMDD on clinic congestion**

## Most facility managers believe that CCMDD has greatly reduced in-clinic congestion (N=55)
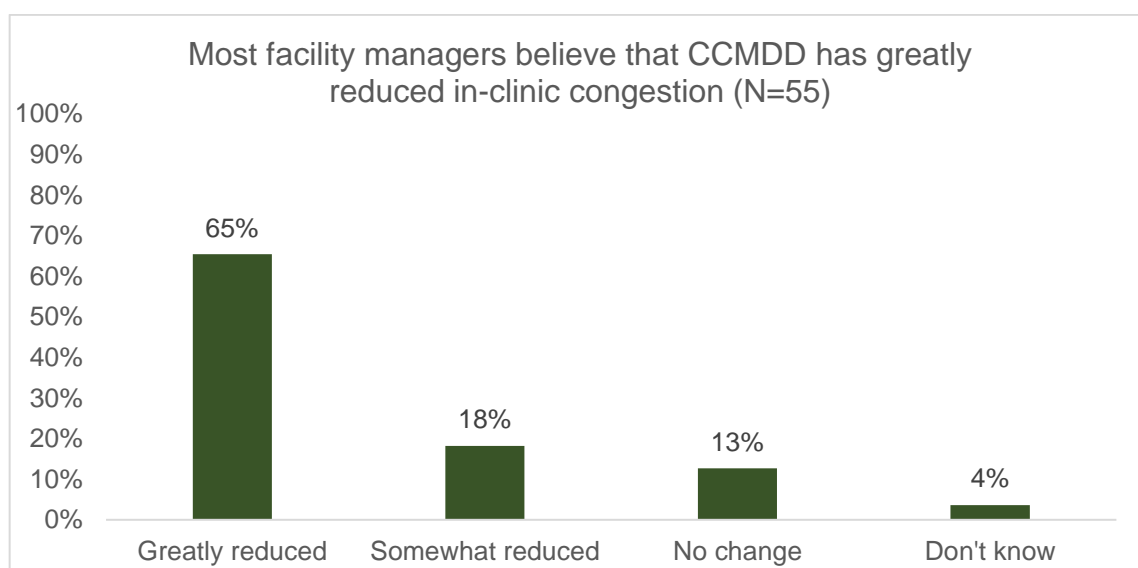


Interestingly however, most of the patients surveyed (36%) reported that they were at the facility at the time because they were collecting their chronic medication (Figure 43).

**Figure 43: Patients reason for facility visit.**

## The majority of users visited the healthcare facility to collect chronic medication (N=207)
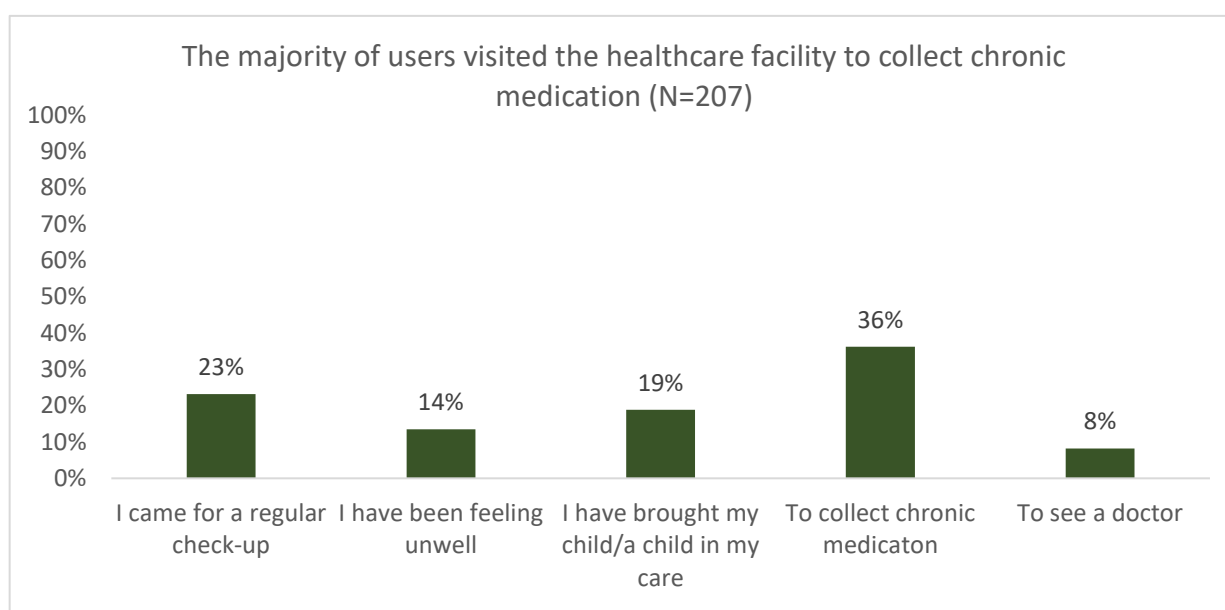


Those who reported this also questioned about their knowledge about the CCMDD programme. Majority of these patients (65%) reported not knowing that they could collect their chronic medication elsewhere (Figure 44). This is not perceived to be a concerning finding, as CCMDD would only be known to patients who would have met the criteria (stable and adherent) and as a result successfully enrolled into the programme.

**Figure 44: Are you aware of other places where you can collect your chronic medication?**

The majority of users indicated that they were unaware of other places to collect chronic medication (N=74)

Yes ■ No

35%

65%
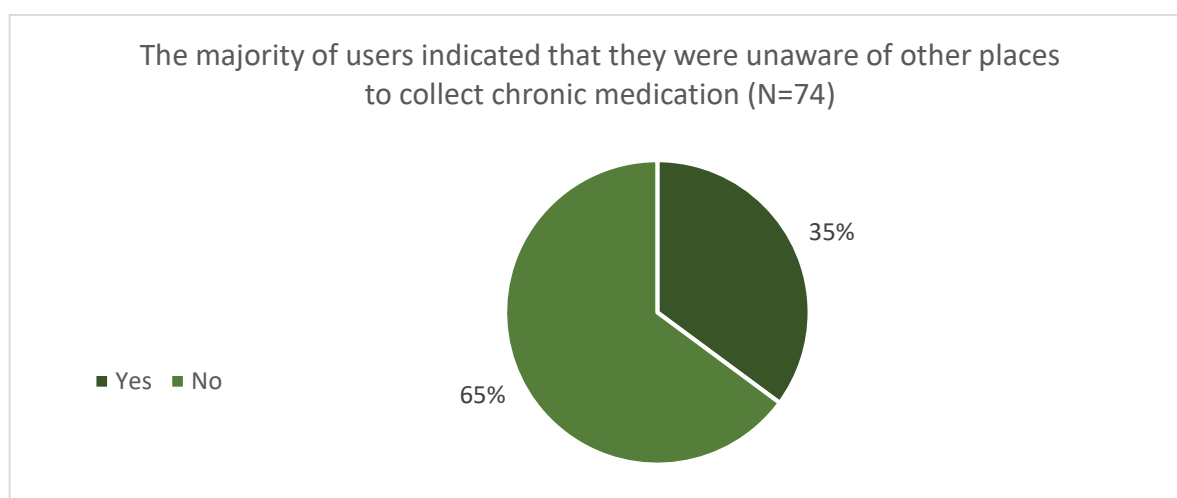
CCMDD included a component of Social Behaviour Change Communication (SBCC) in that it is reliant of patients' ability to change their healthcare behaviour. This new programme meant that chronic-stable patients were no longer required to go to facilities in order to pick up their medication, behaviour which they have been accustomed over the years. Some stakeholders mention the difficulties in encouraging patients to use the new system and emphasised how important consistent communication with patients was in this regard.

*"Some patients still go to the clinic instead of going to the pickup- points."*

Provincial Department of Health official

The noteworthy success of CCMDD is understood to be linked to the strong and visible leadership behind the programme. While it is not the view of all stakeholders, the majority of stakeholders believe that the political leadership behind CCMDD resulted in the programme being well aligned with existing national policies and strategies such as the pharmaceuticals strategy. Stakeholders also believed this intervention was well integrated with other interventions and this integration is evidenced through information sharing between CCMDD and WBPHCOTs.

*"There is political will for CCMDD (and SVS). Whenever we needed to do something it would be backed up by the Minister"*

National Department of Health official

*"CCMDD - you had to report on the number of patients you put on CCMDD and the WBPHCOTS could trace the patients that did not pick their medication"*

District official

In addition to the strong political will behind the programme, effective communication between stakeholders has been highlighted as one of the main contributors to the success of the programme. The vision of the programme is reported to have been well communicated ensuring that all relevant stakeholders had clarity about implementation. The importance of this communication is discussed further in *Section 0:*

*Clarity of* vision. Furthermore, the CCMDD programme is reported to have had good feedback mechanisms put into place, allowing for frequent and sustained communication between different departmental levels and stakeholders throughout the entire implementation period.

*"…we made feedback a priority. We had a communication strategy. It is also important for national to follow up"*

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Monitoring and evaluation of programmes is imperative, and particularly critical in the initial stages of implementation or piloting of programmes allowing the programme implementers to gain insights on programme performance, identify issues, and implement interventions to help improve the programme in future (World Health Organization, 2018).Ultimately monitoring and evaluation supports the programme to achieve its goals, moreover, this process is an important aspect of ensuring accountability to stakeholders (World Health Organization, 2018). The approaches for monitoring and evaluation should be developed at the beginning of programme design and planning. However, this process is often undermined during this critical period, to the detriment of programmes. National stakeholders emphasised the importance of having good Monitoring and Evaluation (M&E) structures and identified that this is one of the aspects that facilitated the success of CCMDD in last five years.

*"M&E is so important…we know what is working and not working."*

Like any other programme, funding is critical to the success of CCMDD. While the programme had limited donor funding initially, additional funding was requested and availed by National Treasury and donors when it became evident that the programme was growing and could not be halted as this would negatively impact its success in the future. The additional funding assisted the programme to achieve continued growth in NHI phase 1. Nevertheless, stakeholders identify that additional funding is still required for CCMDD to realise its true potential, not only for the purposes of scaling up the programme but ensuring the programmes long term sustainability.

*"(CCMDD) was scaled up…We are now in 46 districts…we are at 2% growth because of finances but we can achieve 5% growth."*

National Department of Health

Interventions such as CCMDD need to have sufficient resourcing to realise success. CCMDD comprises of various components which all need to work together. Therefore, there is a need for not only adequate but well-trained human resources to guide the implementation of the programme.

*"Training is more about fixing the aircraft as you fly. CCMDD - training of health workers, working with the private sector and working with other offices to train the workers about CCMDD as they go along."*

National Department of Health

Good quality infrastructure is perceived by stakeholders to be essential for successful implementation of CCMDD. This was identified during the initial planning stages of CCMDD while the various models of chronic medicines dispensing were being explored, including the option of using facilities as PUPs. After exploring all possible options, it is evident that the state of the infrastructure at PHC facilities at the time of implementation would hinder the programmes' success.

*"When we started off, we did an assessment of facilities for CCMDD implementation…the state of facilities indicated that the programme would need to start by dealing with infrastructure issues for the first 2 years. This is why we decided on external facilities."*

National Department of Health

Stakeholders identified that implementation of CCMDD has not been without challenges. A major challenge in the implementation of CCMDD is the apparent lack of co-ordination and communication between the private

providers and facilities. This resulted in patients' ability to wrongly access medication at both the facility and through CCMDD without any anyone noticing. In addition, there was no adequate follow up with patients who were on CCMDD and no longer presenting at the clinic to collect their chronic medication.

> *"… the patients in the clinic was marked lost to follow up at clinics even though they were getting their medication. No collaboration between CCMDD and clinic"*
>
> Provincial Department of Health

> *"They picked it (medication) up at CCMDD places and then the patients still went to the clinic and received 2x the medicine"*
>
> Provincial Department of Health

While CCMDD has been seen to be largely successful, stakeholders communicated that the effects on adherence as a result of the implementation CCMDD is difficult to establish. This is not surprising given that the criteria used to enrol patients onto the programme stipulated "stable" chronic patients which implies that these patient's adherence levels would already be high. In addition, CCMDD is not necessarily tracking patient's adherence through follow-up procedures but only based on whether they collect their medication. This means that the effect on adherence would be impossible to establish.

## 12.7. E-HEALTH

This section will outline the implementation successes and challenges related to the e-health interventions implemented as part of NHI phase 1. E-health interventions are those that employ digital solutions to assist health workers and PHC facilities to operate more efficiently, with the ultimate aim of contributing to improved access to and improved quality healthcare.

### 12.7.1.   Health Patient Registration System (HPRS)

The purpose of HPRS is to serve as an online registry of all patients using healthcare services in South Africa that can be accessed at any facility to provide health workers with patients' demographic information and their most up-to-date health records (Wolmarans, et al., 2015). Patients are registered with a unique identification number (for example their national identity number or passport number) and assigned to a host facility, which is the facility that they attend most frequently. HPRS is thus the entry point for patients into the formal health system. HPRS is thus expected to lead to more efficient patient registration and record keeping, which is then expected to contribute to better decision-making, facilitate easier access to patient data and lead to a better referral system.

Overall, the implementation of HPRS during NHI Phase 1 can be understood to have experienced both successes and challenges. At the end of 2017/2018, 2968 PHC facilities were using HPRS and there were 20 million people registered on the system (National Department of Health, 2018) Moreover, IT hardware for an additional 918 PHC facilities in 13 health districts was purchased, 4862 computers in total  (National Department of Health, 2018). However, there have been challenges that have hindered the intervention's ability to contribute to improved decision-making and referrals thus far. It should be noted, however, that the first stage of implementation has been focused largely on setting up user 'profiles' and has not been expected to contribute greatly to decision-making as yet. As the implementation of NHI continues and HPRS becomes more widely used, it will need to be further populated with routine and referral information to improve patient tracking and, in turn, contribute to improved decision-making.

The findings from the evaluation suggest that stakeholders at all levels recognise the importance of HPRS for improved patient registration and record-keeping, and the potential it has for improved decision-making. While it was reported that the initial roll-out was slow, HPRS has experienced a degree of success in the pilot districts, as evidenced by the survey results. Of the facility managers that responded to our survey (N=55), 36 (65%) believe that HPRS has contributed to improved patient registration and record keeping (Figure 45). A total of 28 respondents (51%) believe that patient waiting time has decreased as a result of HPRS.

**Figure 45: Effect of HPRS on patient registration and record keeping**
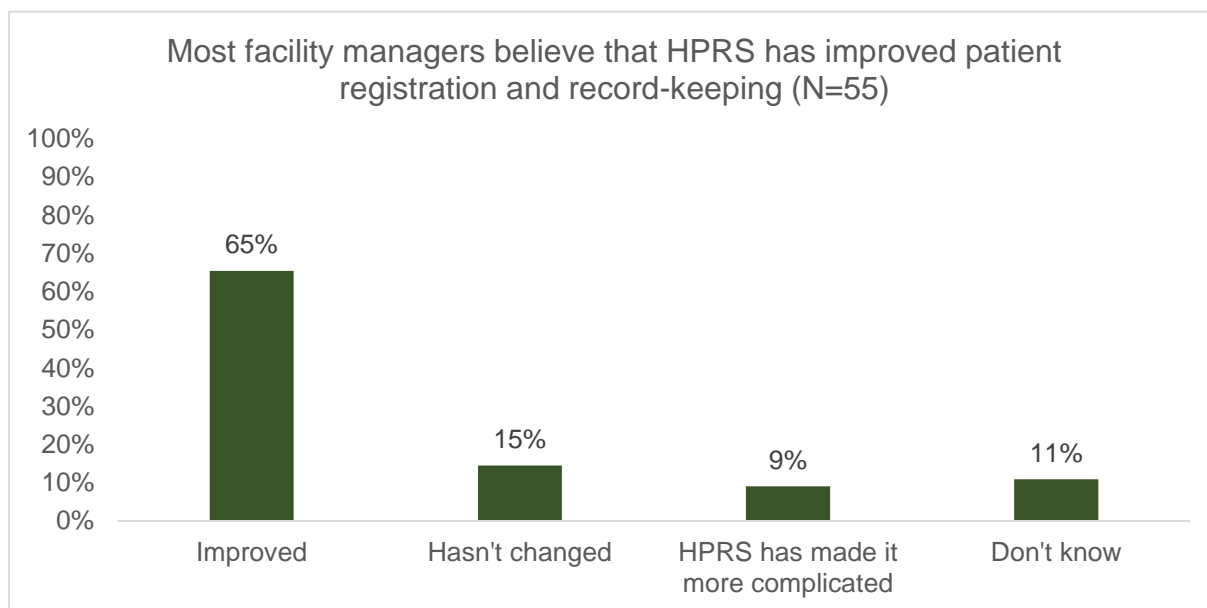


Most facility managers believe that HPRS has improved patient registration and record-keeping (N=55)

Where HPRS has been implemented with success, much of this success has been attributed to the way in which HPRS was introduced to the facilities and the communities. There are positive examples of how HPRS was communicated through an engagement model with feedback mechanisms, which created alignment between the different stakeholders involved. It was reported that facility managers have been included in the implementation on the ground to ensure customised implementation for each site, and that HPRS has been communicated to communities through open days to inform them of the new system and the need for them to bring their identity documents when visiting a healthcare facility so that they can be registered. These efforts have created a sense of ownership among the implementers and, in doing so, have generated buy-in at all levels.

*"An engagement model was approved at the outset by NHC whereby the HODs, MECs, district coordinators, HPRS coordinators and teams would all be kept informed and engaged"*

National Department of Health official

*"The feedback mechanisms were tailored per province."*

National Department of Health official

*"The HPRS has been marketed to communities to be able to bring their form of identification when vising a public health [facility]"*

District Department of Health official

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However, HPRS has not been without its challenges. One of the biggest constraints to facilities in using HPRS effectively is insufficient hardware (computers) and unreliable internet connectivity. For most effective use, it was reported that facilities would need one computer per examination room; however, this is not the case. Many stakeholders reported that there are simply not enough computers at facilities for clinic staff to use the system appropriately, and that computers are often stolen from the facilities. Furthermore, when the facilities experience issues with their computers, it was reported that these issues often take a long time to be fixed as there are too few IT support staff available to assist. Additionally, facilities frequently experience poor network connectivity, which results in the duplication of patient files. According to the facility managers that responded to the survey, the vast majority reported that network connectivity for HPRS was either completely unreliable or only somewhat reliable as seen in Figure 46.

**Figure 46: HPRS - Network connectivity reliability**

How reliable is the network connectivity required for HPRS?

| Always reliable | Somewhat reliable | Completely unreliable |
|:---:|:---:|:---:|
| 30% | 52% | 18% |
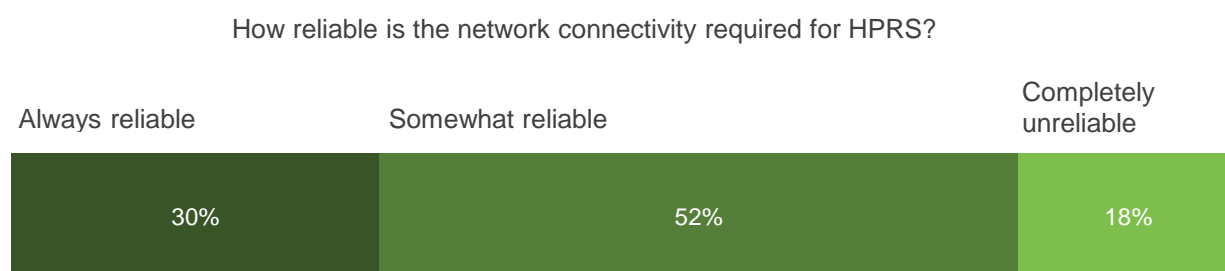
*Source: Facility Mangers Survey*

> *"The main barrier is connectivity and a lack of IT equipment and skills to implement the system"*
>
> National Department of Health official

> *"Connectivity and IT skills are a threat to the HPRS intervention. Lack of connectivity results in duplication of patient files."*
>
> Provincial Department of Health official

A related issue is that of human resources and lack of capacity. It was noted by many stakeholders that the task of registering patients frequently falls to the nurses who are often very busy and do not have the time to upload patient details to the system. It was also noted that computer literacy among clinic staff is poor and that for HPRS to be implemented effectively, facilities would need to hire admin clerks to support the clinic staff in registering patients.

> *"Had only a month to implement which was not enough to provide training to all admin staff"*
>
> Provincial Department of Health official

> *"In 24-hour CHCs, there aren't people to capture these patients."*
>
> Facility manager

Lastly, there have also been challenges associated with the lack of integration between HPRS and other e-health interventions such as MomConnect and the Stock Visibility System (SVS), as well as with the WBPHCOTs, who do not have access to HPRS yet and are often the first point of contact with patients. Stakeholders believe that through integration of HPRS with other interventions, such as WBPHCOTs, greater efficiencies can be reached and improved decision-making facilitated.

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*"The next phase would be to integrate SVS, MomConnect, HPRS and all other systems simultaneously"*

Provincial Department of Health official

*"They bought tablets for all the WBPHCOTS but it does no longer sync to the HPRS and they are no longer used and locked into a cupboard"*

District official

## 12.7.2.    MomConnect

MomConnect is an SMS-based initiative that "aims to support maternal health through the use of cell phone-based technologies integrated into maternal and child health services" (National Department of Health, 2018). The purpose of MomConnect is ultimately to prevent maternal and child deaths through targeted health promotion messages to pregnant women to improve their health and that of their infants (National Department of Health, 2018). At the end of 2017/2018 the number of pregnant women and mothers registered on MomConnect was 1 888 918, which had doubled from the previous financial year.  Moreover, a total of 818 688 pregnant women and mothers were receiving health-promotion messages at the end of 2017/2018.

MomConnect was not an official NHI pilot intervention; however, it is often discussed in conjunction with the other e-health interventions and experiences similar challenges to those outlined above. However, given that MomConnect was on the periphery to the other NHI interventions, consultations with stakeholders were not extensive and the depth of insights regarding this intervention is, therefore, limited to a few observations.

Because MomConnect is cell-phone based, there is the challenge that the patients who most need the service may not have cell phones or may experience connectivity issues, which hinders the effectiveness of the initiative. Furthermore, similar to above, it was reported that nurses often forget or are unable to register patients onto MomConnect, pointing again to the need for admin clerks to assist in this respect.

## 12.7.3.    Stock Visibility System (SVS)

A key challenge faced by the South African public health system is the unreliable availability of medicines and the occurrence of stock-outs at PHC facilities. These challenges are underpinned by poor planning and stock management due to a lack of information on the demand for certain medicines.

To address this challenge and ensure that all South Africans have access to the medicines they need, the NDoH introduced the SVS, a mobile application used in PHC clinics to monitor and report on stock availability levels for essential medicines like ARVs, TB medication and vaccines. The purpose of the SVS is to enable more informed decision-making and proactive stock management at the PHC facility level.

Using the SVS application, clinic staff are able to capture information on the availability of essential medicines at PHC facilities, which is then uploaded to a central, online repository. The data from this repository is then consolidated in real-time to improve oversight of stock availability and, consequently, improve the accuracy and efficiency of stock distribution based on demand.

The SVS is able to detect reported stock-outs at the clinic level and automatically sends early warning alerts to managers at each point in the supply chain when stock-outs are predicted, from clinic through to national level. In a similar vein, the system also alerts managers to over-stocking, which is necessary to avoid situations where

stock is lost due to expiry. These types of alerts thus enable managers to more proactively manage stock levels to avoid stock-outs as well as stock loss.

At the end of 2017/2018 SVS was being implemented in 3167 clinics and community health centres, which equated to 92% coverage (National Department of Health, 2018).The evaluation has found that, where it has been implemented as planned, the implementation of SVS has largely been a success, leading to a reduction in stock-outs and reduced pressure at facilities. Of the facility managers reporting that SVS was present at their facility (N=49), 22 (45%) reported a substantial decrease in the occurrence of stock-outs as a result of SVS, and a further 14 respondents (29%) reported a minor decrease as depicted in Figure 47 below.

**Figure 47: Change in the occurrence of stock-outs as a result of SVS**
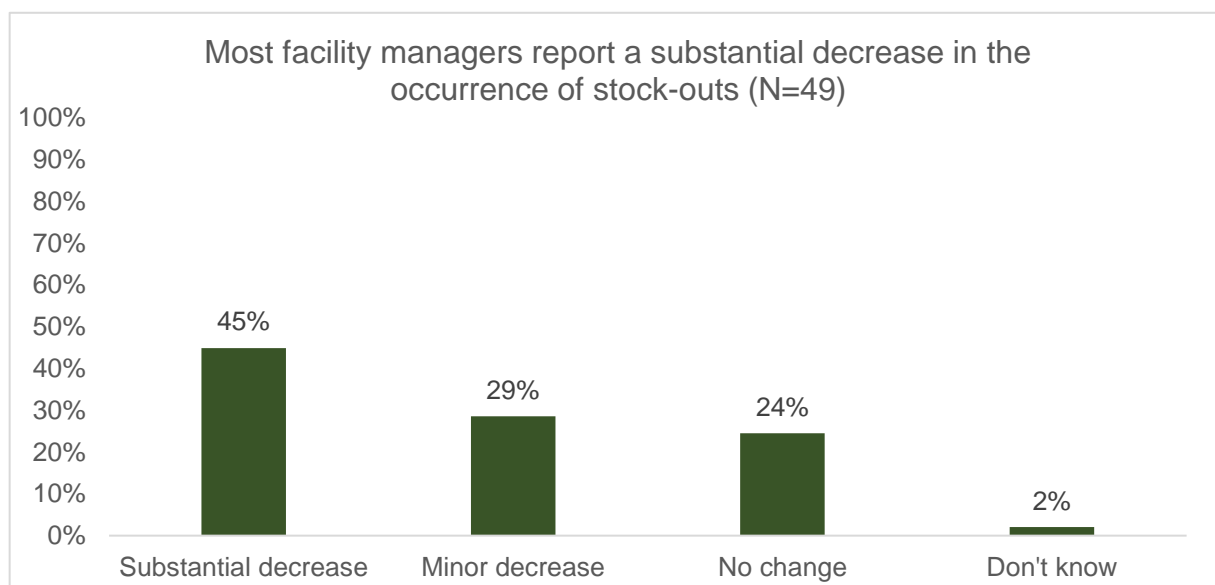


This success is echoed in the responses of the facility users (N=75), where the majority of respondents (56%) reported that they had never been told that they couldn't access medication because it was out of stock and a further 25% reported that this had not occurred often (Figure 48 below).

**Figure 48: User access to medication**
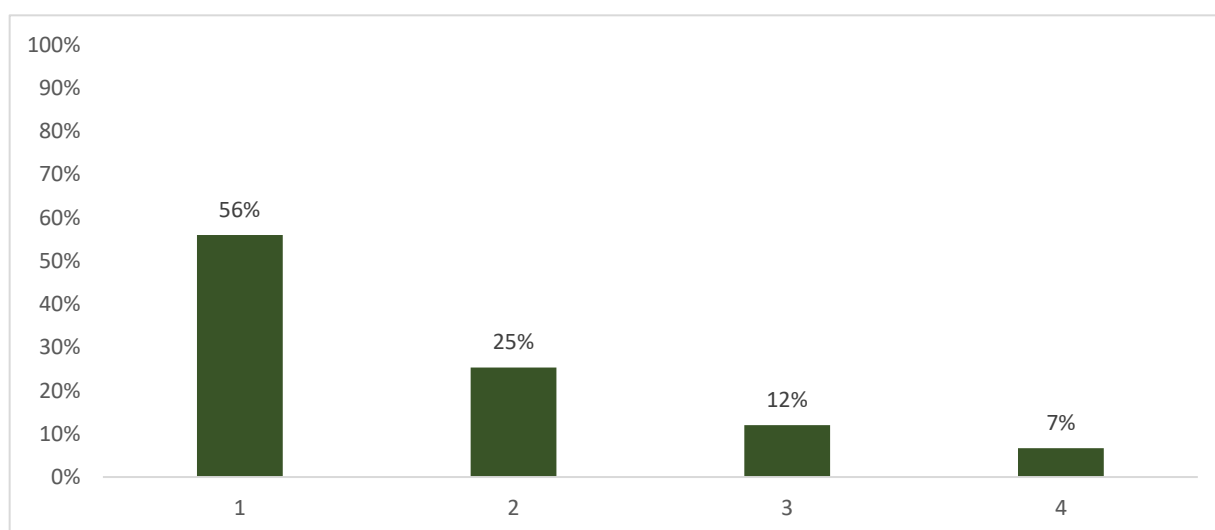
*"[SVS has] impacted quality and access positively. The facility teams have done visits and they have all come back to say stock out is no longer an issue, medicines are now available, but in 2013/2014 this was not the case, so we see improvement."*

National Department of Health official

*"What we seeing in terms of financial management, is that if there are certain medicines that shouldn't be in a facility then already there is some cost saving at PHC (SVS)."*

National Department of Health official

*"The system is good because you can track the consumption of drugs."*

District Department of Health official

However, while there has been some success, many stakeholders also reported challenges in the implementation of SVS. As with other interventions, these challenges largely relate to constraints around personnel capacity and infrastructure. In terms of capacity, it was reported by many stakeholders that for SVS to be implemented effectively, facilities require a pharmacist assistant that can dedicate time to doing stock takes. However, many facilities do not have a pharmacist assistant, which means the burden of using SVS falls to the nurses or the pharmacists who are already time and resource constrained. Furthermore, it was reported that where training has been provided to pharmacy staff on how to use the system, there has been success. However, it takes time to roll out refresher training when the system is updated, and the lack of training has posed a challenge to the success of the intervention.

*"We do refresher training as we roll out and we get new devices. New devices come with improved functionality which needs refresher training. The training is staggered per province so not all happening at once."*

National Department of Health official

*"You have to invest into a resources of pharmacist assistant otherwise you burden the nurses"*

Provincial Department of Health official

*"Training should be ongoing as the system changes all the time"*

District Department of Health official

*"You may not have a pharmacist assistant to update the system so again you rely on the sister to do it all and it may not happen and you don't see the stock at the level it actually is at"*

District Department of Health official

Infrastructure challenges have also posed a challenge to the successful implementation of SVS. Given that SVS is based on an online data repository, a key consideration for the success of SVS is reliable network connectivity. Where this has been unreliable, it was reported that facilities have struggled to effectively implement SVS. Furthermore, it was also reported by stakeholders that the cell phones used for SVS have been stolen or lost at many facilities, which naturally means that the facilities are unable to use the system when these are missing. Finally, there have also been challenges related to the integration of SVS with other e-health interventions. There are concerns among certain stakeholders that different mobile phones or electronic devices are required for the different interventions and that it would be more efficient if there were better interoperability between the interventions.

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> *"HPRS we have the computers and routers but we have data access issues which affected SVS in some facilities where there's no connection"*
>
> Provincial Department of Health official
>
> *"Challenge is you don't have connectivity and phone line"*
>
> District Department of Health official
>
> *"The next phase would be to integrated SVS, MomConnect, HPRS and all other systems simultaneously"*
>
> Provincial Department of Health official
>
> *"They also used tablets for ISHP and WBPHCOTs and SVS had a different phone so this all needs to be interoperable"*
>
> Provincial Department of Health official

# 12.8. INFRASTRUCTURE

Through the introduction of the NHI the NDoH seeks to increase access to and improve quality of services for all South African citizens. In preparation, the NDoH has committed to implementing health systems strengthening activities to help strengthen service delivery at PHC facilities. One of the preparatory activities undertaken include infrastructure improvements to support the delivery of quality healthcare in the public sector.

The healthcare sector is heavily dependent on good quality infrastructure, in the delivery of quality healthcare. Infrastructure can either promote health, wellness and healing or hinder health and aid ill health in the population. Poor infrastructure limits the extent of health services that can be provided to communities. Moreover, infrastructure is the visible interface between the NDoH and the community, the conditions of health facilities reflect on the standards of the NDoH. Through understanding the importance of having good infrastructure to promote health, NDoH has committed to a massive investment, improving infrastructure in the form of physical structures and equipment in the public health sector.

More than R1.9 billion was spent on infrastructure projects since 2013/14 in the NHI pilot districts as depicted in Table 8 below (National Department of Health, 2018)

**Table 8: Summary of NHI pilot districts performance in relation to infrastructure projects**

| | EC- OR Tambo | FS- Thabo Mofutsanyana | GP- Tshwane | KZN- Amajuba, uMgungundlovu, uMzinyathi | LP- Vhembe | MP- Gert Sibande | NC- Pixley ka Seme | NW- Dr Kenneth Kaunda | WC- Eden | Completed | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure since 2013/14 to date** | 692 012 060,70 | 163 218 155,93 | 74 307 341,76 | 146 634 341,63 | 590 822 123,44 | 208 410 479,17 | 30 073 503,01 | 23 711 487,23 | 48 956 518,29 | | 1 978 146 011,16 |
| **CHC and Clinics (NHI Rehabilitation)-DBSA** | 42 completed, 1 facility in identification and currently undergoing a conditional assessment | 11 completed | 12 completed | 2 completed | 13 completed | 23 completed | 16 completed | 19 completed | 1 completed | 139 | 140 |
| **CHC and Clinics (Replacements) - NDoH** | | 3 tendering stage | | | 4 in construction, 1 feasibility stage | 3 in pre-construction, 2 in construction | | | | 0 | 13 |
| **CHC and Clinics (Replacements)-Coega** | 8 completed | 1 in pre-construction and 2 under planning (design and development) | | | | | | | | 8 | 11 |
| **Doctors consulting rooms (Construction -new)- DBSA** | 16 completed | 14 completed | 5 completed | 16 completed | 15 completed | 19 completed | 8 completed | 8 completed | | 101 | 101 |
| **Doctors consulting rooms (Construction -new)- NDoH** | 13 completed | 6 completed | | | 16 completed | 21 completed | | | 5 completed | 61 | 61 |
| **Hospital (New)-Coega** | | | 1 in feasibility stage | | | | | | | 0 | 1 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hospital (Revitalisation)-Coega** | | COEGA213 projects for Dithlabeng - Two for revitalisation of existing hospital and one to re-develop the entire facility | | | | | | | | unclear | 3 |
| **Hospital (Rehabilitation)-DBSA** | | | 2 in feasibility stage | | 1 feasibility stage | | | | | 0 | 3 |
| **Hospital (Emergency maintenance)-DBSA** | 2 completed | | | | | | | | | 2 | 2 |
| **Hospital (Rehabilitation)-Coega** | | | | | | | | | | 0 | 0 |
| **Hospital (Replacement) NDoH** | | | | | 2 construction, 2 feasibility stage | | | | | 4 | 6 |
| **Ideal clinics (alignment to standards)- DBSA** | 44 in feasibility/design stage | 1 completed | | | | | | | | 1 | 45 |
| **Maintenance (clinics/CHC)- NDoH** | 2 in construction stage | 24 completed, 5 in construction phase, rest in pre-construction (71 in total) | 1 completed | 12 completed, 8 in construction phase and rest in pre-construction (25 in total) | 4 completed, 15 in construction stages, rest in pre-construction (66 int total) | 13 completed, 15 in construction, 28 in pre-construction | 2 completed, 31 in pre-construction | | 8 in construction, 40 in pre-construction | 56 | 260 |
| **Maintenance (backlog)-DBSA** | 9 projects completed, 23 at practical completion, 9 projects on hold(tendering) and 23 in construction, others still in | | | | | | | | | 9 | 65 |

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| | identification (65 -in total) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Maintenance (hospital) NDoH** | | 1 completed, 7 in construction phase | | 1 in construction, 4 in pre-construction stage | 1 completed, 6 planning phases | 1 completed, 4 in construction, 4 in pre-construction | | | 1 completed | 4 | 30 |
| **Nursing colleges (refurbishment)** | 1 completed | | 1 completed | | 1 in construction | 1 in construction | 1 in planning | | | 2 | 5 |
| **PPP (Feasibility study)** | 1 completed | | 2 completed | 1 completed | | | | | | 4 | 4 |
| **Maintenance (various) NDoH** | | | | 29 in construction | | | | | | 0 | 29 |
| **Maintenance (celling and fencing)** | | | | | 64 concluded, 5 in construction, rest in pre-construction (74 in total) | | | | | 64 | 74 |
| **Maintenance (water and sanitation)** | | | | | 93 in construction, 5 in preconstruction | | | | | 0 | 98 |
| **Maintenance (Enviro-loo and Lilliput)** | | | | | 94 completed | | | | | 94 | 94 |

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In 2017/2018, alone,107 facilities were maintained, repaired and/or refurbished in NHI districts. (National Department of Health, 2018).

Stakeholders generally recognise that infrastructure is a key contributor for health systems strengthening, and agree that the interventions success is influenced by the existence of an enabling environment. The noted success of this intervention is that it has, to some extent, created an enabling environment in the public healthcare sector.

> *"The community and our district have improved and our infrastructure has improved"*
>
> District official
>
> *Congestion, reduced waiting [time], work load and quality of healthcare has improved at all the facilities where the projects were completed"*
>
> Provincial Department of Health official

32 of 60 (54%) facility managers reported infrastructure improvements at their facilities, however It is unclear that the infrastructure developments at facilities were all related to the implementation of NHI phase 1. While stakeholders have noted some successes and improvement as a result of infrastructure projects, they have mentioned the need for infrastructure projects need to be evidence informed to ensure that infrastructure projects are tailored to the needs of the facility as the needs of each facility are not the same.

> *"Integrated planning is necessary as infrastructure and other things may not be aligned to the clinic's actual needs"*
>
> District official

Stakeholders reported that during NHI phase 1 implementation, there were challenges which affected the timely release of funds which ultimately adversely influenced the timely initiation of planned infrastructure and maintenance upgrades at facilities.

> *"They took long to get the infrastructure part of the grant going."*
>
> National Department of Health official
>
> *"Most constructions are slow and most communities are complaining."*
>
> Provincial Department of Health official
>
> *"Projects take longer than expected"*
>
> District official

In addition to the delays in timing of the release of funds, it is evident that the funding conditions acted as a barrier to the successful implementation of infrastructure programmes. Provincial stakeholders expressed frustration at the funding mechanism and the lack of budget allocated to these projects. The delays in implementation meant that there was a growing backlog of infrastructure projects which created further frustrations on the ground.

"*There was no special grant for infrastructure under NHI…there was fragmentation and this is what we needed to have an NHI specific pot"*

> Provincial Department of Health official

"*Funding should be given to provincial to implement itself so we can also account to the community if certain things are not built and we have a valid reason*"

<div align="right">Provincial Department of Health official</div>

This is supported by the views of facility managers, many of whom felt that they were not empowered to spend funds for infrastructure improvements. None of the surveyed facility managers knew their facility's budget allocation for infrastructure. Moreover, almost all of the surveyed facility managers did not have financial delegations to undertake maintenance of their facility. Most facility managers expressed that they felt that their districts were not very responsive to their maintenance requests (

Figure 49

**Figure 49: Perceptions of facility managers on how responsive district offices were to infrastructure requests**



Most facility managers do not think that their district officers are responsive to facility maintenance requests (N=25)
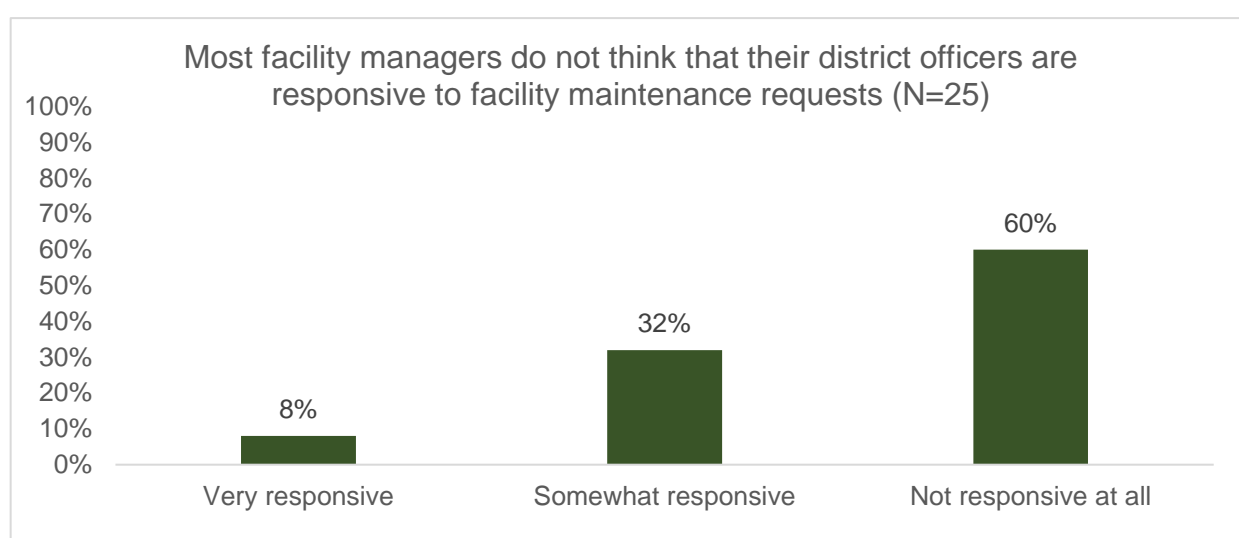
Interestingly, the mandate around implementation of infrastructure programmes under NHI implementation has been queried by stakeholders. Stakeholders hold divergent views as to which government department should be responsible for the implementation and oversight of health-related infrastructure programme, specifically whether it should be the responsibility of DoH or DPW.

<div align="right">*Infrastructure (outside of DoH mandate) could be a problem.*"</div>

<div align="right">National Department of Health official</div>

Stakeholders at all levels echo that infrastructure is an important component of patient perceptions of quality of care, and also affects the likelihood of success when scaling interventions. Patients reported that they valued "space" above any other improvements to infrastructure as see in

Figure 38 above. This implies that despite the introduction of ICRM and infrastructure improvements as well as CCMDD facilities remain congested.

# 12.9. WORKLOAD INDICATORS FOR STAFFING NEEDS (WISN)

Workload Indicators for Staffing Needs (WISN) is a planning tool advocated by the World Health Organization (WHO) that aims to support health managers in making more efficient staffing decisions. The purpose of this tool is to ensure that there are adequate numbers of healthcare workers, with the right skills and in the right places to effectively meet the healthcare demands of the population. The WISN method also assesses the workload pressure of health workers in that facility. According to the WHO (2010), "the WISN method is based on a health worker's workload, with activity (time) standards applied for each workload component". More detail on the WISN method is provided below. The WISN method aims to highlight staff shortages and surpluses in the health system based on the differences between actual and predicted numbers of healthcare workers of a particular type in a particular facility. The method also calculates the ratio of the actual to the required number of healthcare workers to understand workload pressures at particular facilities. The South African Department of Health adopted WISN in 2015 and developed the WISN implementation guideline, which takes account of PHC facility specific staffing norms. Using WISN to determine the staffing needs is expected to lead to better staffing decision, and ultimately to more efficient assignment of workloads across healthcare workers and improved utilisation of human resources for health.

The evaluation has found that stakeholders recognise the potential usefulness of WISN and its intention to support more informed and standardised staffing decisions; however, the lack of funding for staff posts has resulted in the full benefit of WISN being unrealized during NHI Phase 1. This challenge has been well recognised by the South African government and in the 2019 budget speech given by the Minister of Finance, Mr Tito Mboweni, an HRH grant which has funds up to 2.8 billion was announced as a means to increase the number of doctors and nurse personnel in health facilities across the country (Government of South Africa, 2019).

Stakeholders at the national and provincial levels reported that they recognise the value of WISN to inform staffing decisions and to address capacity issues such as those brought about by retirement of healthcare workers. It was reported that before staffing norms were determined, "staffing decisions were driven by vacancy rates, rather than needs". Furthermore, the intervention is widely seen as one that can be easily scaled, and, while it was not implemented as an official part of NHI at the beginning of phase 1, it is seen as a key mechanism for the effective implementation of NHI going forward.

> *"The tool is more like a mirror and shows you where the challenges and gaps are, as well as where there is surplus or overstaffing. So, provides a systemic way of properly distributing staff"*
>
> National Department of Health official
>
> *"If WISN can be implemented it can bring some changes so that the facilities can function well"*
>
> Provincial Department of Health official

Unfortunately, while there is positive sentiment towards WISN, it has not been effectively implemented during Phase 1 of NHI. One of the key reasons for this has been due to budget constraints around filling vacant posts. WISN is effective at pointing out where the shortages and surpluses in the health system are in terms of resources; however, due to budget constraints, facility managers have been unable fill the identified gaps with the necessary staff, which has meant that the same capacity constraints have persisted and WISN has not been applied by facility managers.

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> *"Although WISN showed us the results we need, we couldn't implement it because of budget constraints"*
>
> Provincial Department of Health official
>
> *"No money in the budget to appoint more people"*
>
> District Department of Health official
>
> *"WISN is only good on paper but poor on implementation"*
>
> Facility Manager

Another issue has been the lack of communication around WISN, from the national level down to the district levels, which has contributed to limitations in the understanding of WISN. Consequently, stakeholders have not felt empowered to use it and this has created scepticism among facility managers as to the benefits associated with the initiative.

> *"WISN is National driven so we are still waiting for feedback on that"*
>
> District Department of Health official
>
> *"This programme has not been successful as it has not been followed through"*
>
> District Department of Health official

**Responses from the facility manager survey echo this sentiment (Figure 50), where 15 of the 37 respondents (41%) who reported using WISN at their facility, claimed that it had had no effect on staffing decisions and a further 4 respondents (11%) claimed that it in fact complicates staffing matters. Only 11 (30%) of respondents reported that WISN was helping with staffing decisions. Furthermore, when asked about workload pressure (Figure 51**

Figure 51) of those respondents who reported that WISN has been implemented at their facilities, just three (8%) reported that WISN had contributed to a reduction in workload pressure, while 32% of respondents reported that there had been no change in workload pressure or that it had in fact increased.

**Figure 50: Impact of WISN staffing decisions**



Most facility managers don't think WISN affects decision-making (N=37)

| Category | Percentage |
|---|---|
| Helps with staffing decisions | 30% |
| Complicates staffing decisions | 11% |
| No effect on staffing decisions | 41% |
| Other | 19% |
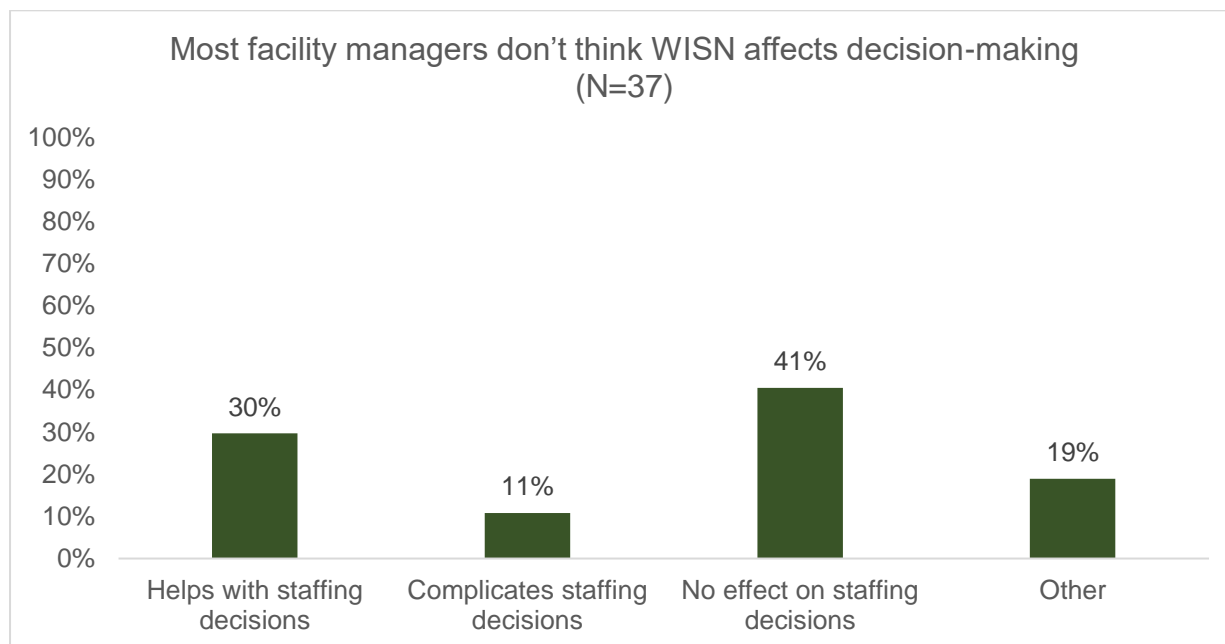
**Figure 51: Impact of WISN on workload pressure**



Most facility managers don't think WISN affects workload pressure (N=37)

| Category | Percentage |
|---|---|
| Workload pressure has reduced | 8% |
| Workload pressure has increased | 19% |
| No change in workload pressure | 32% |
| WISN has not been implemented yet | 24% |
| Don't know | 16% |
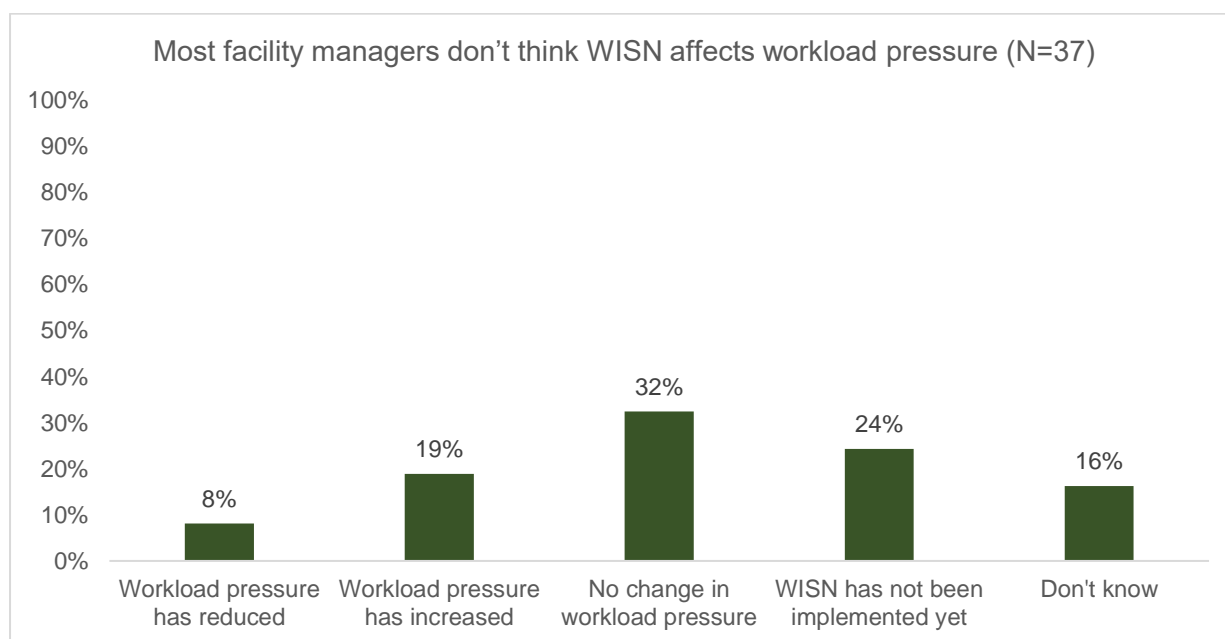
# 13. GOVERNANCE OF NHI PHASE 1

Recognition of the importance of leadership, governance and 'health management strengthening' (Gilson & Daire, 2011) pre-dates NHI. The government's responsibility for 'stewardship' of the health system has long been an area of focus (World Health Organization, 2000). While leadership and governance are understood to be one of the most important government functions within the health system (Smith, et al., 2012), the precise ingredients for effective health system governance are relatively new areas of exploration, with gaps in understanding how best to assess governance (Pyone, Smith, & van den Broek, 2017).

Through consultations with evaluation stakeholders at national, provincial, district and facility levels, the evaluation finds four aspects of governance that have affected the implementation of NHI phase 1 as seen in Figure 52 ; namely, achieving clarity of vision, setting priorities, performance management and maintaining accountability. In relation to the NHI pilots, the subsections that follow discuss each aspect of health systems governance in turn.

**Figure 52: Factors affecting effective governance of NHI**
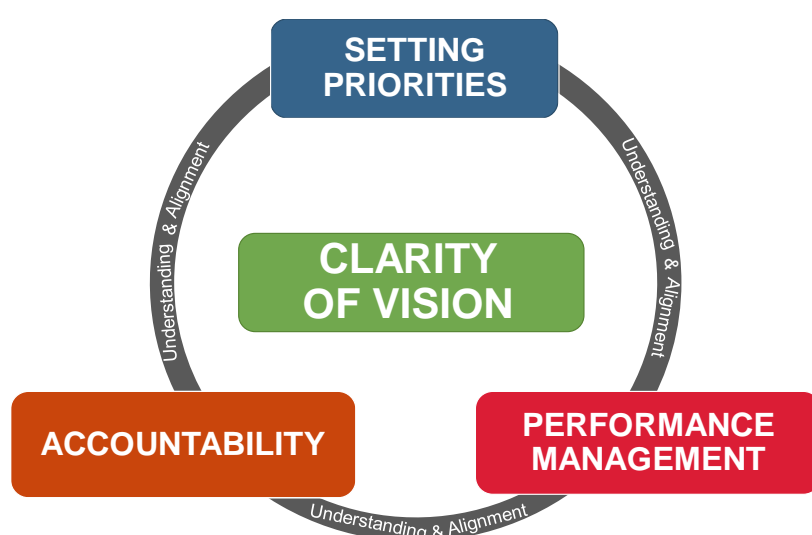


*Sources: Genesis Analytics, 2018*

# 13.1. CLARITY OF VISION

NHI requires complete reorganisation of the health system; a process of immense change in institutional and individual functions, roles and responsibilities. In order to support this change process, multifaceted leadership capabilities are required. Leaders must be able to provide a vision, which sets the direction of the organisation and inspires others to deliver on the organisational mandate (Gilson & Daire, 2011). This vision enables coordination and alignment of interventions across different units within the NDoH and between levels of government.

Most stakeholders consulted during this evaluation understand that NHI contributes to health systems strengthening. However, the link between NHI and UHC is not understood by many, with awareness and understanding of this vision declining from national level to provinces, districts and facilities. Therefore, this role has not been fully met by policy-makers and this is a key area for strengthening in NHI phase 2.

**Box 2: Exploring the link between NHI and Universal Health Coverage**

Universal health coverage (UHC) means that all people and communities can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship.

The NHI White Paper indicates that NHI is intended to move South Africa towards UHC (National Department of Health, 2017). The White Paper, presents a vision of NHI as a facilitator of UHC, which it describes as encompassing:

- Population coverage: The extent to which the population has access to needed health services.

- Service coverage: The extent to which the health needs of the population are addressed by available quality health services.

- Cost coverage: The extent to which the population is protected from direct costs and catastrophic health expenditure.

- By implication, the vision for NHI is layered and far-reaching and requires careful reading of the White Paper to fully understand the extent of this vision.

*Sources: WHO, 2017: NHI White Paper, 2017*

*"I report to the DDG of NHI in the new structure but that wasn't communicated to us. We saw it in a meeting on an organogram. I'm not sure what is happening. We are expected to implement change management with provinces but the same is not done for us"*

National Department of Health official

Further, the logic linking each intervention to the vision for NHI and UHC has not been made explicit. This was an obstacle to successful and coordinated implementation in the early days of NHI phase 1. In fact, some national stakeholders felt that the coordination between national and provincial levels could have been improved through greater buy-in across provinces, aided by clear and consistent communication of a compelling vision.

*"NHI was forced on provinces, they weren't volunteering to participate. In the first few years this was the stumbling block. National and Provincial had same projects at different levels that didn't speak to each other. "*

National Department of Health official

Finally, stakeholders have even lower levels of awareness and understanding concerning the planned implementation of NHI, as well as their own role in NHI. Despite the NHI White Paper providing a definition of Phase 1 and the phases that are intended to follow (National Department of Health, 2017), this understanding is not consistent across stakeholders, which makes it difficult for these stakeholders to understand what the plans are and what their role is within the plans.

*"My role in Phase1 interventions is not clear as I do not know what Phase 1 is."*

National Department of Health official

Clarity of vision is essential to enable other important elements of NHI governance; setting priorities, performance management and accountability. Stakeholders across all levels emphasise that good coordination and breaking down of implementation silos is crucial for successful implementation of NHI and reorganisation of the health system.

*"They also need to make provinces partners, setting up structures to consult on the ground where the reform takes place, reforms are about people and change management is important."*

*"…it is important that it is a continuous process - as ability to grasp the concept of NHI is not the same at all levels"*

Provincial Department of Health officials

## 13.2. SETTING PRIORITIES

Priority setting is defined as a systematic approach to allocate available resources (financial and non-financial) between competing needs towards an optimal health system (Smith, et al., 2012). The task of priority setting requires that high level goals (the vision for NHI) are converted into operational actions within defined indicators and targets. This conversion will need to be conducted for various subnational levels too to ensure that goals are disaggregated and appropriately customised to specific regional realities. For this reason, priority setting should be informed by a process of consultation and consensus-building. Priorities should be set in response to the specific realities of South Africa's burden of disease and to balance prevention and curative services.

**Box 3: Consequences of priority setting**

Priority setting is essential for the coherence of health strategies, policies and plans. With limited coherence across these important governance tools, decision-making becomes more complicated and ineffectual. Priority setting is also required to establish rules and responsibilities for allocating resources. With a limited fiscus, and limited capacity within key institutions, priority setting helps to establish a rank order for budget allocation. Priority setting, therefore, makes it possible to promote cost-effective and transparent budget use.

There is consensus among national stakeholders that priority setting is crucial for planning, which is fundamental to budgetary processes. It is also very important in a resource constrained environment, where there has to be rationalisation and tradeoffs between the ideal and what is financially possible.

Despite the process by which policy was formulated, including the preparation of the NHI Green Paper and the NHI White Paper, and the internal processes relating to budget allocations against the departmental Annual Performance Plan, stakeholders still observed that they were not entirely clear on 1) how to use allocated budgets (despite some districts participating in business plan development); 2) required activities were not allocated budget; and, 3) using NHI budgets to support ongoing activities within districts. The lack of priority-setting and rationalisation led to confusion on where to allocate budget and what this budget was intended to achieve. – for example:

*"No indication of what the money was supposed to be used for and the money was sent back to treasury."*

*"Other projects required the district to fund them which was unfortunately not budgeted. For example, internet connectivity for PHC facilities."*

*"Much of the plans were not synchronised. District did its best to implement the intervention. We used NHI interventions to supplement the existing operations (in) the district."*

District official

Most stakeholders acknowledge and agree that interventions like CCMDD, WBPHCOTs, DCSTs, *inter alia,* have commendable and appropriate objectives that do balance prevention and curative health services. However, stakeholders also recognise that there were specific instances where interventions were 'parachuted' into various provinces with limited customisation to suit district realities.

*"The NDoH is the implementing body and provincial is where the delivery happens (a method called parachuting) but the two are not always coordinated"*

National Department of Health official

A specific example is ICRM, which had specific criteria that indicate improvement, and were eventually rolled out beyond the pilot districts. Most national, provincial and district officials believe that ICRM contributed towards well-equipped facilities. However, provincial stakeholders mentioned that it can often be the case that the criteria are not customised to the district, which can lead to unnecessary and wasteful expenditure. For example, the quote that follows describes a case where unnecessary equipment was claimed to have been bought in a province. Whether or not this purchase was unnecessary (which an audit would be able to clarify), the fact that stakeholders perceive it as such is indicative that priority setting may not have buy-in across all levels of government. Priority setting that is both top-down and bottom-up and is supported by consensus-building will ensure that any criteria that are applied are suited to district realities

*"In order to reach "Ideal Clinic" status, unnecessary equipment is bought and it just goes to waste."*

*Provincial Department of Health official*

This process of consultation and consensus-building requires time and resources, which should not be underestimated. Stakeholders at all levels were clear that these communication fora were established and were used, especially in the early days of NHI phase 1. However, they also emphasised that the timing and frequency of consultative fora is sometimes insufficient to ensure that it is feasible to gain useful inputs and consensus. This is an observation that is triangulated across stakeholders across national, provincial and district levels.

*"…we need to take into account timing. We need to speak sooner rather than later."*

*"Governance was, at first, good but as the programme has rolled out, there is less and less engagement."*

National Department of Health officials

*"Quarterly meetings (have been) scheduled with province since 2012, but stopped in 2017 due to lack of funding and drive."*

Provincial Department of Health official

*"Province should revive the provincial structures. Facilities rely on the District to provide answers and implement NHI."*

District official

Commentary by various district officials

Therefore, the importance of this aspect of governance cannot be overstated.

> *"Make sure that the planning and the design is clear up front. Include the managers on the ground and customise the implementation for each site."*
>
> *"We need to plan collectively for NHI, with the rest of the NDoH."*
>
> National Department of Health officials

There are numerous approaches that can be taken to set priorities. These may be according to required standards of service or aspirational targets of attainment, aligned to the vision for NHI (Hauck, Smith, & Goddard, 2004). Alternatively, where there is mandated health insurance and/or devolved tax funding of healthcare, a set of specified health services may be prescribed to establish the exact services to which populations are entitled. These specified health services may then be described further based on other priorities that have been set, for example targets for health improvement, patient safety standards, clinic waiting times or other indicators to assess whether access is guaranteed (Smith, et al., 2012). The decision concerning what to fund should be an exercise steeped in consultation, priority setting and best fit for the population needs.

# 13.3. PERFORMANCE MANAGEMENT

The generation, dissemination and use of credible information within the health system is crucial. Information is essential for supporting managerial, strategic, political and democratic control of the health system – and, information may contribute towards a variety of decisions; including, tracking national public health outcomes, monitoring healthcare safety, determining appropriate patient treatment options, promoting performance improvement among healthcare professionals and improving accountability of the health system to citizens (Smith, et al., 2012). However, the availability of information is only beneficial when this information is used to affect decisions. The subsections that follow discuss particular factors that have been found to influence performance management during NHI phase 1.

## 13.3.1. Conducive organisation culture

Organisational culture determines routine practices and ways of doing business in the health system, but also describes particular values and sentiments, which often indicate power balances in the health system (Gilson & Daire, 2011). In fact, it was suggested as early as 2011 that PHC re-engineering in South Africa will ultimately require re-engineering of power relationship in the health system because the current system favours hierarchy and top down decision making within individual silos (Gilson & Daire, 2011).

The CCMDD is a good example of how organisation culture influences implementation. CCMDD is a program driven by data, where national, facilities and suppliers all need to understand the demand for chronic medications at all times. A process was undertaken whereby each level of the health system was oriented towards the approach needed and bought into the concept, especially seeing as it held the promise of reducing patient waiting times and volumes at facilities. By taking the time to do this, CCMDD implementers used data to make decisions and the intervention was implemented effectively. This was evidenced by the decision to change service providers, as the original provider was not delivering to the satisfaction of the stakeholders. This experience helps to further build the case for the use of data a culture that is responsive to evidence to support implementation and decision-making. *"…we made feedback a priority. We had a communication strategy. It is also important for national to follow up. M&E is so important…we know what is working and not working."*

National Department of Health official

This learning-oriented culture is a positive finding of this evaluation; however, is not observed across the health system or across interventions. In fact, during the consultations, stakeholders were asked to reflect on the quality of communication and collaboration between levels of government and across interventions. Generally, findings are mixed. Certain stakeholders believe that communication is 'excellent', focusing specifically on the level of engagement between districts, provinces and NDOH and also on the structured process by which communication is made.

> *"Very good collaboration between districts, provinces and national however each district and each province is unique. The means of engagement and communication had to be tailored for each district based on various factors to ensure that success was attained"*
>
> National Department of Health official

Other stakeholders believe that communication has not been effective, citing that different 'office(s)' within NDOH tends to find fault with others and that this does not translate into positive communications for improvement. Stakeholders consulted in partner national departments suggested that, despite regular submissions, questions were met with defensiveness instead of a desire to collaboratively uncover potential solutions.

> *"So, communication has not been the best - every office complains about the other. Communication is poor due to our governance mode."*
>
> National Department of Health official

> *"No real feedback loops. (I) just focused on what was submitted, asked questions and then engaged with NDoH to discuss. But this was the point where requests for more information were met with defensive stance."*
>
> National government official

## 13.3.2.    Robust evidence for feedback and learning

More generally than specific intervention examples, stakeholders acknowledge that there are numerous feedback platforms between the three levels of government and between partner departments. However, these platforms are usually attended by senior officials and most concern high-level discussions. For this reason, feedback platforms might not generate the type of detailed, frank communications required to facilitate learning and action based on evidence. These observations were made by national and district officials. Crucially, the NDOH officials were citing the examples of provinces and districts not sharing their true and complete views.

> *"There are feedback platforms but people don't always share what is in their hearts at those platforms. Better when there are one-on-one discussions because there is fear in the lower-level administrators"*
>
> National Department of Health official

National stakeholders presented the view that there is mistrust that that has been generated will be used to inform decisions, given that NDOH is "fix(ed) on a path" and unlikely to adapt implementation based on evidence that is surfaced. This perspective suggests low commitment to evidence-informed decision-making. It also suggests that factors other than the available evidence are preferred when leaders make decisions; however, stakeholders did not present perspectives on what else is used to inform decisions.

> *"There are opportunities for learning but NDoH seems to fix on a path and not be willing to shift once they've decided what to do and this is a pity since it is counter to what is needed to have scale"*

National Department of Health official

The example of CCMDD indicates the importance of generating and using robust evidence to support feedback and learning. Similarly, HPRS included feedback mechanisms that were tailored to each province and included specific strategies for MECs, HODs, HPRS coordinators and project teams. This was important to test the functionality of the e-Health platform. However, there are also examples of poor use of evidence for feedback and learning. Within GP contracting, a mechanism to monitor the performance of GPs and surface their perspectives was absent, which meant that it was difficult for the department to intervene where implementation was difficult as they were either not aware there was a challenge or were not aware of how the GPs were experiencing this new role. There also appeared to be misinformation between contracted GPs and national and provincial officials.

*"Engagements with GPs and GP associations seemed limited. There was consultation but it seemed like there was also misinformation."*

National Department of Health official

There are many reasons to prefer basing decisions upon other factors rather than evidence, as indicated by the experiences of certain district officials.

*"Recommendations are sometimes made but the final approval is made by the province."*

*"The recommendations were not addressed, since the next phase of the budget did not allow for this"*

Various district officials

It could be that the quality of data is not trusted by stakeholders, that the credibility of data is questionable, that sufficiently detailed information is unavailable, or that information is not timeous. This may also tie back to organisational culture and the extent to which there is genuine commitment to organisational mission and priorities that have been set, versus prevalent sentiments or political motivations.

## 13.3.3.    Strong and credible leadership

Good governance is dependent on strong and credible leadership. Leadership underpins the creation of a conducive organisational culture to supporting the generation and use of robust evidence for feedback and learning. Indeed, leadership is required to give life to the vision for the health system and to embed priorities in the everyday practices of health system. This is because leadership must inspire many different people, with their diverse roles and responsibilities, to adopt a new and common sense of organisational mission, organisational values and new routines to enact these (Gilson & Daire, 2011). Leadership is commonly thought to only be a function of those in senior management positions in the health system. However, effective governance of the South African health system requires distributed leaderships, which indicates that leadership must be seen as a collective capacity across the system (Gilson & Daire, 2011).

Stakeholders consulted, whether at national, provincial or district level, voiced the importance of good governance and leadership within the health system.

*"Leadership and governance - we need strong willed people; a lot of success is due to individuals' force of will. We need to continue to create such leadership (and I am worried I do not see this at lower levels)."*

*National Department of Health Official*

In fact, stakeholders suggested that ineffective leadership is a factor that undermines the sustainability and scalability of NHI, especially as South Africa moves towards NHI phase 2. Good leaders are needed at all levels of the health system. WBPHCOT team leaders are an excellent example of where leadership has not been sufficiently strong, consistently across all districts. If WBPHCOT team leaders, interfacing with communities, do not engender confidence in their ability, patients will not buy-in to the vision of NHI. Further, if team leaders are not confident in the vision and priorities of NHI, their actions are not likely to be aligned to overarching objectives. Leadership interfacing with the community is as important as within departmental structures.

> *"They (WBPHCOTs leaders) cannot be just school leavers - but more competent and confidence so that they can convincingly advise the patients."*
>
> National Department of Health Official

# 13.4. ACCOUNTABILITY

**Box 4: Examples of accountability mechanisms**

> Performance information is insufficient to promote the accountability of service providers unless there is a mechanism that enables health systems stakeholders to communicate a judgment on their performance. Accountability is only promoted if an incentive is available to encourage the service provider to act to improve their performance, for example performance-based payment arrangements, accreditation systems, oversight systems or reputational pressure derived from the scrutiny of peers.

*Sources: Gilson & Daire, 2011*

Without accountability mechanisms, priority setting and performance management will have little to no effect on health systems governance. It is only through a combination of consequences and incentives that encourage specific behaviours that health system strengthening and reorganisation is enabled. Within South Africa, there are numerous state structures (for example, reporting to Parliament) and frameworks (for example, the punitive measures described within the Public Financial Management Act) that act as accountability mechanisms. However, adherence to these mechanisms might be uneven.

On the other hand, as evidenced by the quote below, operating within the bounds of these accountability mechanisms might stifle requirements to reorganise the health system. Given that new structures have been and will continue to be added to the health system, it must be anticipated that this will change how effective current rules are and what incentives are in place to follow these rules. This has already been experienced within NHI phase 1, in particular as roles and responsibilities within clinics need to be adjusted to account for newly formed teams.

> *"This is another unintended consequence…clinical governance is seen as the role of DCSTs only; it absolves clinicians of this responsibility"*
>
> National Department of Health official

Further, there is a prevailing view across national, provincial and district levels that low performance is more symptomatic of the limited consequences for poor performance, which limits accountability, than of inadequate capacity. Therefore, there is acknowledgement that strengthening accountability is fundamental to implementing NHI.

> *"We don't need training - people have been over-trained, instead there needs to be accountability."*
>
> *"With leadership comes management and accountability - if people aren't delivering, there needs to be consequences."*
>
> District officials

# 14. FINANCIAL ANALYSIS

The evaluation of the NHI phase 1 initiatives was aimed at identifying areas that can be expanded upon based on their successes and identifying the mechanisms to rapidly upscale such initiatives. It would therefore be prudent to review the financial obligations made over the past few years via the NHI direct and indirect grants in order to align successful initiatives with the financial resources allocated. This analysis is based on the financial reports provided by the NDoH and is a high-level review of the expenditure per province as well as some of the key interventions. The analysis was based on the audited financial statements of the NDoH being compared to the NHI pilot progress reports and individual intervention reports and figures.

## 14.1. ANALYSIS OF NHI GRANT SPENDING

### 14.1.1.　 NHI Direct Grant

The NHI direct grant was a schedule five direct conditional grant, from which the national Department of Health (NDOH) allocates funds to provincial health departments. Grant funding in 2015/6 was planned to be used for strengthening district capacity for monitoring and evaluation, strengthening coordination and integration of selected municipal ward-based outreach teams within pilot districts, and to strengthen processes and supply chain management systems at the district level. The direct NHI Grant began in 2012/13 with the NHI Green Paper and ended in 2016/17, when the funds were redirected to the ideal clinic realisation project.

Figure 53: NHI direct grant cumulative budget and expenditure for the five financial years, by provinceFigure 53**Error! Reference source not found.** below shows the cumulative budget and expenditure over the financial years, against the proportion of budget spent. The total budget given over the five-year period was ~R503m and expenditure was recorded as ~R381m. This represents 76% of the total budget. However, the proportion spent varied between the provinces, with Gauteng showing the highest under expenditure at 56% of its budget (~R42m of its ~R75m budget spent) and NW came closest to spending all of its budget at 94% (~R37m of ~R39m budget spent).

**Figure 53: NHI direct grant cumulative budget and expenditure for the five financial years, by province**

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018
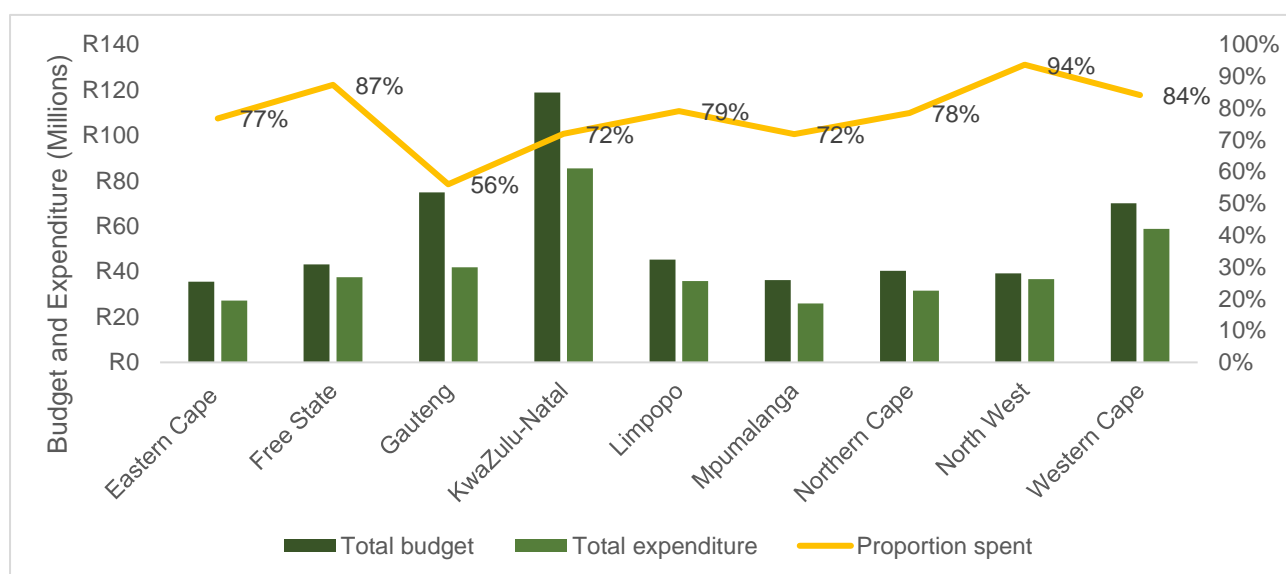
Figure 54 and **Error! Reference source not found.** Table 9 below shows that over the period, provinces were able to better make use of the Grant. This could be an indication of initial uncertainty amongst the districts and provinces in terms of what the grant should be used for and what the procurement process was. KZN's pilot districts had shown marked improvement in their key health indicators year on year, and an expenditure percentage of 72% of their budget was achieved. KZN was allocated a higher budget as they had two Pilot districts funded from the NHI grant (and one funded from the Provincial budget).

**Figure 54: Proportion of budget spent annually, by province**
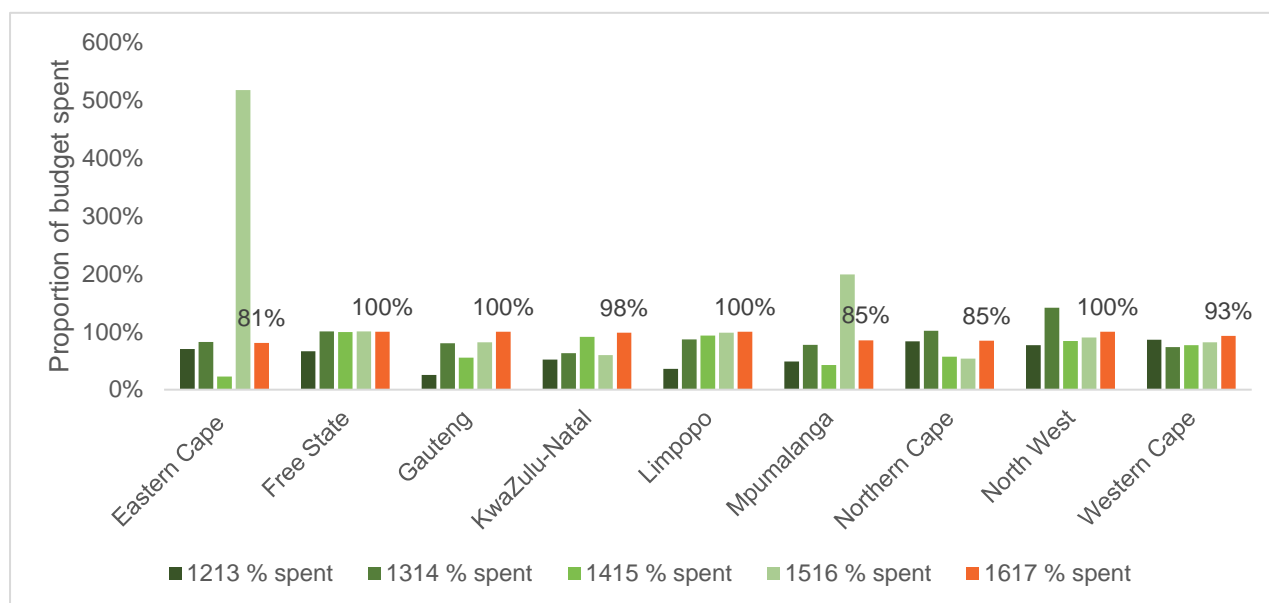


The EC showed very high over expenditure in 2015/2016 (~R5.1m spent despite R992K budget). However, the higher spending percentages are due to the huge reductions by National Treasury, because of the non-surrender of funds by Provinces, resulting in a perceived over expenditure of 517% (This was due to a division of revenue amount of ~R7.2m, minus the government gazette reduction of ~R6.2m leaving an allocated budget of ~R992 000 for the year compared to expenditure of ~R5.1m). The table below displays the total budget vs expenditure amounts for the period 2012/2013 to 2016/2017.

**Table 9: Budget and expenditure 2012/13-2016/17**

| Province | Total Budget (R'000) | Total Exp (R'000) | % Spent |
|----------|----------------------|-------------------|---------|
| EC | 35,490 | 27,207 | 77% |
| FS | 43,057 | 37,551 | 87% |
| GP | 74,787 | 41,864 | 56% |
| KZN | 118,800 | 85,300 | 72% |
| LP | 45,201 | 35,725 | 79% |
| MP | 36,162 | 25,960 | 72% |
| NC | 40,258 | 31,555 | 78% |
| NW | 39,201 | 36,680 | 94% |
| WC | 69,958 | 58,751 | 84% |
| Total | 502,914 | 380,593 | 76% |

## 14.1.2. National Health Insurance Indirect Grant

The indirect NHI grant was a schedule 6A indirect grant, which was managed by the NDOH on behalf of provincial health departments. It had been introduced to deal with under-spending of the direct grant and to enable the NDOH to play a greater role in delivering services. The two parts of the direct grant were for the contracting of general practitioners (GPs) and developing DRG's. The indirect grant funding was used for developing and implementing innovative models for the contracting of health practitioners, supporting establishments of fully constituted and functional district clinical specialist terms, strengthening school health services, and implementing alternate chronic care dispensing and distribution models. This model had changed slightly over the three years it had been implemented.

This indirect grant was for key NHI pilot projects. Between 2014/15 and 2017/18, a total budget of R2.5b was allocated for NHI pilot projects. Of this R2.5b, ~R2.1b was spent, representing 84% of the total allocated budget. The figure below shows the budget and expenditure for each pilot project for 2014/15 to 2017/18. The indirect grant grew substantially in 2017/18, and achieved a 94% expenditure rate compared to the budget. Health practitioner contracting continued to receive the largest budget throughout the three-year period (R1.28bn) and achieved a 79% expenditure rate over the 3 years (R1.02bn). The contracting of health professionals in the NHI pilot sites is reflected in Table 10  below.

**Table 10: Health Professional contracting in Pilot sites.2014/15-2017/18**

|  | 2014/15 | 2015/16 | 2016/17 | 2017/18 |
|---|---|---|---|---|
| **Health professionals contracted in NHI pilot sites** | 287* | 531 | 679 | 626 |

*GP contracting only. This was expanded to health professionals from 2015/16.

The HPV vaccination immunizations for first and second dose immunisations for grade 4 learners is reflected in Table 11 below.

**Table 11: HPV immunization program for Grade 4 learners nationally.2014/15-2017/18**

|  | 2014/15 | 2015/16 | 2016/17 | 2017/18 |
|---|---|---|---|---|
| **Grade 4 learners vaccinated for HPV. Dose 1.** | 419 000 | 228 211 | 265 865 | 169 102 |
| **Grade 4 learners vaccinated for HPV. Dose 2.** | - | 329 665 | 320 292 | 289 623 |
| **TOTAL** | 419 000 | 557 876 | 586 157 | 458 725 |

Patients and facilities registered on the CCMDD programme are reflected in Table 12**Error! Reference source not found.** below.

**Table 12: CCMDD patient and facility registration. 2014/15-2017/18**

|  | 2014/2015 | 2015/2016 | 2016/2017 | 2017/2018 |
|---|---|---|---|---|
| **Patients registered in pilot districts** | 14 657 | 393 149 | 650 452 | 875 175 |

| **Facilities registered in pilot districts** | | 671 | 721 | 778 |
|---|---|---|---|---|

In 2016/17 the ideal clinic realisation project received R10m budget. In 2017/18, the NHI Conditional Grant was converted into the Ideal Clinic Conditional Grant. Funding for the patient information and stock information systems began in 17/18. The Stock Visibility System (SVS) application, aimed at improving medicine availability in clinics was rolled out to 3167 facilities by 2017/18. The Health Patient Registration System (HPRS) was rolled out to 2967 PHC facilities by 2017/18, with 20 700 149 patients registered on the system. Additionally, 4862 computers were delivered to facilities with 4598 being set up for usage.

**Figure 55: Budget and expenditure per pilot project (Excluding Health Facility Revitalisation component): 2014/15-2017/18**
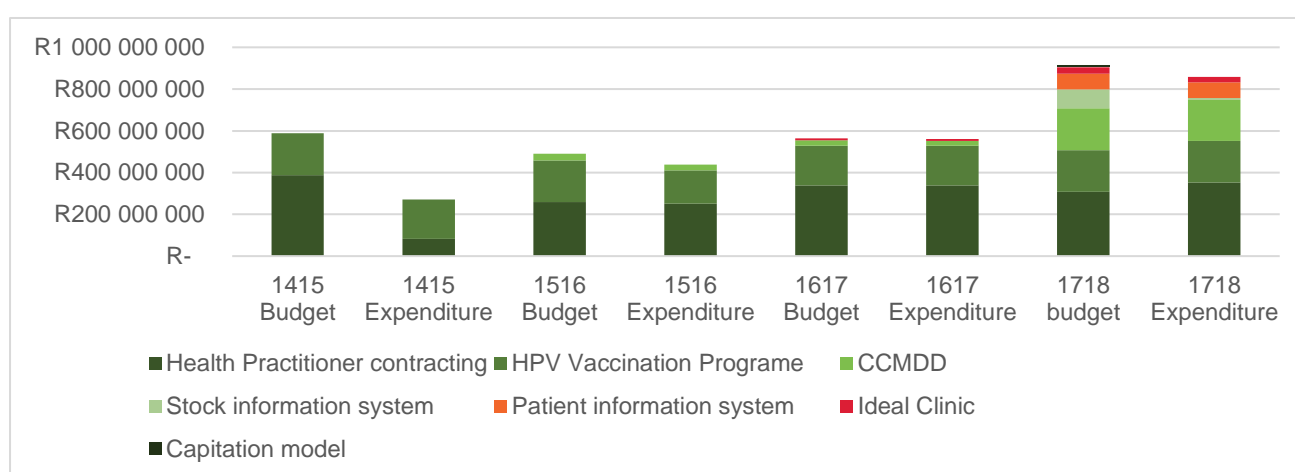


It is important to note that several of these interventions received funding from other sources (e.g. donor funding), hence this allocation of the indirect grant to these interventions does not represent the full extent of funding for the interventions. The timing of the funding allocations is aligned to the project's maturity and the scaling up of the various interventions over the first phase of the NHI implementation.

## 14.1.3.  Health Facility Revitalisation (HFR) Component

The Health Facility Revitalisation grant has the following aims:

• To accelerate the construction, maintenance, upgrading and rehabilitation of new and existing health infrastructure.

• To enable provinces to plan, manage, modernise, rationalise and transform the infrastructure, health technology, monitoring and evaluation of hospitals and to transform hospital management and improve quality of care, in line with national policy objectives.

• To supplement provincial funding of health infrastructure, to accelerate the provision of health facilities including office furniture and related equipment, as well as to ensure proper maintenance of provincial health infrastructure for nursing colleges and schools.

Figure 56 below shows the cumulative budget and expenditure for the three financial years 2014/15-2016/17. The budget for the three years combined was ~R1.9b and expenditure ~R1.6b. Therefore, the provinces

managed to spend 83% of the total budget allocated for the HFR component. Of the provinces, Limpopo received the highest allocation, followed by the EC. KZN, NW and NC all over spent on the grant by 7%, 251% and 13% respectively. (NW were allocated a budget of ~R2.9m and spent ~R10.3m over the period).

**Figure 56: Health facility revitalisation component: 2014/15-2016/17 (cumulative)**
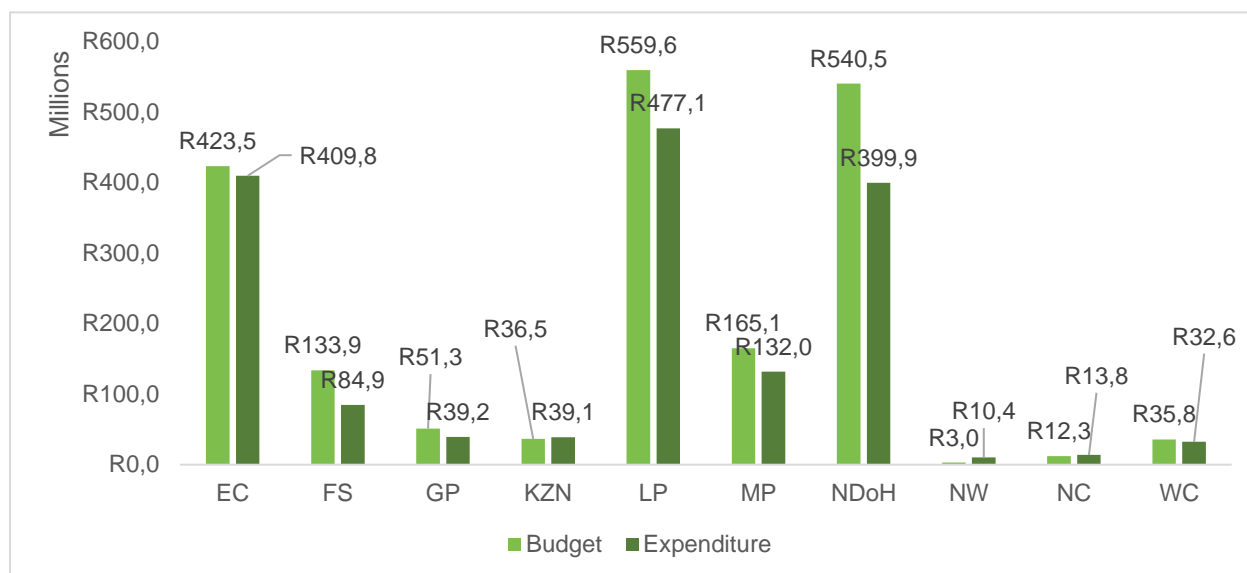


Figure 57 below shows the proportion of budget spent, by province, for two financial years. In 2015/16, spending improved significantly, with an average expenditure of 102% of budget being spent. In 2016/17, GP, KZN, MP and NC all overspent based on their reported budget allocation. However, it is possible that some funds were rolled over from 2015/16 and therefore the overspending is not a true reflection. This is likely due to the long-term nature and unpredictability of maintenance and upgrade projects.

**Figure 57: Health facility revitalisation component: 2014/15-2016/17 proportion of budget spent**
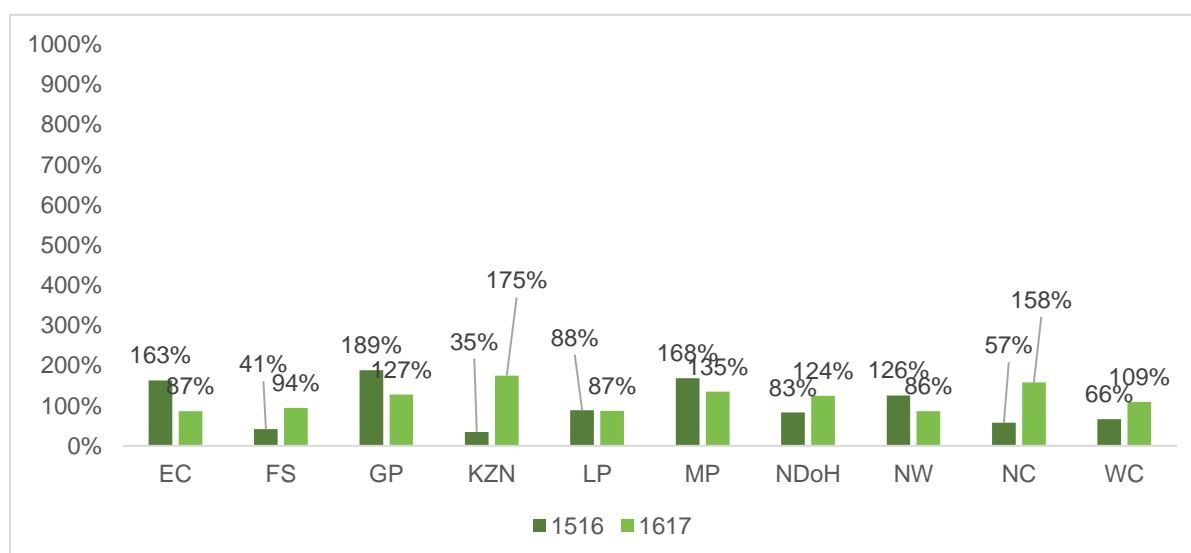


There is an ongoing risk of a lack of capacity in the provinces in terms of human resources and necessary skills which impact on the overall management of the various grants. The quality of the variance reports has not fully improved however the NDOH is continuously interacting with the provincial Grants Managers and Grant Coordinators to correct the issue of the variance reports.

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

Provinces did however show an improving ability to spend allocated funding as the years progressed and the indirect grant appears to be a valuable way to fund new initiatives. Whilst these increases in expenditure are welcomed, the inflexible nature of the funding grants along with specified criteria did make it difficult for Provinces to apply the funding grants to specific needs relevant to their Province or District. It would be useful to understand the needs and requirements of the Provinces in order for future funding to be flexible enough to allow for specific initiatives in certain Provinces which might not be relevant to other Provinces. This however needs to be considered within the framework and guidelines of the grant expenditure. In future years, it would be valuable to see itemised spending on these NHI projects, so that a deeper analysis of the cost effectiveness and impact of the projects can be conducted

**KEY OBSERVATIONS:**

- 76% of the total direct grant budget was spent over the 5-year period;
- Provinces were able to make better use of the Grant over time. This could be an indication of initial uncertainty amongst the districts and provinces in terms of what the grant should be used for and what the procurement process was;
- 84% of the indirect grant was spent over the period. The majority of the spend was for GP contracting and HPV vaccination programs;
- Additional programs i.e. SVS, CCMDD, HPRS, started receiving funding from 2016/17;
- Several programs were reliant on donor funding initiatives;
- 83% of the health facility revitalisation component was spent over the period;
- Looking forward, clearer procurement processes need to be established for Provinces to plan make full use of the grants provided;
- Key objectives and expectations need to be communicated, per program, to the provinces and districts to ensure appropriate business plans are aligned to the budget allocations; and
- Lack of capacity in the provinces in terms of human resources and necessary skills need to be addressed as this has an impact on the overall management and reporting of the various grants.

# CHAPTER 4: CONCLUSIONS

## 15. OVERALL PROGRESS MADE IN PHASE 1

The primary objective of this evaluation was to assess progress made during NHI phase 1 implementation against the set objectives and targets. Specifically, the evaluation intended to;1) identify which of the interventions have been successful and the factors that promoted their success during implementation; and 2) identify which interventions have been the least successful and the barriers to successful implementation and the unintended consequences of implementation. Furthermore, the aim of the evaluation was to assess the impact of the pilot districts on the access and quality of services, however, it has been very difficult to assess the impact of NHI phase 1 because of various important factors.

The majority of the interventions implemented during NHI phase 1 were implemented to scale. Since interventions were scaled up beyond the pilot districts, it is difficult to identify major differences in performance between pilot and non-pilot districts. The lack of a 'control group' made it difficult to evaluate the impact of the interventions.

Indicators of access to and quality are complex and difficult to measure. While National and International guidelines are being developed theses were not available nor measured during NHI phase 1 implementation. Additionally, baseline measures were not established in all pilot districts and the start of implementation making it difficult to assess if there has been any improvement since the start of NHI phase 1 implementation.

In assessing the routine and outcomes data, it was difficult to identify a clear trend as the data varied. In some years, indicator performance appears to have increased significantly in one year, however the performance these indicators showed little to no improvement in the following year. Moreover, the assessment of indicators depends on the availability of accurate denominators which were not always available and varied from year to year. While the quality of data provided improved over the course of implementation there was still a data quality challenge with the final dataset obtained. All of the mentioned factors contribute to the challenge in assessing health outcomes and the impact of the various interventions.

It is therefore unsurprising that the evaluators are unable to provide an overall assessment of the success or failure of NHI phase 1 implementation. The answer is nuanced, and it is more feasible to comment on the implementation success of the 10 interventions which have been the focus of this evaluation. The conclusions of this evaluation are based on the literature findings, findings from the interviews and surveys undertaken during the evaluation and the analysis of the routine and outcomes data from the DHIS undertaken as part of the evaluation.

The NHI Phase 1 interventions experienced both success and challenges during implementation. The success of interventions was driven by a number of factors including; strong political will, adequate human and financial resources for implementation, good coordination and communication and good monitoring systems in place at the time of implementation. During implementation the interventions also faced a number of challenges and to varying degrees, these factors hindered their success. These included inadequate planning, lack of resources, inconsistent communication a lack of coordination where necessary and insufficient mechanisms to monitor progress to ensure course correction.

## 15.1. WBPHCOTS WARD-BASED PRIMARY HEALTHCARE OUTREACH TEAMS (WBPHCOTS)

The WBPHCOTs intervention has been largely successful in NHI phase 1 implementation. These outreach teams were successfully introduced into communities and reported to have reached a large proportion of community members in need of health services during phase 1. Reaching individuals in need of healthcare is imperative in the attainment of the goal to improve access to health for South African communities. The success of this intervention is seen in the indicator improvements at the districts for the increase in OHH visits (household visits and referrals to facilities). Stakeholders view WBPHCOTs as an important component in promoting increased access to healthcare services. The value that has been placed on these teams, meant that each district was well staffed with WBPHCOTs, and the use of community healthcare workers who are from the same communities played a major role in their success. This meant that they had a real understanding of the geography, community characteristics and social setting of their communities in undertaking their work. WBPHCOTs collected data during their household visits, which was integrated into the DHIS system.

However, there are some notable challenges experienced during implementation of this intervention. While these teams are well staffed, the staff composition of many of the teams lacked an outreach team leader which altered perceptions about quality of care received among community members. One of the WBPHCOTs core functions was to channel referrals to facilities. However, there is limited data on the effectiveness of referrals and follow ups made from communities and facilities. Finally, while data was collected routinely during household visits this data was collected using a paper-based system which compromised the data quality due to the lag between capturing data and transferring it into the system. The next phase of this programme needs to focus on ensuring that referrals are taking place and tracked through unique patient identifiers, and that data elements are recorded electronically for real-time integration with the DHIS.

## 15.2. INTEGRATED SCHOOL HEALTH PROGRAMME (ISHP)

It is evident that the ISHP programme has successfully screened a large number of school- going children for health conditions, mainly screening for vision and hearing impairments, and oral health. The successful implementation of this programme required good inter-departmental collaboration with the DBE and this collaboration was demonstrated during NHI phase 1 implementation.

While screening has been a major success, the intervention has been less successful in ensuring that learners access the much-needed services they have been referred to. A major barrier to the success of the ISHP programme has been ineffective and non-standardised referral systems, which also had no feedback measures in place between the ISHP teams, facilities and the schools or DBE. This translated to ISHP nurses not being able to establish whether school-going learners were indeed able to access the required services. Ultimately, the feedback mechanism should link the referral process to the ISHP nurse as well as the WBPHCOTs for the district. Unique patient identifiers would also allow for better monitoring and evaluation of the programme. The lack of sufficient equipment and resources also hindered the programme's success in NHI phase 1. Lastly the ISHP programme was standardised across primary and high school learners, however, literature has shown that learners of older ages have different health needs to younger learners and that this age group would benefit more from programmes focused on sexual and reproductive health.

## 15.3. GENERAL PRACTITIONER (GP) CONTRACTING

Historically, PHC facilities have not had medical officers present to support the team led by the PHC Professional nurses. The introduction of this intervention, contracting GPs to PHC facilities, has improved direct access to medical officers for communities. As a result of the increased GP presence, patients perceived an improvement of quality of care received during their visits. However, GP contracting was not implemented to scale, and in the NHI pilot districts, many facility managers reported not having a GP contracted to support the facility during NHI phase 1 implementation.

The programme initially struggled to attract large numbers of GPs although it later gained more momentum as phase 1 progressed. However, the management of the programme seems to have been inadequate. The lack of adequate planning impacted the coordination between GPs and the NDoH. Contracted GPs were essentially viewed as "subcontractors" and could not be paid using NDoH guidelines or through the government payroll system. This loophole allowed contracted GPs to claim for an unverified number of hours and for expenses which typically, would not be reimbursed to other staff in the public health sector. Increasing human resources bill in PHC facilities through GP contracting became unaffordable to effectively sustain and scale up. Furthermore, the impact on the actual quality (not just patients' perception of quality) of services provided in public healthcare facilities is unknown.

An unintended consequence of GP contracting is evident in the shifting of limited resources within the public sector. Public sector doctors are understood to have resigned from their full-time employment positions and opted to be contracted under the NHI GP contracting agreement. While the intention was to encourage private sector doctors to avail themselves to support the public healthcare system, it appears the incentives attached to GP contracting resulted in further constraints as it drained full time resources from the public healthcare sector. Although increased access to doctors in PHC settings may be desirable it may not currently be affordable at scale or the most cost-effective method to improving health outcomes at PHC.

## 15.4. IDEAL CLINIC REALISATION AND MAINTENANCE (ICRM)

The success of this intervention lies in its ability to help facilities to quantify their needs and better advocated for the required funding. Where implemented as envisioned, there was a perceived improvement in quality of care by both facility mangers and patients.

However, implementation of ICRM became frustrating for facility managers, who complained about the short duration of implementation allocated to the fast-changing requirements of ICRM. The programme became implemented as a regulatory exercise rather than being driven by the vision to provide quality healthcare. Like other interventions, it has been hard to assess whether ICRM did indeed lead to improvements in the quality of care being delivered at PHC facilities because of the generalised implementation beyond the NHI pilot districts.

## 15.5. DISTRICT CLINICAL SPECIALIST TEAMS (DCSTS)

These highly trained medical specialists were introduced as a means to improve the quality of services through strong mentorship and capacity building of staff in districts. Where implemented, DCSTs have indeed been shown to have capacitated staff and ultimately improved some aspects of healthcare at facilities. Stakeholder have identified that the introduction of DCSTs in districts has indeed promoted better clinical governance.

However, this success was not uniform, and was largely dependent on achieving the full DCST composition. There was an intended focus on improved neonatal, child and maternal health, and the DCSTs were supposed to include specialists such as obstetricians, gynaecologist, and paediatricians. However, the majority of the teams were missing these critical resources. This meant that, while has been some success in the introduction of these teams, and there have been initiatives to improve quality of care, the implementation of DCSTs continues to be patchy, and the impact on improving neonatal, child and maternal care hard to assess. These specialised teams of clinicians may not necessarily be effective as mentors and trainers and with the high cost attached to distributing these the teams in districts, the long-term cost-effectiveness and sustainability of DCSTs may need to re-assessed.

## 15.6. CENTRALISED CHRONIC MEDICINE DISPENSING AND DISTRIBUTION (CCMDD)

CCMDD has been identified as the NDoHs' flagship programme during NHI phase 1 implementation. A number of facilitating factors are understood to have contributed to the success of CCMDD. The most important is the leadership behind the programme. The presence of visible leadership driving the process of implementation is beneficial for a number of reasons: the vision is well communicated, ensuring all implementers are clear on the vision and furthermore motivated to put their effort behind the intervention. More significantly, strong leadership assists in finding solutions to challenges as they arise, and assists in finding ways to work through bureaucratic blockages which often act as barriers to successful implementation.

The initial facilitating factor was the emphasis on communication and training. The aims and objectives of CCMDD were communicated to all district level staff and facility staff were well trained on CCMDD, and enrolment of patients onto the programme, and this facilitated rapid scale up. A contributing factor to the awareness and training surrounding the CCMDD program was the appointment of service providers in the provinces who were appointed to manage the CCMDD implementation. When it became apparent that the programme was going to continue to enrol patients beyond its initial plans, managers were able to develop a scale-up plan and budget, which was required to ensure the successful scalability of the programme in conjunction with the service providers. An evidence-based proposal was presented to National Treasury, and this is understood to have assisted the release of additional funding for the programme. Significant donor funding for this initiative and the appointment of the service providers was also made available. The ability to provide an evidence-based proposal speaks to the strength of the performance monitoring of the programme. The strong focus on performance monitoring meant that there was good data collection and reporting which allowed programme managers to be able to support the request for additional funding. Strong reporting requirements were included in the service providers' contracts, which removed the burden from facilities and strengthened data collection and quality.

Nevertheless, there were some factors which hindered the success of the implementation of CCMDD. The appointment of a new service provider towards the end of NHI phase 1 implementation posed a challenge to the continuity of the programme. Furthermore, the large scale up meant that a large number of patients across the country who have in the past, received their chronic medication at facilities were now registered on to the programme and this required extensive coordination between the two processes. However, there was a lack of sufficient integration and coordination between facilities and the CCMDD PUPs which resulted in inadequate tracking of patients between the two systems. This requires strengthening in the next phase of implementation.

## 15.7. HEALTH PATIENT REGISTRATION SYSTEM (HPRS)

HPRS is understood to have significantly contributed to improved patient registration and record keeping in facilities. Where HPRS has been implemented with success, much of this success has been attributed to the way in which HPRS was introduced to the facilities and the communities. There was a sense of ownership of the programme and the strong communication from "owner's" about HPRS implementation, through the use of an engagement model with feedback mechanisms which has been noted as a facilitator to this success. This created alignment between the different stakeholders involved and ensured good coordination within the programme during the implementation phase.

Where HPRS has not been implemented with success, it is largely related to the poor connectivity at facilities and the challenges with the hardware required for this intervention. HPRS has been implemented in parallel to existing IT systems and the lack of integration between IT systems has contributed to duplicated efforts at facilities. Moreover, there is some disconnect in the prioritising of this intervention at the national and provincial levels within the department which impacted the interventions success.

## 15.8. STOCK VISIBILITY SYSTEM (SVS)

The SVS programme was largely implemented as planned, and has been successful in its aims to reduce stock outs and administrative pressure at PHC facilities. The stock visibility system allowed facilities to electronically capture information related to stock level in the facilities and managers, whom had live access to the system, could use the tool to effectively plan and ultimately minimise stock outs. The benefit of the SVS, which was real-time reporting of stock level, motivated staff to update the system regularly and promoted proactive management of drug levels in facilities among managers. Ultimately, the success of this intervention is underpinned by the large-scale implementation, the good coordination and more importantly the robust reporting of data (drug stock levels) which assisted and promoted proactive planning.

The implementation challenges of SVS were mostly related to issues around connectivity and challenges with the hardware required to input information. Where there is poor connectivity, facilities were unable to regularly update the system. The staff trained and responsible for the use of SVS were pharmacists and pharmacy assistants, however there was a lack of these cadres in facilities. The intervention will require continuous training to ensure that staff are able to use the system. The future focus of this intervention should allow for robust stock control management. Additionally, implementation of SVS during phase 1 was largely dependent on donor funding and the lack there of going forward will impact the scalability and sustainability of this intervention.

## 15.9. INFRASTRUCTURE

Infrastructure is a critical component in ensuring not only access to services but the ability to provide quality services to communities. It is evident that even small infrastructure changes had a large positive impact on the overall environment at facilities for staff and patients.

While this is evident, the success of this intervention has been significantly impacted by the perceived lack of ownership of the programme. The understanding regarding which government department is responsible for the implementation of infrastructure programmes in the health sector is not aligned. While some stakeholders believe it is the Department of Public Works (DPW's) mandate, other stakeholders believe that health related infrastructure is the DoH's responsibility, and they must ensure successful implementation. The lack of alignment and coordination between these two departments has been detrimental to the success of this intervention.

Infrastructure and maintenance programmes are evidently not a one-size fits all intervention, and need careful planning to ensure adequate implementation in order to successfully meet of the needs of each district. This careful planning is not evident during the implementation of NHI phase 1. Finally, Infrastructure programmes are often costly interventions to implement. Infrastructure development is not a once-off intervention, and requires consistent maintenance. The lack of planning capacity meant that infrastructure budgets went unspent and as a result the maintenance and repair of existing buildings was neglected. Ownership, effective planning, good coordination and realistic budgeting is critical to the future success of infrastructure programmes.

# 15.10. IMPLEMENTATION OF WORKLOAD INDICATORS FOR STAFFING NEEDS (WISN)

The WISN assessments provided standardised, evidence-based staffing needs at a facility level. WISN assessments increased facilities ability to understand their staffing needs required to provide quality services to patients.

However, this intervention faced a number of challenges. WISN was initially seen as an external departmental programme, not associated to NHI implementation. Although later acknowledged as an intervention which could be beneficial to NHI implementation, there continued to be a lack of full integration of WISN with other NHI phase 1 initiatives. Assessments of staffing norms should take place within the broader context of a review of workloads and performance management of staff.

The ultimate goal of the WISN standards is to ensure appropriate numbers of healthcare workers (determined by doctor, nurse, patient and bed ratios), with the right skills mix and in the right places to effectively meet the healthcare needs of communities. WISN identifies where there are gaps or surpluses in human resources, and this ought to assist facilities to motivate for additional resources or a reduction of resources. To date, where assessments were done, WISN has indeed been able to identify the staffing needs of facilities. However, there is often a lack of funding available to hire the required staff or create new posts. Thus, while facility managers could use the tool to understand their staffing needs, they were unable to fill the hiring gaps due to various hiring freezes- enacted by provincial DoHs or provincial treasuries. This indicates a lack of coordination and alignment between stakeholders. Intervention budgets need to be deeply aligned with the intended outcomes of the intervention in order to drive success. Also transferring of personnel from one facility to another may not happen easily due to labour relations and condition of work considerations. In this case implementing a planning without the ability to act on the outcomes only leads to frustration and dissatisfaction among managers.

# CHAPTER 5: RECOMMENDATIONS

This chapter presents the recommendations arising from this evaluation, which are presented in two distinct sections; 1) Strategic recommendations for NHI Phase 2, and, 2) Intervention-specific interventions as these interventions are scaled in NHI Phase 2.

# 16. STRATEGIC RECOMMENDATIONS FOR NHI PHASE 2

Based on the findings of this evaluation, the following recommendations are proposed to promote the goals of health systems strengthening and re-organisation of the health system, which underpin the NHI. These recommendations are intended to support effective implementation of NHI Phase 2, based on the factors demonstrated to influence the degree of success experienced in implementing NHI Phase 1 interventions within pilot districts.

As demonstrated in *Section 6:*

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*Governance of NHI Phase* 1, 'stewardship' of the health system is dependent on setting priorities, performance management and accountability. Leadership is central to each of these, and is enabled by effective communication to ensure clarity of vision. It is critical that programmes such as these included all stakeholders including provinces and districts whom are ultimately the leaders in implementation. It is therefore recommended that:

**Recommendation 1:**

Make the vision "real" for all stakeholders and communicate this vision clearly and regularly – for example, the Health Summit was used to create support and share the vision for health systems strengthening. Similarly, NHI Phase 2 should be launched with a clear vision and plan, which includes plans to realistically address weaknesses in the public health sector. The plan needs to include a clear theory of change which clearly illustrates the how change is envisioned; a results chain to link the various inputs, activities, outputs and outcomes leading to achievement of project impact; a set of defined indicators of success which will be used to measure improvement over time and baseline measurement to ensure that before and after comparisons can be made to ascertain the programme success. The plan needs to be clearly communicated, so as to ensure that all stakeholders are clear about the vision of NHI and the goals of phase 2.

In order to achieve clarity of vision and to generate buy-in during the process of priority setting, it is important that the understanding of cooperative governance and intergovernmental collaboration, as defined within the Intergovernmental Relations Framework Act, 2005 (Act 13 of 2015), is imbued throughout planning and implementation of NHI. Therefore, it will continue to be important to:

**Recommendation 2:**

Bring all stakeholders on board, especially provinces and districts, through cooperative governance and intergovernmental collaboration between all levels. Provide regular feedback to encourage common purpose and continued commitment to the NHI programme.

It is important to understand the subtle nuance that differentiates cooperation from collaboration. Cooperation without collaboration can lead to group think; a situation in which actors with experiences and views differentiated from common group views do not have space to influence group action and decisions then do not reflect the combined knowledge, experience and wisdom of the full group. Collaboration without cooperation can lead to disunity; a situation where there is conflict and disagreement because the governance structures required for collaboration are absent. However, when there is cooperation and collaboration, there is opportunity for more meaningful decision-making, greater creativity and more successful implementation (Gilson & Daire, 2011).

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**Figure 58: Cooperation and collaboration**

Cooperation
Mutual respect
Transparency
Shared goals
Independent decision-making
Short-term partnerships
Sharing ideas

Collaboration
Mutual trust
Vulnerability
Share values
Interdependent decision-making
Long-term partnerships
Generating ideas together
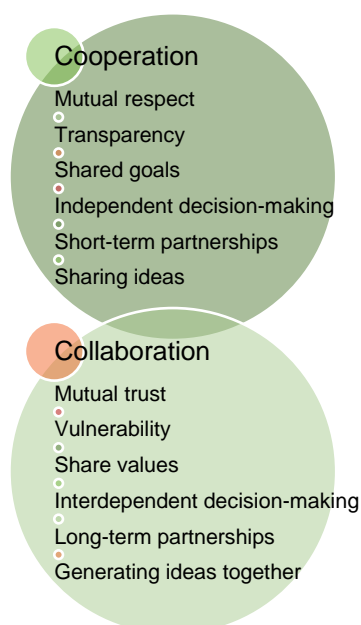
*Sources: Gilson and Daire (2011)*

In order to ensure that the vision of health systems strengthening and reorganisation of the health system through NHI is central to implementation, it is important that leaders and champions of NHI are identified throughout the health system. These leaders and champions should be responsible for assessing, designing and transitioning current governance structures within the health system to match the requirements for NHI functions. They should progress the vision of NHI and support implementation changes on a day-to-day, operational and tactical basis.

**Recommendation 3:**

Identify champions and intervention leaders at all levels, provide them with clearly defined roles and responsibilities. Leverage these champions and leaders to drive the vision and programme.

Strong accountability mechanisms are essential for good governance. Based on the findings of this evaluation, there is a need to strengthen accountability mechanisms and enable greater accountability at all levels of the health system. This implies a need to strengthen performance management. In particular, roles within NHI structures and NHI interventions should be aligned with the goals and priorities of interventions, such that personnel key performance indicators (KPIs) can have improved alignment to the NHI vision and objectives. Therefore, it is recommended to:

**Recommendation 4:**

Develop implementation plans with milestones and targets that are linked to Conditional Grant business plans and Annual Performance Plans (APPs). These milestones and targets should be used to identify key performance indicators (KPIs) for personnel performance management to encourage accountability.

Accountability will be further enhanced by ensuring that progress towards milestones and targets can be reliably assessed. This enables a judgment to be made as to whether the terms of Conditional Grants are being upheld

and that plans are being implemented as intended. Progress should be measured by establishing indicators of success and using these indicators to develop monitoring plans that include mechanisms to ensure data quality. Further, regular reporting and communication should be built into monitoring plans to enable course correction and continuous improvement, as well as stronger accountability to the terms of Conditional Grants.

**Recommendation 5:**

Define clear metrics for success which are measured and reported on regularly to enable continuous improvement and stronger accountability towards the terms of Conditional Grants. These should include measures of access to and the quality of health services.

This evaluation finds that the existing organisational culture limits staff's license to be creative, responsive and to take initiative; qualities required when embarking on a comprehensive health system strengthening and reorganisation programming. However, the current structures, rules and regulations are perceived by evaluation participants to stifle levels of innovation. The devolved nature of health systems governance implies that quality leadership must be available at all levels of the health system. This suggests that leaders need greater scope to adjust implementation to suit the realities of their local social, economic and political contexts.

Further, there is evidence that certain stakeholders are fearful of raising issues within current governance structures and of questioning the status quo. This stifles the generation of useful evidence, limits learning and diminishes the opportunity to benefit from the health system's greatest resource – the experiences and ideas of the people that work within the system. By encouraging a learning-oriented culture, the health system will not only enable greater innovation but will also contribute to staff feeling more empowered, and hence, more valued. Therefore:

**Recommendation 6:**

Develop a problem-solving, innovative and high-performance culture. Managers' leadership styles need to be assessed and mentorship should be made available to support a change in culture.

There is agreement in the literature that, while health systems strengthening and reorganisation requires 'big picture' systems thinking, there is great value in incremental reform, which includes incremental changes to governance structures (de Savigny & Adams, 2009). It has been shown that there is great opportunity to learn which governance structures are most suitable based on implementation experience (Management Sciences for Health, 2015).

**Recommendation 7:**

Allow for incremental implementation and learn from successes and challenges. Monitor for unintended consequences during programme implementation and course correct throughout.

Additionally:

**Recommendation 8:**

Have feedback loops between all stakeholder levels that allow for course correction throughout the system.

Building on the development of implementation plans, with linked milestones and targets, and clear metrics for success, it should now be possible to enable a greater level of accountability among staff for programme delivery. This requires improving personnel performance management. This requires locating personnel roles in

alignment with the goals and priorities of interventions; and staff KPIs and all Performance Management Development Systems (PMDS) should be aligned accordingly.

**Recommendation 9:**

Hold all staff accountable for programme delivery through measurable and actioned KPIs, and incentivise good performance.

Within this system of improved performance monitoring and strong accountability, it will be essential to showcase and celebrate successes. Motivation can be created by generating excitement around successes. This includes through communications, capturing of lessons learned, provision of incentives, *inter alia*. Successes can also be used as examples from which lessons can be learned. Finally, celebrating successes is a good counter for when it is necessary to take a firmer stance on issues of poor performance. Therefore:

**Recommendation 10:**

Celebrate successes and progress towards milestones and targets.

# 17. INTERVENTION-SPECIFIC RECOMMENDATIONS FOR NHI PHASE 2

The recommendations below are specific to the interventions that have been implemented during NHI Phase 1. It is recognised that the interventions assessed within this evaluation are being implemented in a fluid environment. These recommendations are, therefore, pertinent should the interventions continue and be scaled in NHI Phase 2.

## 17.1. WARD-BASED PRIMARY HEALTHCARE OUTREACH TEAMS (WBPHCOTS)

The aim of WBPHCOTs to service the community is important and, based on the evidence generated through this evaluation, has been generally successful. It is important to build on this success in order to generate further value for the health system. Indeed, WBPHCOTs' on-the-ground presence can be used to generation important insights that can be integrated into decision-making at district, provincial and national levels.

Evidenced by both the literature review and evaluation evidence, one of the defining factors of success for WBPHCOTs is strong management and support structures. It is evident that there is a need for continuous skills development of the WBPHCOTS[2] specifically as teams members change over time. In some districts, these structures have been absent or ineffective. This has resulted in certain WBPHCOTs being unclear of their role. Therefore:

**WBPHCOTs Recommendation 1:**

Each WBPHCOT should be provided with regular and appropriate supervision. They should be assigned a designated supervisor to realise their full staffing complement. Managers and supervisors should be responsible for clearly communicating the vision, objectives, priorities and KPIs of their teams.

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[2] This perspective was provided across stakeholders, including the Northern Cape Province Department of Health.

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The evaluation also found that, in some instances, WBPHCOTs were limited in their ability to discharge their duties because they were not able to travel to certain locations. WBPHCOTs should be provided with requisite resources to realise their important role within communities. In particular:

**WBPHCOTs Recommendation 2:**

Transport and equipment should be planned and adequately budgeted.

The evaluation also found that WBPHCOTs are recognised as the "soldiers of the community". They are able to reach population groups that do not often access clinics. There is an opportunity for WBPHCOTs to go beyond their current practice to be truly transformational in underserved areas. Therefore:

**WBPHCOTs Recommendation 3**

WBPHCOTs' scope of practice should be expanded to more than health promotion and referrals.

A shortcoming of WBPHCOTs demonstrated through this evaluation is that their service provision has not streamlined the referral of household members to facilities. While referrals are being made, these are not executed in a manner that improves the efficiency of referrals. By improving the simplicity, ease and speed of referrals, WBPHCOTs have the opportunity to engender greater trust between these teams and the populations they service.

**Box 5: Factors influencing effectiveness of CHWs**

There are several factors that present challenges for CHW programmes, and the challenges experienced by CHWs are the same between low- and middle-income countries. In fact, the following factors were identified within the WBPHCOT stream; sub-standard training, poor governance, unsatisfactory support and supervision, insufficient coverage and distribution, inadequate linkages with facilities, inconsistent remuneration, and lack of targets for coverage or quality.

Adequate training and support is critical to minimising knowledge gaps and ensuring CHWs provide good quality of care. Reviews of national CHW programmes in the 1980s and 1990s concluded that a lack of ongoing training and supervision as well as poor logistical and financial support were the causes of the poor quality of care delivered by CHWs.

*Sources: Genesis Analytics (2018)*

**WBPHCOTs Recommendation 4:**

Referrals from WBPHCOTs should be prioritised by the facility. This could be done through the implementation of a strong management system as suggested by the Free State Province. Teams should be empowered to facilitate a simple, easy and speedy referral process by setting up 'priority status' appointments at facilities on behalf of the identified patient. The WBPHCOTs should also be alerted via a referral process to conduct home-based visits in follow-up to patients that have visited the facility.

WBPHCOTs are also uniquely positioned to play an important strategic and tactical role in the health information systems, aligned to the WHO Building Block referring to health information systems. While this is not currently within the scope of their role, the tools that they use can easily be adapted to generate valuable information. It can then be explored how this information could be integrated into the district and provincial health information system. Planning within the health systems can benefit from more regular and more disaggregated data. Therefore:

**WBPHCOTs Recommendation 5:**

WBPHCOTs should be utilised as data collectors to obtain data on population health and across interventions in order to better understand the population and their priority health needs. Electronic systems should allow for WBPHCOTs to report on household data.

However, the accumulation of data is meaningless without ensuring that this data is aligned with agreed milestones and targets (as per the Conditional Grants), in order for newly generated data to be considered as meaningful evidence for decision-making. For example, indicators such as Outreach Household (OHH) visit rates are currently not integrated into the DHIS, but WBPHCOTs could conceivably feed this data into the system. This could be a means of generating wellness status profiles at household level within each WBPHCOTs' catchment areas. Then, these wellness status profiles could be aggregated to inform service provision. Given the frequency of WBPHCOTs' visits to households, it is likely that this data could be updated more regularly. This data availability would enable a more responsive health system that caters to the specific health needs of district populations.

# 17.2. INTEGRATED SCHOOL HEALTH PROGRAMME (ISHP)

**Box 6: Does vision screening make a difference? Evidence from a recent Cochrane Review**

A recent Cochrane Review, which included studies from China, India and Tanzania, was conducted to determine if vision screening of school-age children and adolescents reduced the number of children who needed spectacles but do not have any, or are wearing the wrong prescription. The original studies compared vision screening with the provision of free spectacles versus vision screening with no provision of free spectacles (prescription only), among other treatments. The findings of this review provided high-certainty evidence that vision screening with provision of free spectacles resulted in a higher proportion of children wearing spectacles than if vision screening is accompanied by provision of a prescription only (risk ratio (RR) 1.60, 95% confidence interval (CI) 1.34 to 1.90; 1,092 participants).

*Sources: Evans, Morjaria, & Powell, 2018; Evans, Morjaria, & Powell, 2018*

From the literature review and primary data, it is evident that programmes which are unable to provide on-site services are unlikely to generate improvements in health outcomes. If a child is screened and is indicated to need spectacles, a more considered system of linking the child to care will improve the likelihood of spectacles to be provided. If it is expected that the child's family must seek further care on their own initiative, it is more likely that they will attrition out of the system. The success of this intervention is dependent on the implementation of strong management systems for referrals.[3]

Therefore:

**ISHP Recommendation 1:**

For primary schools, screening programmes need to have a close link to services, which are ideally delivered on site, or referrals should be standardised and include effective feedback mechanisms.

Like other interventions, ISHP should be based on the needs of the population they serve, in this case the needs of the school-going population. Provision of services should be age-linked. For example, it may be more appropriate to provide vision and hearing services for younger learners in primary schools, but introduce sexual and reproductive health services in secondary schools.

**ISHP Recommendation 2:**

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[3] Free State Province Department of Health mentioned this specific dependency, which is crucial for the successful implementation of strong management systems for referrals.

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The services provided through ISHP should be tailored to the health needs of particular age groups within the school-going population, as well as cultural and demographic considerations. For high schools, the priority should be on sexual and reproductive health services where nurses are referring to care.

Further:

**ISHP Recommendation 3:**

Transport and equipment (both capex and maintenance) should be adequately budgeted for.

# 17.3. GENERAL PRACTITIONER (GP) CONTRACTING

**Box 7: Effects of poor communication with contracted documents**

A case study from O.R. Tambo district in the Eastern Cape of South Africa found that private doctors had the capacity to deliver quality care to public patients. However, low uptake of the national contract related mostly to lack of effective communication and consultation between private doctors and national government which created mistrust and apprehension.

*Sources: Hongoro, 2015*

GP contracting was indicated by the evaluation findings to be an expensive model. An additional cost item pertained to doctors claiming for kilometres travelled to facilities and the hours they work as mentioned by Mpumalanga Province. As a result, evaluation participants cited challenges to sustain the current contracting mechanisms. While the intentions of the intervention are well-founded, without ensuring the budgetary capacity to implement the model, its potential cannot be realised. Therefore:

**GP Contracting Recommendation 1:**

Contracting of GPs needs to shift from contracting GPs to work sessions at public sector facilities to contracting GPs to work in their own facilities, but seeing all patients and being reimbursed by the state. This could be using a capitation model which has been supported by Provinces[4], or other outcomes-based reimbursement schemes, but ideally not fee-for-service payment models.

Further, the evaluation finds that it proved difficult to manage the performance of GPs and to ensure that their services within districts justified the costs of their remuneration. The management of GPs will need to be guided by clear management plans[5] which are put into effective at contracting stages.

Therefore:

**GP Contracting (and contracting of other HCPs) Recommendation 2:**

HCP contracts need to be carefully monitored and processes should be put in place for regular supervision and oversight. For example, there should be regular auditing to ensure there is no fraudulent activity. There should also be clear performance indicators, as mentioned by the Eastern Cape Province.

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[4]This feedback was provided by the Eastern Cape Department of Health.

[5] Free State Department of Health mentioned this specific need in order to enable effective contracting.

**Box 8: Factors influencing effective implementation of specialist contracting**

A study on contracting specialists for emergency medical obstetric care in India found that contracting-in was useful for non-emergency conditions such as elective caesareans but not for emergency obstetrics. A number of barriers were cited to the effective implementation of contracting-in with obstetric specialists:

- Poor infrastructure required for emergency obstetric care meant that there was limited availability of blood storage facilities.
- Long distances and difficult terrain are some of the issues cited with poor access to private specialists.
- Government employed specialists reported unsatisfactory financial provision for their services. This speaks to the importance of determining a contracting fee that does not disincentivise practitioners from working within the public sector but is still attractive enough to draw private practitioners in.

*Sources: Randive, Chaturvedi, & Mistry, 2012*

Finally:

**GP Contracting (contracting of other HCPs) Recommendation 3**

Salaries should be benchmarked and consistent so as not to shift resources and to ensure sustainability of the intervention.

# 17.4. IDEAL CLINIC REALISATION AND MAINTENANCE (ICRM)

ICRM is an intervention of excellent intentions. However, according to evaluation participants, the ultimate vision of the ICRM was diminished by over-bureaucratisation and inflexible guidelines that were unsuitable to local social and economic realities. Evaluation participants also expressed that ICRM standards can undermine economy and cost-effectiveness when standards are not adjusted to suit facility-specific conditions. Specifically, it was mentioned that ICRM and OHSC assessments appeared to be a duplication and created a burden on HCPs[6] because of the frequent implementation at facilities. Further frustrations were caused because funding created constraints on ensuring the ideal clinic status was continuously maintained, as mentioned by Mpumalanga Province. Thus:

**ICRM Recommendation 1:**

There should be a limited set of core ICRM standards for all facilities. A flexible set of standards based on conditions and needs at specific facilities.

Further, some evaluations participants within districts and facilities expressed that certain requirements were impossible to meet due to procurement mechanisms at facility-level. This hampered successful attainment of ICRM standards. Therefore:

**ICRM Recommendation 2:**

Simplify procurement mechanisms at a facility level, especially for routine maintenance through delegations.

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[6]This perspective was shared by Mpumalanga Department of Health.

Finally, this evaluation finds that the ICRM standards changed just as districts and facilities began processes to comply with original ICRM standards. According to evaluation participants, these changes created policy uncertainty, resulting in demotivation to comply. This limited the seriousness and commitment facilities showed towards implementing ICRM reforms. Because a programme of health system strengthening does require a degree of flexibility to enable responsiveness, it is understood that changes to standards can be expected and, under certain circumstances, is desirable. However, this must be balanced with maintaining policy certainty and working within existing budget cycles. Therefore:

**ICRM Recommendation 3:**

ICRM standards should be set for a two-year period and reviewed in that time frame, or longer. For example, the Free State Province suggested that this be a three-year period.

## 17.5. DISTRICT CLINICAL SPECIALIST TEAMS (DCSTS)

The evaluation findings demonstrate that implementation of DCSTs was not uniform across the NHI pilot districts, and in some instances the teams were carrying-out clinical work rather than serving the intended role of capacity building. Therefore, the implementation of DCSTs in NHI Phase 1 serves as a good example of the importance of maintaining the NHI vision across levels of government, and ensuring strong and effective communication of plans throughout the system.

It is also a good example of provinces and districts adjusting a plan based on their capacity needs; therefore, serves as a reminder of the importance of 'bottom-up' planning such that the intended functions of the DCSTs are responsive to local contexts. It is further recognised that the Minister of Health has championed DCSTs and this has generated buy-in, at least within the NDoH and provincial departments.

This evaluation concurs that DCSTs have largely been successful, however:

**DCST Recommendation 1:**

The DCST model should be reviewed, through a cost effectiveness analysis, to determine if it is the most cost-effective and highest impact method for improving clinical governance and quality of services and whether or not the model is appropriate to be implemented in different settings

In some districts, DCSTs have had a mixed reception. This is primarily related to the DCST composition not reflecting the correct skills to undertake capacity building and training activities which could have been mitigated by training on mentorship[7], Additionally, task shifting could be employed as a strategy to increase optimal use of scarce resources as mentioned by the Kwa-Zulu Natal Department of Health, Therefore:

**DCST Recommendation 2:**

The role of DCSTs should be clearly defined and there needs to be clear communication that the primary role of DCSTs is improving the quality of care at PHC facilities, rather than providing services themselves

Finally, future implementation of DCSTs should be mindful of unanticipated results. For example, this evaluation finds that payment disparities resulted in an expensive model that pulled specialist resources out of secondary and tertiary facilities. Thus:

**DCST Recommendation 3:**

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[7] Free State Department of Health

Salaries should be benchmarked and consistent with specialist services in the rest of the public service sector.

# 17.6. CENTRALISED CHRONIC MEDICINE DISPENSING AND DISTRIBUTION (CCMDD)

Overall, evaluation participants viewed CCMDD as a successful intervention. However, one factor was described by all stakeholders as having affected implementation; the change of service providers appointed to implement CCMDD. Transfer from one service provider to another requires careful management to ensure proper handover of databases, standard practices and institutional knowledge. Unfortunately, evaluation participants suggest that this was not the case, Therefore, there is a need for policies and guidelines to inform the process for changing service providers. This will be a vital component of sustainability for NHI Phase 2.

**CCMDD Recommendation 1:**

There needs to be planned transition of service providers, if and when there is a change in service providers.

One specific issue affected the impressive success of CCMDD. During transfer from one service provider to another, the list of patients was not shared from the original provider to the incumbent. In fact, it was recommended that the incumbent create a new list, given the issues that were experienced with the first list. While this strategy was appropriate to ensuring that implementation challenges were not completed, it is also the case that adhering and valid patients faced delays in obtaining medicines. Therefore:

**Box 9: Factors that influence contracting relationships with private providers**

The literature suggests that important factors in the relationship between the contracting parties is the degree of flexibility and cooperation, rather than the specifics of the contract document. It is further concluded that contracts should pay attention to appropriate incentives, not necessarily financial, for both the purchaser and the provider.

*Sources: Palmer, 2000*

**CCMDD Recommendation 2:**

Systems must be in place to ensure coordination between CCMDD pick up points and facilities to ensure no patients are lost to care. Furthermore, PUPs should be stationed at clinics in remote/rural areas where service providers are unable to provide standalone PUPs[8].

Finally, CCMDD demonstrates good potential for scaling. Therefore, as the system expands, thoughts should turn to how best to maintain current levels of success. In particular:

**CCMDD Recommendation 3:**

As the system grows, it will require additional oversight and management support, and all provinces should have a transition plan in place[9]

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[8] This requirement was suggested by the Eastern Cape Department of Health.

[9] The importance of managing transition was highlight by the Free State Department of Health.

# 17.7. HEALTH PATIENT REGISTRATION SYSTEM (HPRS)

HPRS has been successful in getting facilities onto the system, but unequal implementation has created frustration as the system is yet to be implemented successfully in all facilities. Healthcare IT connectivity helps bridge fragmentation to provide better integration[10]. It is also important that once the system has been implemented in a facility, it can be sustained. Thus:

**HPRS Recommendation 1:**

Programme requires holistic budgeting for hardware, software, connectivity and staffing to ensure it can be expanded to the Electronic Medical Records (EMR) stage, across all health facilities as mentioned by the KwaZulu Natal Province Department of Health.

The HPRS system benefited from a small implementing team and a dedicated programme champion, which enabled them to seek creative solutions to work within existing regulatory and bureaucratic frameworks. This factor was key to the success of HPRS. Importantly, this manner of adapting implementation to suit the context is a lesson that should be applied to other interventions.

Despite this commendable and creative way of working, it is also true that the team operated in a siloed nature, which meant that implementation at the facility-level was challenging given that the intervention was spearheaded at NDoH. Small teams need to be cautious that the future vision and purpose of the intervention is effectively communicated top-down, and that communications reach facilities timeously. It is, therefore, worth considering how a small team might achieve the degree of sustainability and scalability required for NHI Phase 2. Therefore:

**HPRS Recommendation 2:**

Capacity building and mentoring of new team members is recommended as the programme needs to have continuity beyond a single champion.

HPRS has enjoyed good success and resulted in a tangible change in the way information is managed at facilities. This was supported by thorough training of system implementers. The next phase of HPRS should include generating medical records associated with each patient profile, so that the system might be used for value-generating activities; for example, tracking patients' facility visits to assess frequency and reason for visits.

**HPRS Recommendation 3:**

Once the next phase of HPRS commences, the duplication of processes (paper based and online registration) needs to be avoided through robust system architecture.

There is great utility that can be achieved through HPRS, aligned with the vision for NHI and with improving health information systems (in terms of the WHO Building Blocks); therefore, deepening and scaling this intervention should be prioritised. The next phase will require ensuring inter-operability of all IT systems.

**HPRS Recommendation 4:**

Expertise needs to be sourced to strengthen the inter-operability of various IT systems (as supported by the findings of the Kwa Zulu Natal Department of Health pilot report), including HPRS.

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[10] This insight was shared by the Gauteng Province Department of Health.

## 17.8. STOCK VISIBILTY SYSTEM (SVS)

This intervention has been demonstrated by the evaluation to have been successful in decreasing stock outs nationally. However, in certain locations, this success has been limited by access to updated information. Therefore:

**SVS Recommendation 1:**

Districts officials need to ensure that facility managers and staff understand the importance of regularly updating the information in the system. This requires, that there are pharmacists and pharmacy assistants at facilities[11]and that they are continuous trained to fully understand and have the ability to use the system.

While successful, this intervention has relied heavily on donor funding, which creates concern around its sustainability and scalability to other facilities should only government funding be available. Thus:

**SVS Recommendation 2:**

Planning needs to take place to ensure sufficient domestic funding is available to maintain the current success of SVS into future years.

This interventions success is largely impacted by the availability of adequate internet connectivity and hardware thus:

**SVS Recommendation 3:**

Funding needs to be allocated for software, hardware, connectivity and staffing to ensure efficient continuity of SVS for all PHC Facilities throughout the country[12]

Finally, to ensure the success of this intervention:

**SVS Recommendation 3:**

There needs to be a focus on stock control managements, in future so as to enable more dynamic stock management on include warning for low stock and better forecasting for medicines needs at facilities.

## 17.9. INFRASTRUCTURE

Infrastructure is a critical component of a well-functioning primary healthcare system. Indeed, infrastructure affects the success of all other interventions thus its importance cannot be overstated. Long-term planning related to infrastructure is critical, however, too often, investment is made into new infrastructure with little thought to its maintenance. Therefore:

**Infrastructure Recommendation 1:**

Differentiate funding for maintenance and funding for infrastructure development, and funding mechanisms need to be put in place for both these activities. This may precipitate the need for multiple funding sources [13].

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[11] This requirement was specifically mentioned by the Mpumalanga Province Department of Health.

[12] The Northern Cape Department of Health highlight the national scope of this recommendation.

[13] Gauteng Department of Health suggested the implication of this recommendation.

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

Further, a fundamental issue with infrastructure can be ameliorated by ensuring that:

**Infrastructure Recommendation 2:**

District and facility managers need capacity building around planning for procurement of infrastructure, and maintenance.

# 17.10. HUMAN RESOURCES FOR HEALTH: WORKLOAD INDICATORS FOR STAFFING NEEDS (WISN)

While WISN has only experienced limited success, it commendable that it is aligned with the global standard and is an internationally recognised system. This evaluation finds that the success of WISN was limited, in particular, by funding for human resources being reduced just as WISN was launched. Therefore, the value of this important system remains to be seen. The intention of WISN is clearly aligned with NHI, given the importance of information systems to understand how and where staffing allocation decisions need to be made. Despite these positive findings, the evaluation also finds that there is a need to ensure that WISN is context-specific and supported by Gauteng Department of Health which identified that more work needs to be done to contextualise WISN norms to the local South African setting.

**WISN Recommendation 1:**

Any assessment of staffing norms should take place within the broader context of a review of workloads e.g. the number of patients seen per day [14]and performance management of staff.

WISN could become a key tool within NHI; however, it requires that the governance structures and accountability considerations described in previous recommendations be enacted; namely:

**WISN Recommendation 2:**

Communication between relevant stakeholders (National Treasury) should take place before an assessment of staffing norms takes place.

Finally, to ensure the success, sustainability and scalability of NHI interventions:

**WISN Recommendation 3:**

There should be a holistic view of the human resources, of which staffing is just one component.

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[14] This example was provided by the Gauteng Department of Health.

# APPENDIX

## APPENDIX 1: APPROACH AND METHODS

## EVALUATION AIM, OBJECTIVES AND QUESTIONS

The overall aim of this evaluation is to evaluate the inputs invested, outputs made and intermediate outcomes of the service delivery improvement and interventions, which were implemented as part of NHI Phase 1 pilot districts. Additionally, the evaluation aims to make recommendations to inform the implementation of phase 2 of NHI. The specific objectives of the evaluation are to:

- Evaluate progress made during NHI Phase 1 against the objectives and targets set for the NHI initiative;
- Identify NHI phase 1 interventions (or aspects thereof) that are working and analyse the factors that promoted their successful implementation;
- Identify NHI phase 1 interventions (or aspects thereof) that are not working and analyse the factors (causal links/relationships) that have been barriers to successful implementation, as well as identifying possible unintended consequences of the implementation of the NHI phase 1 interventions;
- Assess the effect/s of interventions on service delivery in the pilot districts;
- Identify best practices in the implementation of NHI phase 1;
- Assess the required coordination and collaboration mechanisms that should have been put in place to enhance coherence in the implementation of identified interventions;
- Assess sustainability measures that could facilitate phased implementation of NHI, with a particular focus on NHI phase 2;
- Describe what would be required to scale-up successful interventions in NHI phase 2; and,
- Make recommendations that are actionable, realistic and feasible to implement.

Part of the evaluation includes undertaking:

- A systematic review of reviews/assessments/evaluations that have been conducted in the NHI pilot districts; and,
- A comparative literature review of the evaluation of NHI implementation between South Africa and other developing countries.

### Levels of enquiry

The Genesis Consortium developed a set of evaluation questions that aimed to achieve the evaluation objectives. The evaluation questions are distinguishable across three levels of enquiry, namely overarching, cross-cutting and intervention-specific.

- **Overarching questions:** This was a set of questions that applied to the entire implementation of NHI Phase 1 focusing on HSS at the broadest level. These questions sought to understand the overarching drivers of success and key challenges experienced during NHI Phase 1 implementation (the "what?"), what the key reasons for success and failure have been (the "why?"), and what the implications of these lessons are for NDoH and Provincial Departments of Health (PDoH) for NHI phase 2 implementation (the "now what?").

- **Cross-cutting questions:** This was a set of common questions that applied to multiple NHI Phase 1 interventions. These questions focused on common issues such as human and financial resources; alignment across district, provincial and national levels; and intended and unintended consequences. The purpose of these questions was to unpack the implementation and impact of the interventions.
- **Intervention-specific questions:** This set of questions probed specific aspects of a particular NHI phase 1 interventions. The purpose of these questions was to understand the more granular details of each of the interventions.

The full list of evaluation questions, according to their level of enquiry, can be found in Annexure 8.

# EVALUATION FRAMEWORK

## Identifying factors that affect implementation success

Damschroder et al. (2009) describe how an implementation science framework can be applied specifically to health systems in order to understand why and how health system interventions are implemented. The evaluation team have adapted this framework to also include five key measures of intervention success, namely: reach, effectiveness, adoption, implementation and maintenance as seen in Figure 59 (Damschroder, et al., 2009). The framework highlights the important factors, such as intervention characteristics and processes, target groups and the environmental context, which are all important when considering whether an intervention was successfully implemented or not. The evaluation questions were categorised according to these measures. In this way the evaluation team is able to ensure that there is interrogation of all factors that relate to implementation success.

**Figure 59: Factors predicting implementation success**
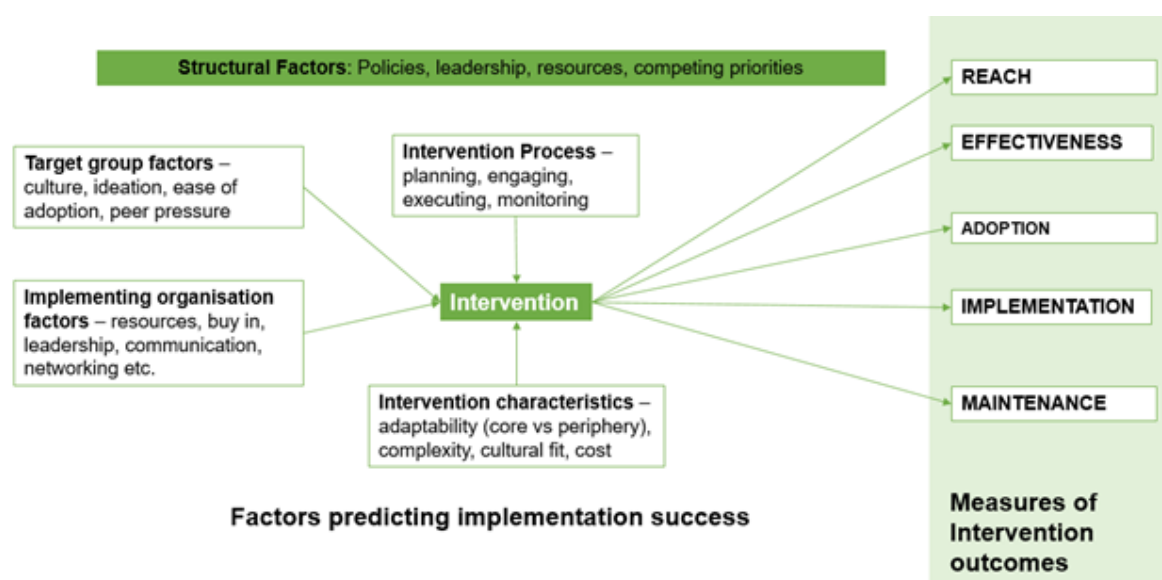


Source: Damschroder et al. (2009)

# EVALUATION APPROACH

## Evaluation principles

The evaluation approach used for this evaluation consisted of three components. These are depicted in Figure 60 and described in more detail below.

**Figure 60: Evaluation principles**
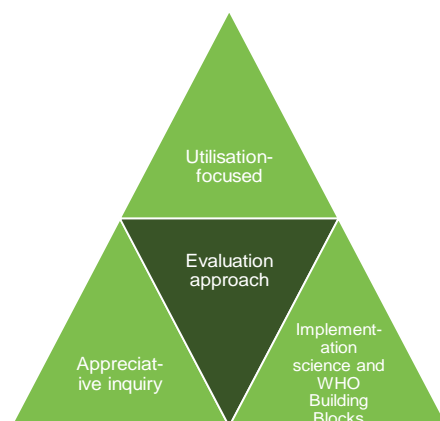


*Source: Genesis Consortium proposal submitted for the Tender NDOH10/2016-2017*

- **Principles of utilisation-focused evaluation (UFE):** A utilisation-focused evaluation is one that engages with the intended users of the evaluation at the onset, thereby ensuring that the evaluation addresses what is important and increases the probability that the evaluation findings are relevant and appropriate (Ramirez & Brodhead, 2013). The tools used in this evaluation were developed through a consultative process with the Genesis Consortium and NDoH, consortium members and the Technical Advisory Committee (TAC). Part of the inception phase of this evaluation included discussions with Chief Operating Officer (COO) and Deputy Director Generals (DDGs) of NDoH. These discussions were used to access "what matters" to each member and to get their nuanced insights into the NHI. These discussions were used to inform the evaluation and protocol in terms of questions and interventions to be included in the evaluation.

- **Principles of appreciative inquiry (AI):** The evaluation tools employed the principle of AI, which is based on an appreciative framework. In other words, the first questions asked did not focus on what has failed, but rather on stories of best practices, on positive moments, on the greatest leanings, on successful processes and on generative partnerships (Coghlan, Preskill, & Catsambas, 2003). This enabled the evaluation to assess the success of NHI phase 1 interventions and to create images of a future built on those positive experiences. Evaluation teams were also trained on how to conduct interviews and discussions in a way that promoted AI in order to gain the most useful insights for sustainability and scalability of NHI.

- **Elements of implementation science and the WHO building blocks of health systems:** The evaluation framework was also developed with the guiding principles of an implementation science framework in mind. An implementation science approach was used to supplement the WHO building blocks to understand why and how changes are implemented in a health system. In doing so, the evaluation is framed according to core components that contribute to the strengthening of health systems in terms of improving access to health coverage and quality of healthcare (World Health Organization, 2007). The WHO building blocks comprise six elements that are crucial for HSS, namely 1) service delivery, 2) health information systems,

3) financing, 4) health workforce, 5) access to essential medicines, and 6) leadership/ governance. When appropriate, WHO Building Blocks have been incorporated into the evaluation case studies so as to highlight the importance of this framework to NHI phase 1 interventions.

# EVALUATION METHODS

This evaluation made use of mixed methods to assess the NHI phase 1 pilot districts and NHI phase 1 interventions. Combined qualitative and quantitative approaches achieve the evaluation aim and objectives. In general, the qualitative approaches have been used to understand why interventions have succeeded and what has impeded the success of other interventions. Quantitative methods have been used to show by how much the interventions made a difference to the health system according to health indicator outcomes.

The following sections describe the process implemented to complete this evaluation; obtaining ethics approval, sampling and selecting sites, developing data collection tools, collecting data, managing and quality assuring data, and analysing and synthesising data.

## Ethics approval

National ethics approval was obtained from the University of the Witwatersrand's Human Research Ethics Committee (HREC) (non-medical). The evaluation team also obtained provincial access approval through the National Health Research Database (NHRD). Certificates for national research ethics approval and for provincial access approval are provided in Appendices 5-6.

A study protocol was developed for both national and provincial levels, which captured all details pertaining to the evaluation aim and objectives, methods, data collection, data management and analysis, and reporting. Using the research protocol, the evaluation team first applied for national research approval. Conditional approval was granted on 20 April 2018 on the basis that the evaluation teams obtained letters of permission to enter the different healthcare facilities (protocol number: H18/04/06). Using this conditional national approval, the evaluation team was then able to apply for provincial access approvals. Provinces had various procedures, which were followed as required. Once each province granted access approval, the evaluation team was able to enter the provinces and obtain permission letters from facility managers to undertake the evaluation at their facility. The letters were submitted to HREC, retrospectively. Full national ethics approval was granted on 21 July 2018.

## Description of sample and site selection

The evaluation team has used carefully selected sampling approaches to sample at different levels. The first step in the approach was sampling of facilities from the ten pilot districts. Following this, the evaluation team identified a sample of representatives for the interviews and surveys (national, provincial, district and facility level) as per table 3 below.

### Selection of facilities

#### Selection of facilities for in-person visits

The central component of the fieldwork was a series of facility visits. The facility visits were used to obtain qualitative (interview) and quantitative (survey) data, through engagements with patients and staff involved in

the implementation of the NHI interventions. Stratified random sampling was used to select facilities within the ten districts.

**Study population:** All PHC clinics and CHCs in the ten pilot districts

**Sample size:** Four PHC clinics /CHCs per district (in total 40 facilities)

**Type of sampling:** Stratified random sampling

**Methodology:** The NDoH supplied the evaluation team with a list of all the facilities in the ten NHI pilot districts. The list stratified facilities according to area (urban, peri-urban or rural) and according to facility type (PHC facilities or CHC). The first step in sampling was to identify appropriate sub-districts. It was noted that eight sub-districts had less than four facilities, which was below the required sample. For this reason, these sub-districts were excluded from the sample. Thereafter, two sub-districts were purposively sampled for each district. These sub-districts were sampled to represent an urban-rural split (as far as possible), as well as based on proximity to one another.

Since the aim of the evaluation was to generate lessons for Phase 2, it was important not to rely solely on purposive sampling so as to ensure that the sites were not only those that present the "best" practice, only. Thereafter, one CHC and three PHCs were randomly selected across the two sub-districts. Due to the small number of CHCs in a sub-district, options were sometimes limited to a single facility, which was used in the final sample. In the case of Thabo Mofutsanyana, there was no CHC in the district. PHCs were randomly selected using random number generation in Microsoft Excel. Random sampling ensured that the team was not directed to only the "best" facilities. The total sample of 40 facilities can be found in Annexure 9.

### Selection of facilities for telephonic interviews

Another 100 facilities were sampled in order to collect quantitative data though telephonic interviews with facility managers.

**Study population:** All PHC clinics and CHCs in the ten pilot districts

**Sample size:** 100 PHC clinics /CHCs across the 10 districts (10 facilities per district)

**Type of sampling:** Convenience sampling

**Methodology:** An additional 100 facilities were included in the study for telephonic interviews. NDoH supplied the evaluation team with a database of facilities in the pilot districts. From the list, the facilities that were already selected for in-person visits were removed. Facilities were then randomly selected by apply a random number generator in Microsoft Excel. However, due to high non-response rates using the random sampling, non-responses were substituted. It was agreed that telephonic interviews would continue until at least 60% of the final sample was achieved (i.e. 60 facilities were sampled).

## Strategy for identifying participants for the interviews

The evaluation population included key representatives at national, provincial, district and facility level. Table 13 below describes the evaluation population at these levels. The following sections then describe how the evaluation team identified these representatives for participation in interviews.

**Table 13: Evaluation population at different levels**

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| Level | Evaluation population |
|---|---|
| **National** | DDGs<br><br>DoH programme managers<br><br>Government stakeholders |
| **Provincial** | Provincial Heads of Department (HoD)<br><br>District Health Services (DHS) programme managers<br><br>NHI Coordinators |
| **District** | District Health Management Teams (DHMT)<br><br>District Managers (DM)<br><br>DCST members |
| **Facility** | Facility Managers (FM)<br><br>Pharmacists<br><br>Clerks<br><br>WBPHCOTs<br><br>GPs<br><br>Clinic committee members<br><br>ISHP nurses<br><br>Patients |

### National informants

**Study population:** DDGs, DoH programme managers and other government stakeholders.

**Type of sampling:** Purposive sampling

**Methodology:** These stakeholders were identified in consultation with NDoH. The evaluation team was were supplied with a list of roles and designations of key stakeholder groups for interview. The NDoH selected these representatives as they were key role players in the implementation of NHI. The final number of national stakeholder interviews was then dependent on the willingness and availability of the identified stakeholders to participate.

### Provincial informants

**Study population:** Provincial representatives, DHS programme managers and NHI coordinators

**Type of sampling:** Purposive sampling

**Methodology:** These stakeholders were identified in consultation with NDoH. It was agreed that personnel in roles that are related to the NHI would be selected for provincial level interviews. The number of provincial

stakeholder interviews was dependent on the willingness and availability of provincial stakeholders to participate.

### District informants

**Sample population:** DHMT, District Managers, and DCSTs

**Type of sampling:** Purposive sampling

**Methodology:** Similarly, to the national and provincial interviewees, these stakeholders were identified in consultation with NDoH. Stakeholders were selected according to roles related to NHI. Again, the final sample was based on willingness and availability of district stakeholders to participate.

### Facility informants

**Sample population:** Intervention-specific stakeholders (pharmacists, clerks, GPs and ISHP nurses), clinic committee members and 40 PHC/CHC facility managers

**Types of sampling:** Purposive sampling

**Methodology:** The 40 PHC/CHC facility managers were those that managed the selected facilities. In addition, the evaluation teams conducted interviews with pharmacists, clerks, GPs, ISHP nurses, clinic committee members and WBPHCOTs at the facilities. For the intervention specific stakeholders (pharmacists, clerks, GPs, ISHP nurses and WBPHCOTs) and for clinic committee members interviews were held with those who were available and willing to participate. When a facility manager was not available, interviews were undertaken with the acting facility manager or operations manager (OM) instead.

## Strategy for identifying patients for the quantitative survey

At PHC/CHC healthcare facilities, patients were surveyed on their experiences of accessing care. Using a quantitative survey, insights were gained into the views and opinions of patients regarding the quality of care, overall service offering and improvement of basic services. Since the purpose of the patient survey was to gauge patients' perceptions of changes in the quality of care over time, it was important to select patients who were likely to have experienced care at that facility over the last three years.

**Study population**: All patients visiting the PHC clinics and CHCs on the day that evaluation team visits who have made regular use of that facility over the last three years.

**Sample size:** Five patients per facility, 20 per district, 200 in total

**Type of sampling:** Systematic random sampling

**Methodology:** The intention was to select patients queueing in the facilities awaiting assistance. Based on the number of people in the queue, the team would sample every nth patient in order to get the five patients per facility, where n is obtained by dividing the number of people in the queue by five. However, during the piloting, it was evident that patients had reservations regarding participation in a survey with "outsiders". Facility managers then introduced the fieldworkers to patients. These patients would only be interviewed once their informed consent had been obtained.

The evaluation team anticipated lower response rates at certain facilities and so pre-empted this by oversampling at other facilities where patients were eager to participate. These patients were included in the final sample of patients, which eventually exceeded the expected 200 patients.

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# EVALUATION TOOLS

The evaluation made use of five evaluation tools, listed below and elaborated in this section.

- NHI Rapid Assessment review and comparative literature review outlines;
- Qualitative key informant interview (KII) guides;
- Quantitative facility manager survey questionnaire;
- Quantitative facility-user survey questionnaire; and,
- Routine and outcomes data dashboards.

Two review outlines were developed for the review of NHI Rapid Assessments that have been conducted in the NHI pilot districts from 2012 and for the review of comparative literature of South Africa and other developing countries. The information gathered from these reviews was used to inform the evaluation throughout.

The qualitative and quantitative data collection tools, were derived from the evaluation framework to ensure that the data collected is meaningful and not transitionary. The evaluation framework, in turn, was developed from the evaluation aim, objectives and questions. This guaranteed that the evaluation tools were made to answer the questions and achieve the evaluation aim and objectives. The data collection tools included qualitative interview guides and quantitative survey questionnaires and dashboards.

All the qualitative and quantitative data collection tools were pre-tested as described in the section "pre-testing of tools". Language considerations were accounted for. Information sheets and consent forms were translated into five languages (Afrikaans, Sesotho, Setswana, isiXhosa and isiZulu) and evaluators were selected with language preferences in mind.

## Qualitative interview guides

The evaluation team developed a four qualitative interview guides, which were customisable according to the participants' expertise and familiarity with the twelve NHI Phase 1 interventions. The four interview guides included:

1) National level interview guide (Annexure 4);
2) Provincial/ district level interview guide (Annexure 4);
3) Intervention staff interview guide (Annexure 4);
4) Clinic committee interview guide (Annexure 4); and,
5) Facility manager interview guide (Annexure 4).

- The guides were divided into the three levels of enquiry and collected data on the following topics: Background information;
- Factors that contributed to the success and the factors that hindered the success of the NHI Phase 1 pilot districts and interventions;
- Possible unintended consequences of implementation during NHI Phase 1;
- Lessons learned from NHI Phase 1;
- Coordination and collaboration mechanisms that contribute towards the success of implementation of NHI Phase 1 interventions;
- Governance and leadership structures and how that impact implementation of NHI Phase 1;
- Factors that are important for intervention scale-up in Phase 2; and,
- Factors that are important for intervention sustainability.

The interview guides were semi-structured with broad questions. The guides were also customisable according to the role and experience that stakeholders with implementing NHI Phase 1 interventions. The tool provided prompts and guidance to the evaluator to ensure that questions were always relevant, despite stakeholders being diverse.

## Quantitative survey questionnaires

The quantitative survey questionnaires were developed using a platform called Survey Gizmo, which is an appropriate and efficient tool for survey design and data collection. The quantitative survey questionnaires included:

1) Facility manager survey questionnaire (Annexure 5); and,
2) Patient survey questionnaire (Annexure 6).

The facility manager questionnaire made use of close-ended questions (yes/no questions or scaled questions) designed to be delivered telephonically. The questionnaire collected quantitative data on the 12 NHI Phase 1 interventions in relation to:

- Background information;
- Financial and human resources during the implementation of NHI Phase 1;
- Training during the implementation of NHI Phase 1;
- Communication during the implementation of NHI Phase 1;
- The impact of NHI Phase 1 on improving access and quality of healthcare; and,
- The success or challenges of NHI Phase 1 interventions.

The patient survey questionnaire was a short quantitative tool with close-ended questions that was administered to patients at PHC facilities. This questionnaire covered the following topics:

- Demographics;
- Use of healthcare facilities; and,
- Experience of healthcare facilities.

# DATA COLLECTION

The purpose of the data collection was to ensure that this evaluation gathered both qualitative and quantitative primary and secondary data, and considered both international and national experience, while enabling the evaluation team to triangulate diverse findings. The use of multiple data collection enables the evaluation team to gather perspectives from multiple stakeholders from national down to district level to get a complete picture of NHI phase 1 implementation. In this way the evaluation team are able to understand what has happened internally, as well as the impact on the end-users. The data collection also enables the review of trends over time and between areas as quantitative data was used to assess the changes in health outcomes across years and across pilot and non-pilot district. The use of mixed methods enables greater rigour, and more nuanced and contextualised data. This contributes to a more credible and insightful evaluation.

Secondary data collection included a review of the NHI Rapid Assessments and other NHI reports, a review of international literature, as well as collection of health outcome data for dashboard development. Each of these data collection processes were unique, as described below.

Quantitative and qualitative primary data collection was completed by conducting interviews and surveys at national, provincial, district and facility levels. Both in-person and telephonic methods were used to gather all

the data. Evaluation teams made in-person visits to the 10 districts. The evaluation team consisted of a senior-level evaluator who was responsible for facilitating the interview and mid-level evaluator who was responsible for note taking during the interview. All data was collected on a digital platform called Survey Gizmo. In-person interviews were audio recorded on a laptop, if consent was given. Telephonic interviews were conducted in Johannesburg by a mid-level evaluator. Evaluation teams were provided with training and a fieldwork protocol prior to going into the field. The primary data collection was pre-tested in a one district, before data collection continued in other districts. A total of 463 stakeholders were interviewed during primary data collection.

# Secondary data collection

## Review of NHI rapid assessments

The evaluation team reviewed four Status of NHI Pilot Districts Reports, the NHI Green Paper, the NHI Draft White Paper and the NHI Final White Paper. The purpose of this review was to get an overview of the successes and challenges of each improvement intervention, according to their inputs. From the review the evaluation team was able to identify factors that influenced the success of the implementation of the interventions, which were then used to guide data analysis. The findings from the review can be found in Annexure 10.

## Comparative review of international literature

A key component of this evaluation was to undertake a comparative literature review. The aim of this review was to provide evidence on the effects of selected HSS interventions and factors facilitating or hindering their implementation in low- to middle-income countries (LMICs). The literature review aimed to:

- Synthesise evidence on the effects of selected HSS interventions in LMICs;
- Explore factors contributing to or hindering the implementation of selected NHI initiatives in LMICs; and,
- Gather lessons learned from other LMICs for implementing similar NHI initiatives.

This review focused on interventions aimed at: improving access to healthcare for school learners, increasing access to scarce HCPs, improving community outreach services to promote health; and improving referrals in the health system.

In order to identify relevant literature, the evaluation searched online databases and asked health sector experts to share relevant documentation. The evaluation team searched for literature on the implementation of the interventions mentioned above as well as the effect on access to and quality of care. The evaluation team searched for articles which investigated factors explaining the successes, challenges and lessons learned as a result of these selected interventions. In instances where there has been limited literature from LMICs, literature from developed countries has been included in the review, but this has been stated explicitly.

Findings from the comparative literature review were used to triangulate the findings from the primary data collection. The evaluation team also used the comparative literature review to support the evaluation recommendations.

The draft literature review underwent various rounds of reviews from the Genesis Consortium and is currently being reviewed by the TWG. The draft comparative literature review can be found in Annexure 11.

# Primary data collection

## Pre-testing of tools

All the qualitative and quantitative data collection tools were pre-tested at one district, namely uMzinyathi in KZN.

## Purpose of the pre-testing

The purpose of the pre-test was to test the district data collection component of the evaluation. Specifically, the pilot tested two dimensions of the data collection.

The first dimension was to test the proposed fieldwork methods and processes. The second dimension was to test the appropriateness, understandability and usability of the evaluation tools. The NHI evaluation fieldwork methods was specifically tailored according to the evaluation team's understanding of the fieldwork process. While similar data collection exercises have been implemented successfully by the Genesis consortium in the past, there are always valuable lessons to be learned by undertaking a pilot. Finally, the pre-test also allowed the team to test whether five days in field was sufficient to collect data from the specified structures and respondents listed in the evaluation protocol and whether the evaluation tools required adjustments.

## Methods

uMzinyathi was chosen as the pre-test district as KwaZulu-Natal Provincial Health Research Committee was the first to provide approval to undertake fieldwork in the province. In addition, the office of the DDG for Macro Policy Planning and NHI in KZNDoH was highly responsive to the fieldwork needs and the evaluation team was mobilised in time to undertake fieldwork in uMzinyathi for piloting. These factors were addressed before the commencement of the main fieldwork phase.

## Pre-testing findings

Findings from the pre-test are presented below:

1. The envisaged five-day structure per district was confirmed to be appropriate to undertake fieldwork;

2. Overall, the developed tools were found to be relevant and allowed for rich data collection;

3. Language considerations were anticipated and all tools and interviewers were specifically allocated to districts based on their ability to communicate in the predominant language in each district;

4. Service delivery protests occurred during pre-testing and affected the completion of the fieldwork. In anticipation of such challenges, the fieldwork training included scenario briefs for various security alerts to ensure safety of evaluators while the research continued; and,

5. The success of the pre-test week depended greatly on the support which the evaluation team received from officials at the national, provincial and district offices. Therefore, building rapport and a good working relationship with provincial and district officials was key in ensuring a smooth and effective fieldwork process.

The findings from the pre-test were used to:

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1.   Approve the proposed five-day fieldwork structure per district;

2.   Revise and amend fieldwork tools by making minor changes to the written instructions to fieldworkers;

3.   Identify language considerations and align the language dynamics in each district and province;

4.   Note logistical challenges and brief the evaluation teams on potential challenges in field; and,

5.   Address any general challenges and appeal to the national, provincial and district officials for support.

These amendments were implemented prior to the commencement of the main fieldwork phase. The uMzinyathi pre-test district was not revisited as it was felt that these changes were minor and did not impact on the quality of data collected. Thus, the data collected during from uMzinyathi was included in the analysis. The full pre-test report can be found in Annexure 7.

## Qualitative Key informant interviews

### National-level interviews

A total of 27 national stakeholders were identified and contacted to participate in the KIIs. Overall, 19 interviews were completed at the national level, with 22 national stakeholders interviewed as some interviews were undertaken in a group interview format. These interviews were conducted in-person at National department offices. Table 14 below provides details on the number of national stakeholders contacted, the number of national interviews completed and their representation.

**Table 14: Number of completed KIIs at national level**

| National Department | Number of stakeholders contacted | Number of KIIs completed |
|---|---|---|
| **NDoH** | 21 | **17** <br><br>**General (6)** <br><br>DDGs (3) <br><br>NHI (1) <br><br>DHS (1) <br><br>Affordable Medicine (1) <br><br>**Intervention Specific (11)** <br><br>WISN (2) <br><br>HPRS (1) <br><br>CCMDD (1) <br><br>GP Contracting (1) <br><br>ICRM (2) <br><br>ISHP (1) |

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

| National Department | Number of stakeholders contacted | Number of KIIs completed |
|---|---|---|
| | | DCST (3) |
| **National Treasury** | **4** | **3** |
| **DBE** | **1** | **1** |
| **DPME** | **1** | **1** |
| **TOTAL** | **27** | **22** |

## Provincial-level interviews

Provincial interviews were conducted at Provincial DoH offices through a series of provincial visits. The first provincial visit took place between 11 to 15 June 2018 (which served as the pre-testing). Provincial visits were concluded during the week of 23 to 27 July 2018. Stakeholders interviewed included provincial representatives, DDGs, Chief Directors, NHI programme managers and NHI coordinators. The majority of provincial stakeholders were interviewed in-person, but when stakeholders were unavailable on the given date, every effort was made to reschedule interviews, which were conducted telephonically. The number of provincial interviews conducted is summarised in Table 5 below.

## District-level interviews

At the district level, a total of ten NHI pilot districts were visited, with the eleventh retained as a case study. Fieldwork began in uMzinyathi district in KZN and the final district was Dr Kenneth Kaunda in the North West. At a district level, interviews were conducted with DHMTs, DHS Managers and DCSTs. In some instances, interviews were held in groups with more than one representative from a district team in the table below provides details on when fieldwork was conducted and the stakeholders interviewed in each district.

**Table 15: Number of completed KIIs at provincial and district level**

| Province | District | Number of KIIs completed | |
|---|---|---|---|
| | | Provincial | District |
| **Eastern Cape** | OR Tambo | 3 | 8 |
| **Free State** | Thabo Mofutsanyana | 1 | 1 |
| **Gauteng** | City of Tshwane | 1 | 2 |
| **KwaZulu-Natal** | uMzinyathi | 2 | 3 |
| **KwaZulu-Natal** | uMgungundlovu | | 4 |
| **Limpopo** | Vhembe | 2 | 2 |
| **Mpumalanga** | Gert Sibande | 2 | 3 |
| **Northern Cape** | Pixley ka Seme | 3 | 2 |
| **North West** | Dr Kenneth Kaunda | 2 | 2 |

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| Province | District | Number of KIIs completed | |
|----------|----------|-----------|----------|
| | | **Provincial** | **District** |
| **Western Cape** | Eden | 4 | 4 |
| **TOTAL** | | 20 | 31 |
| | | **51** | |

There may be variation between provincial and district representatives due to the availability of stakeholders. In some district management teams, were interviewed individuals or in a group setting. This explains the large number of district-level KIIs in the Eastern Cape, as members of the District Management Team (DMT) were interviewed individually.

### Facility-level interviews

The evaluation teams visited four PHC/CHC facilities in each district. At the PHC facilities, KIIs were conducted with PHC facility managers, with intervention staff (pharmacists, clerks, GPs, ISHP nurses, WBPHCOTs) and with clinic committee members.Table 16 below provides a breakdown of the number of KIIs completed with each of these stakeholder groups.

**Table 16: Number of interviews completed per stakeholder group**

| Stakeholder group | Number of KIIs complete |
|-------------------|-------------------------|
| **Facility Manager** | 40 |
| **Clinic Committee member** | 22 |
| **Intervention staff** | 65 |
| **TOTAL** | **127** |

## Quantitative surveys

### Telephonic surveys with facility managers

Telephonic interviews were also held with PHC Facility Managers with a different sample of facilities across the ten pilot districts. The target was to complete 100 surveys, although an oversample of 20 was used to account for expected non-responses. Unwillingness to participate, incorrect or outdated contact details or unavailability of participants all contributed to an unexpectedly low response rate. This was despite numerous efforts to retrieve correct contact details, to notify facility managers of the survey through formal channels and repeat attempts to make contact with the given sample. In the end, the evaluation team settled for 60 out of 100 completed interviews. This 60% completion rate was agreed to be adequate for quantitative data collection and the TWG approved this change to the methods.

**Table 17** below provides details on the target number of surveys, the actual number achieved and the percentage of completed surveys per province.

**Table 17: Number of facility manager surveys completed**

| Province | Number of contacts identified | Number of interviews completed | Response Rate |
|---|---:|---:|---:|
| Eastern Cape | 12 | 5 | 42% |
| Free State | 14 | 5 | 36% |
| Gauteng | 15 | 6 | 40% |
| KwaZulu-Natal | 20 | 9 | 45% |
| Limpopo | 11 | 8 | 73% |
| Mpumalanga | 15 | 5 | 33% |
| Northern Cape | 13 | 8 | 62% |
| North West | 6 | 3 | 50% |
| Western Cape | 14 | 11 | 79% |
| TOTAL | 120 sampled (100 target) | 60 | 60% |

### In-person surveys with facility users

During the district visits, the evaluation teams administered a quantitative survey to patients at facilities. Before approaching patients to participate, the evaluation team introduced themselves to the manager-in-charge and requested a private room or quiet space in which the survey was administered. Queueing patients asked for their place in the queue to be reserved while the team administered the survey. The teams found that at some facilities, patients were eager to participate and so the total number of patients surveyed was 226; although some facilities happened to have fewer users and so there were fewer patients to interview.Table 18 below provides socio-demographic characteristics of the patients.

**Table 18: Age and gender of patients surveyed at facilities**

| Age | Gender | |
|---|---|---|
| | Male | Female |
| **18 – 25** | 7 | 30 |
| **26 – 35** | 4 | 11 |
| **36 – 50** | 1 | 9 |
| **51 – 55** | 25 | 55 |
| **56 – 60** | 9 | 32 |
| **60+** | 4 | 37 |
| **TOTAL** | **50** | **174** |
| **OVERALL TOTAL** | **226** | |

# DATA MANAGEMENT AND QUALITY

This section will outline the data management and quality measures employed.

## General data storage and protection

The data collected during this evaluation is housed at Genesis. Genesis premises are access controlled so that only staff may enter and exit. Guests are escorted by Genesis staff members through the premises. To avoid any loss of data, hardcopy data is captured in soft copy at the earliest possible convenience post-fieldwork. Softcopy data is stored on internal servers. These servers are backed up to the cloud and backups can only be accessed with an electronic key, which is in the possession of the Information Technology (IT) manager. The Genesis servers are firewall-protected and are only accessible to those that have been granted access to the domain. The servers are therefore restricted to Genesis staff members only.

## Qualitative data management

Prior to fieldwork, all fieldworkers were trained in the appropriate storage and management of data on a day-to-day basis while in the field, and the project manager was responsible for monitoring the effective management and storage of data on internal servers.

All data was collected only from individuals who gave informed consent to participate in the research process, and where the data was of a sensitive nature, this data was anonymised such that all identifying information was removed.

Data was captured from the interviews on Survey Gizmo using a mobile device (laptop/ tablet) and voice recordings if consent was provided. Survey Gizmo is a web-based platform, which enables easy, accurate, cost-effective and mobile survey data collection and collation. At the end of each day, the notes were checked and collated with the recordings. The transcriptions were contained within a web-enabled tracking tool, enabling efficient quality assurance processes and easy collaboration between evaluation team members. Once data

collection complete, the interviews were downloaded and saved on the Genesis internal server for protection. Data were then analysed using Atlas.ti v 7.5

## Quantitative data management

The facility manager surveys and PHC user surveys were administered using SurveyGizmo, and the data collected were only accessible to the Genesis staff who had access to the Genesis SurveyGizmo account. The facility manager survey will be kept anonymous, while the PHC user survey was anonymous as no names were captured. Once data collection was complete, the facility manager and PHC user survey results were downloaded and saved on the Genesis internal server for protection. Data were then analysed using Microsoft Excel 2016.

The Information Security Policy (ISP) for the PwC global network is aligned to the control requirements of ISO27002:2013. The Member Firms are expected to comply with the requirements of this policy and are audited to the requirements of the ISP by the PwC Global Risk & Quality- Information Security Compliance which is independent from member firms.

The security practices and methods used by the PwC Global Risk & Quality Security – Information Security Compliance team have been independently audited by the British Standards Institution (BSI) to ensure compatibility with and conformity to ISO/IEC 27001:2013. An annual review of these processes is conducted by BSI. ISO/IEC 27002:2013 outlines the standards for security policy, organisation of information security, asset management, human resources security, physical and environmental security, communications and operations management, access control, information systems acquisition, development and maintenance, information security incident management, and compliance. These standards were adhered to for this evaluation.

The Information Security Policy (ISP) for the PwC global network is aligned to the control requirements of ISO27002:2013. The Member Firms are expected to comply with the requirements of this policy and are audited to the requirements of the ISP by the PwC Global Risk & Quality- Information Security Compliance which is independent from member firms.

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# PROCESS FOR ANALYSIS AND SYNTHESIS

This section describes the process that the evaluation team followed for the analysis and synthesise the data as seen in Figure 61.The steps are as follows:

1. A full consortium meeting was held to establish the initial themes that were surfacing from both the qualitative and quantitative primary data
2. Evaluators received training on how to conduct a qualitative data analysis, which was important to drive consistency in the data analysis process

3. Evaluators used Atlas.ti v7.5 to extract the themes across the qualitative interview transcripts, while Microsoft Excel 2016 was used for the quantitative analysis of the facility manager and PHC user survey data sets, and Tableau was used to analyse the quantitative routine and outcome data

4. The data was then interpreted and aligned to the objectives of the evaluation TOR. This involved extensive synthesis meetings with the full complement of the consortium. Some of the fieldworkers were also present in these meetings so as to provide deeper context to the findings.

5. A validation meeting was held with the consortium, which was used to interrogate common findings arising from the different data sources and assess the value of the findings. Findings were interpreted according to overarching, cross-cutting and intervention specific themes as defined in *Chapter 3: Findings ANd* Discussion

# 18.  TRENDS IN KEY HEALTH INDICATORS PERFORMANCE

## 18.1. PURPOSE OF HEALTH INDICATOR DASHBOARDS

The dashboards aim to demonstrate the performance of each pilot district over time as well as the general trend of the indicators. While many of the routine DHIS indicators cannot be directly linked to the specific intervention and therefore one should be cautious of over interpretation, the dashboards provide evidence of trends in key health indicators in each district and province. This evidence helps to ascertain whether a district showed improvement over the period of the NHI pilot phase1 across the various indicators.

## 18.2. LIMITATIONS

The DHIS indicators allow for a fuller picture, showing progress in the health system and the fidelity of the NHI pilot projects. However, the routine DHIS indicators cannot be directly linked to a specific intervention and therefore one should be cautious of over interpretation. Rather, the dashboards can give insight into the strength of the health system in each district and whether a district showed improvement over the pilot phase.

The team did not attempt to amend any data, as it was important that the dashboards reflected audited results, accepted by the provinces and the NDoH. The sector is aware of the need for strengthening data quality and one of the NHI interventions, focusing on e-Health, aims to do this through better patient record keeping and data management. Improved data quality will allow for more reliable data analysis and results.

## 18.3. DESCRIPTION OF DATA SOURCES

The evaluation team used health information data and financial data for the quantitative analysis. We received data from 2013/14 to 2017/18 for as many of the indicators as possible, however some data was not available for all the years. We received the complete DHIS data from the NDoH, which has data at the facility level. We aggregated the facility level data up to a district level, by summing the raw data and then calculated the performance for the financial year as a whole, using the standard indicator calculations.

**Health information data:** The team used District Health Information System (DHIS) data received from the NDoH. Supplementary data was also received for the SVS, WBPHCOT and ISHP.

# 18.4. PROCESS TO DEVELOP THE DASHBOARDS

## 18.4.1. Mapping indicators to interventions

### 18.4.1.1. DHIS routine indicators

The team initially mapped the available DHIS data indicators to the interventions, as far as possible. This is shown in Table 6 below. This was only possible for WBPHCOT, SVS and the DCSTs.

**Table 6: Mapping DHIS routine indicators to relevant NHI Phase 1 interventions**

| DHIS routine indicators | WBPHCOT | SVS | DCST |
|---|---|---|---|
| Antenatal 1st visit 20 weeks or later | x | | |
| Antenatal 1st visit before 20 weeks | x | | x |
| Antenatal 1st visit total | x | | x |
| Any tracer item drug stock out (clinic/CHC/CDC) | | x | |
| ART adult naive start ART in month | | | |
| ART adult remain on ART end of period | | | |
| ART child under 15 years naive start ART in month | | | |
| ART child under 15 years remain on ART end of period | | | |
| BCG dose | | | |
| Cervical cancer screening 30 years and older | x | | |
| Child under 2 years underweight - new (weight between -2 SD and -3 SD new) | x | | |
| Diarrhoea death under 5 years | x | | x |
| Diarrhoea separation under 5 years | | | |
| Diarrhoea with dehydration new in child under 5 years | x | | |
| HIV positive client screened for TB | x | | |
| HIV positive new eligible client initiated on IPT | | | |
| Immunised fully under 1 year new | x | | |
| Inpatient death neonatal total | | | x |
| Inpatient death under 1-year total | | | x |
| Inpatient death under 5 years total | | | x |
| Inpatient deaths – total | | | |
| Maternal mortality in facility ratio | | | X |

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| DHIS routine indicators | WBPHCOT | SVS | DCST |
|---|---|---|---|
| Measles 1st dose | | | |
| Measles 2nd dose | | | |
| Medical male circumcision performed | | | |
| Mother postnatal visit within 6 days after delivery | x | | |
| PHC client seen by public doctor | | | |
| PHC headcount 5 years and older | | | |
| PHC headcount under 5 years | x | | |
| Pneumonia death under 5 years | | | x |
| Pneumonia separation under 5 years | | | |
| Severe acute malnutrition (SAM) death under 5 years | | | x |
| Severe acute malnutrition (SAM) inpatient under 5 years | | | |
| Still birth in facility | | | |
| TB AFB sputum result received within 48 hours | | | |
| Total births in facility | | | x |

The evaluation team then mapped out additional data received from the NDoH for the WBPHCOT, which included additional outreach household (OHH) data, ISHP data and additional CCMDD data, as well as SVS specific data were also received. The indicators for these data sets are provided in Table 7 below.

**Table 7: Mapping data to NHI Phase 1 interventions**

| Additional Indicators | WBPHCOT | SVS | ISHP | CCMDD |
|---|---|---|---|---|
| OHH client referred to facility rate | x | | | |
| OHH follow up visit rate | x | | | |
| OHH headcount total | x | | | |
| OHH headcount under 5 years coverage | x | | | |
| OHH registration visit rate | x | | | |
| OHH visits total | x | | | |
| OHH with postnatal care rate | x | | | |
| Clinic drug availability reports (FY '17 and FY'18) | | x | | |
| School Grade 1 screening coverage (annualised) | | | x | |
| School Grade 10 screening coverage (annualised) | | | x | |

| | | | | |
|---|---|---|---|---|
| School Grade 4 screening coverage (annualised) | 136 | | x | |
| School Grade 8 screening coverage (annualised) | | | x | |
| School Grade R screening coverage (annualised) | | | x | |
| School ISHP coverage (annualised) | | | x | |
| School learner referred rate (sum of eye, hearing, oral, speech and TB) | | | x | |
| School learner screening coverage (annualised) | | | x | |
| Total patients registered on CCMDD | | | | x |
| Total facilities registered for CCMDD | | | | x |
| Total medicine parcels delivered via CCMDD | | | | x |

# 18.5. RESULTS

The aim of analysing indicators in the pilot districts over the period of the pilots was to try and determine whether the various phase 1 interventions had a measurable impact. Additional analysis was completed, which included pilot and non-pilot districts in the same graphs (see annexure 12). These districts should not be directly compared. The reason for this is that there is enormous variability between districts, and the pilot districts were often selected because they were started off from a lower base than other districts. However, we think examining trends across indicators, years and districts can be instructive.

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## 18.5.1. Indicator specific results

**Figure 1: Top 10 performing indicators in the NHI Pilot districts over time (FY 2013 – FY 2017)**



<div style="background-color:#e8f0dc; padding:10px;">

**KEY OBSERVATIONS:**

7. The Average medicine parcel per uninsured was the highest ranked by the end of 2017 (With measurement commencing in 2016)
8. Of the top 10 indicators, 2 showed a constant improvement year on year:
   - Diarrhoea with dehydration in child under 5 years incidence
   - School learner screening coverage (annualised)
9. "Still birth in facility rates" and "School learner referred for suspected TB rate" showed erratic decreases and increases. This could be a reporting anomaly.

</div>

## 18.5.2. District Specific Results

The team's data analysis intended to highlight specific success items and possible areas requiring improvement for each of the pilot districts. The dashboard tool allows the user to drill down into the detail for each indicator for each district and also allows for comparison between pilot districts and also a comparison between the pilot district in a Province and the non-pilot districts in a Province.

## 18.5.2.1. uMzinyathi District

**Figure 2: Antenatal visit before 20 weeks. uMzinyathi compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
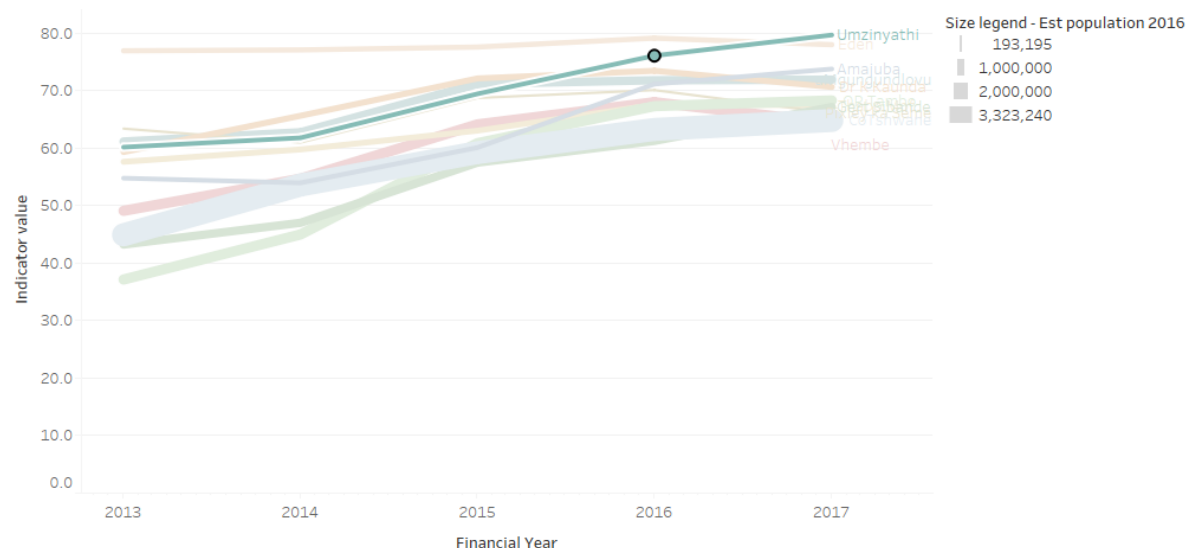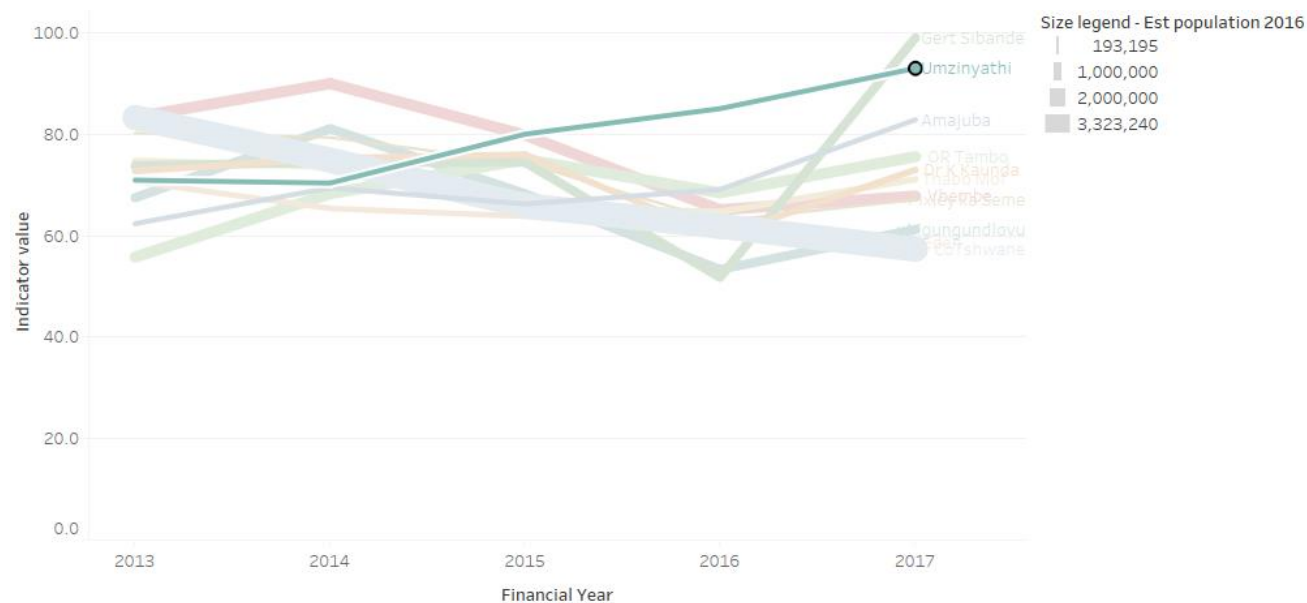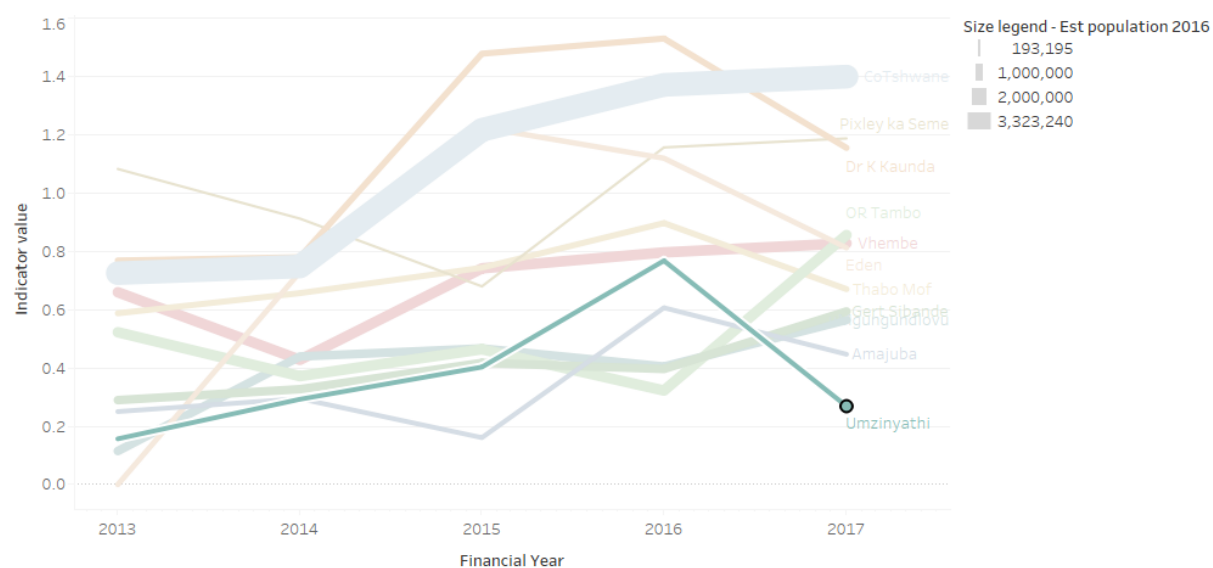


**Figure 3: Immunisation under the age of 1. uMzinyathi compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
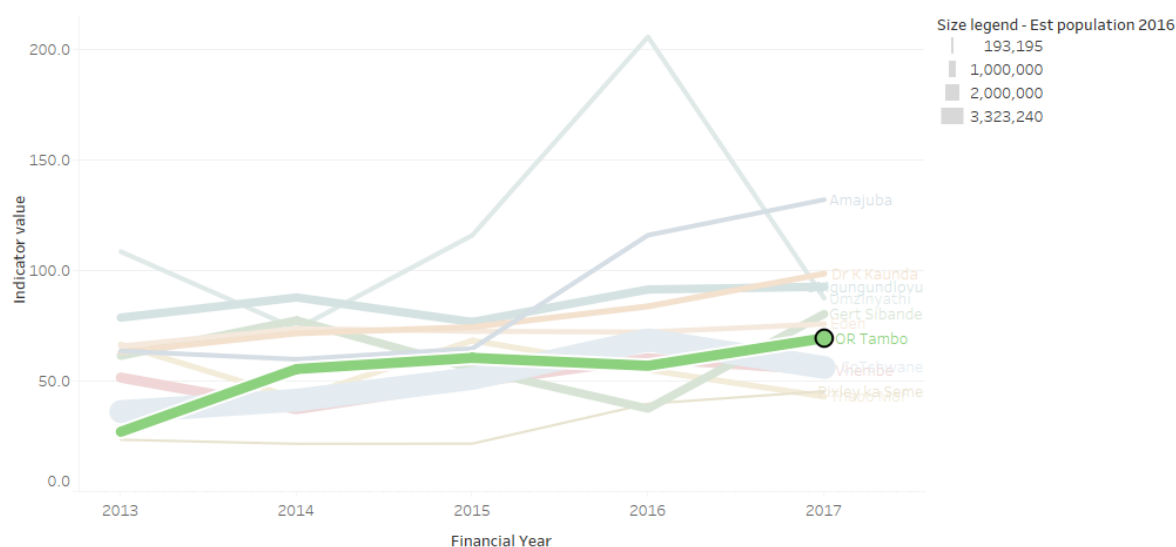


**KEY OBSERVATIONS:**

Huge improvement for this indicator. Qualitative information indicated that mother and child health was prioritised as the focus for the district

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**Figure 4: School learner screening coverage. uMzinyathi compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



## 18.5.2.2.    OR Tambo District

**Figure 5: Cervical cancer screening over 30. OR Tambo compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Consistent improvement shown year on year and increase in ranking compared to other pilot districts.

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**Figure 6: Diarrhoea with dehydration under 5. OR Tambo compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
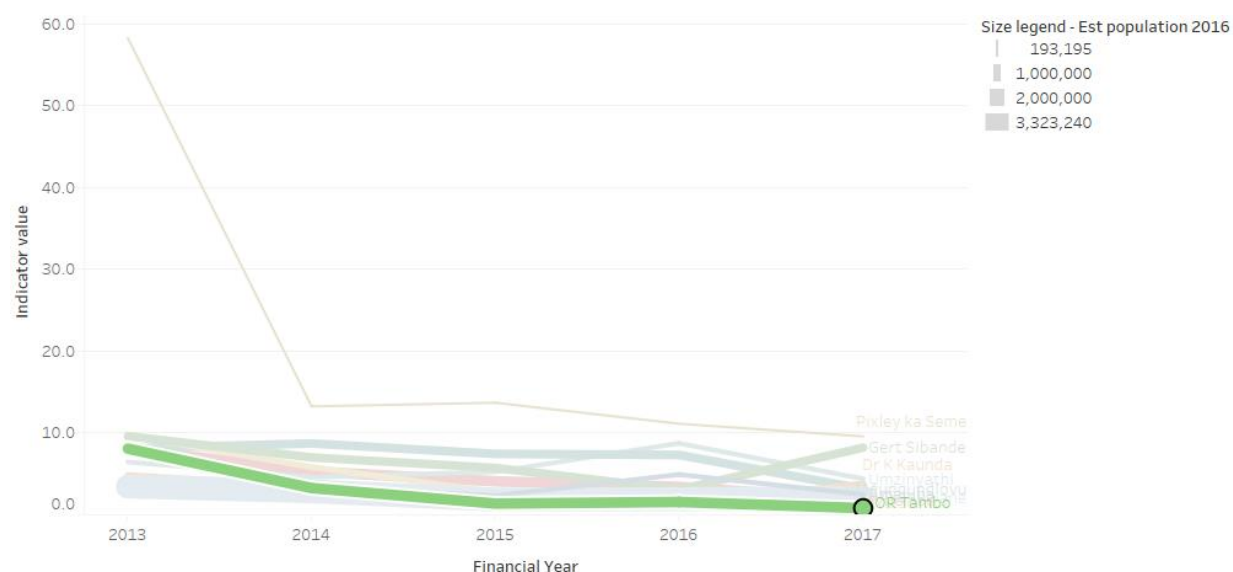


**Figure 7: OHH Total visits. OR Tambo compared to other Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Average improvement compared to other NHI pilot districts. Qualitative data indicated that WBPHCOT's were not consistent.

## 18.5.2.3.    uMgungundlovu

**Figure 8: Measles 2nd dose. uMgungundlovu compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
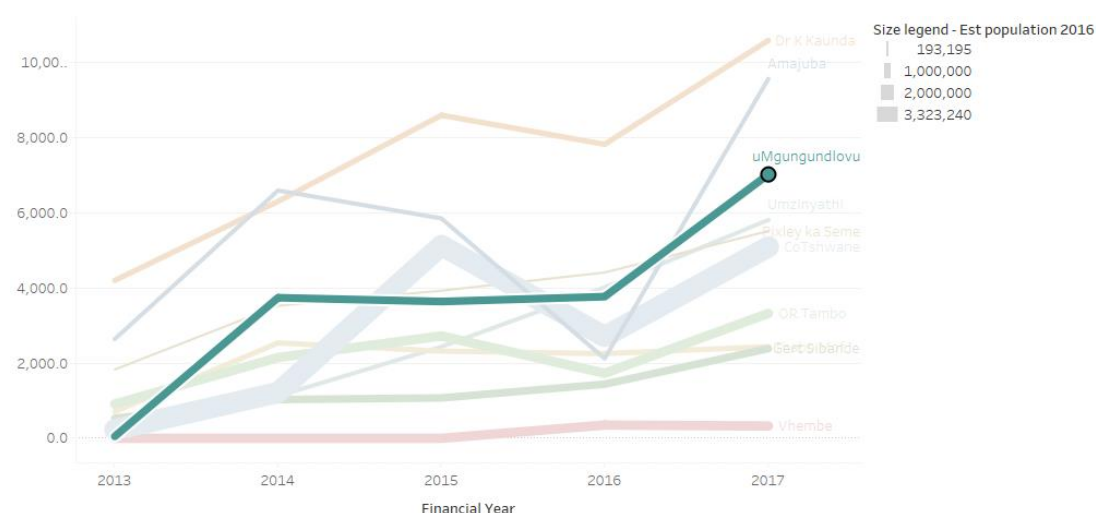
Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018
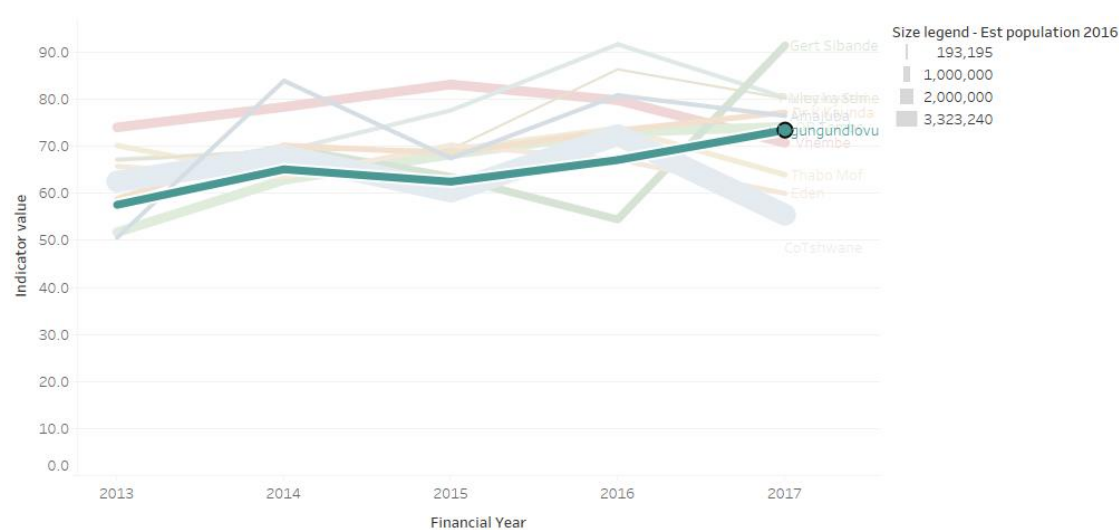


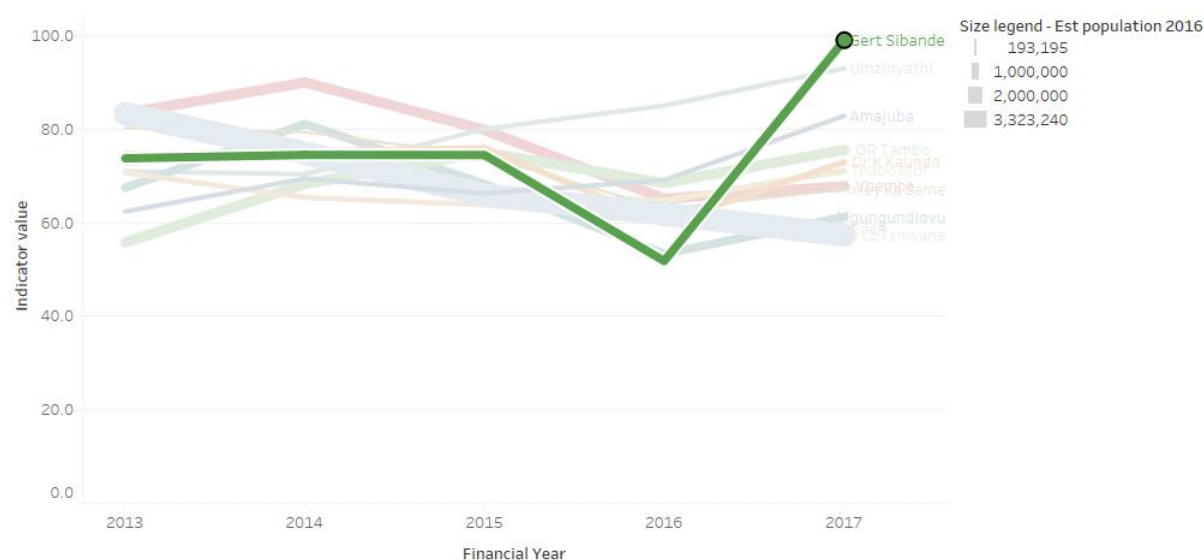**Figure 9: OHH Headcount. uMgungundlovu compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Improvement shown compared to other pilot districts. Qualitative commentary reflected the lack of capacitated WBPHCOTs.
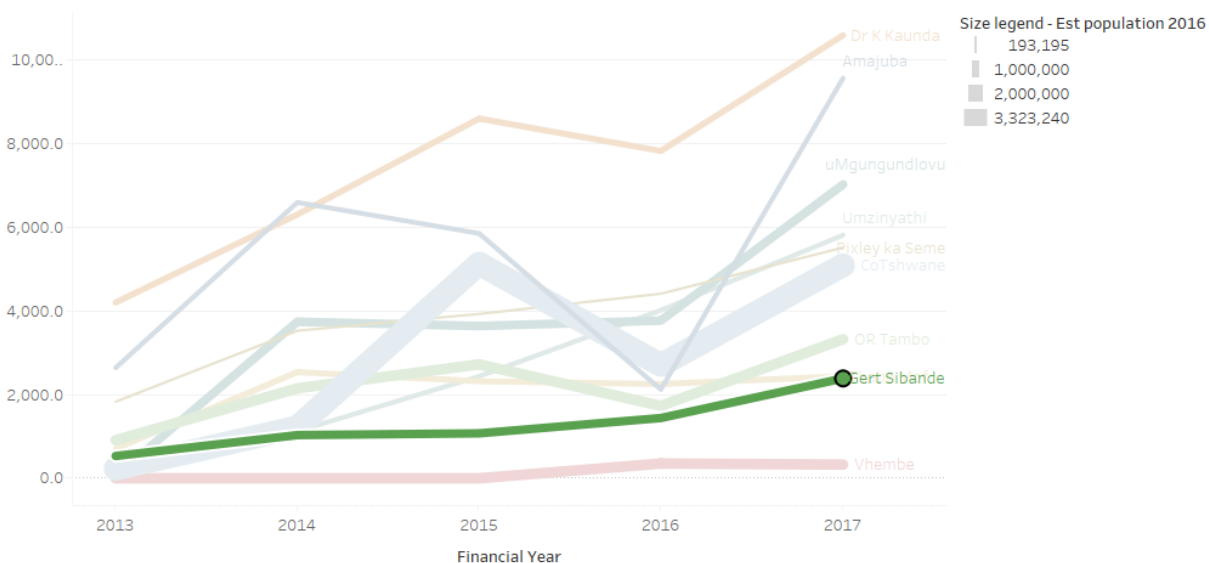
## 18.5.2.4. Gert Sibande District

**Figure 10: Immunisation under 1 year. Gert Sibande compared to other NHI Pilot Districts (FY 2013 – FY 2017)**

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**KEY OBSERVATIONS:**

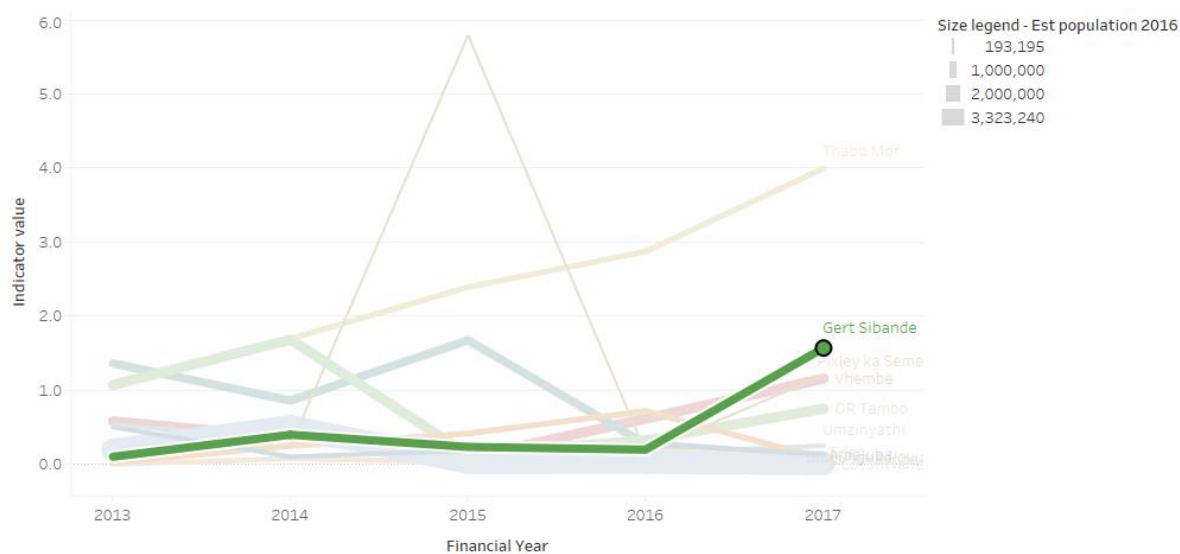Huge improvement from 2016 to 2017 and ending 2017 as the best of the pilot districts.

**Figure 11: OHH headcount total. Gert Sibande compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Not sufficient improvement and a drop in the rank for this indicator. Qualitative data reflects the WBPHCOT's not being a success as it was difficult to recruit and keep staff.

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**Figure 12:School learner referred for suspected TB. Gert Sibande compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Good improvement ending '17 as the $2^{nd}$ best pilot.

## 18.5.2.5. Amajuba District

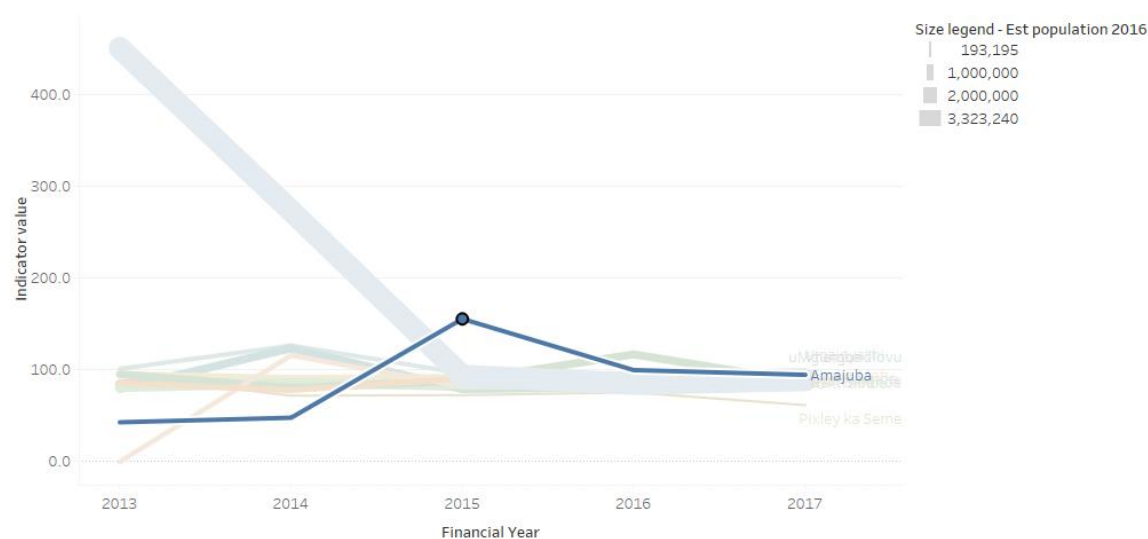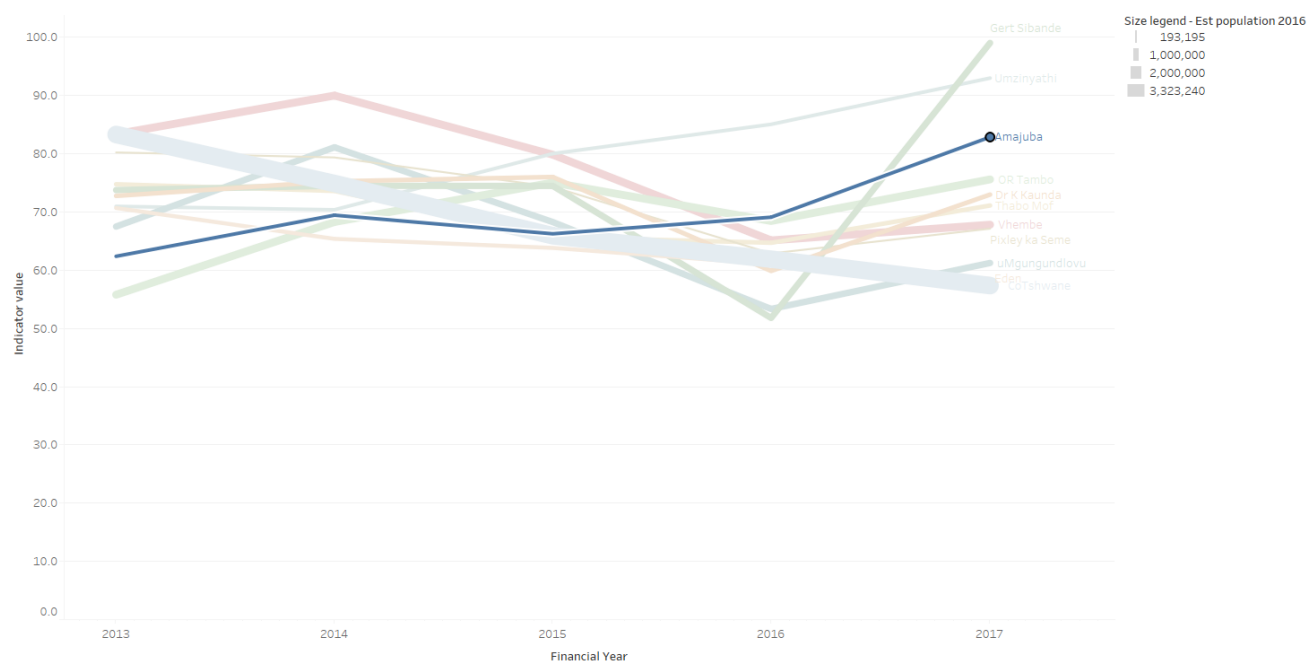**Figure 13: Antenatal first visit before 20 weeks. Amajuba compared to other NHI Pilot Districts (FY 2013 – FY 2017)**

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

**Figure 14: HIV Positive on IPT. Amajuba compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

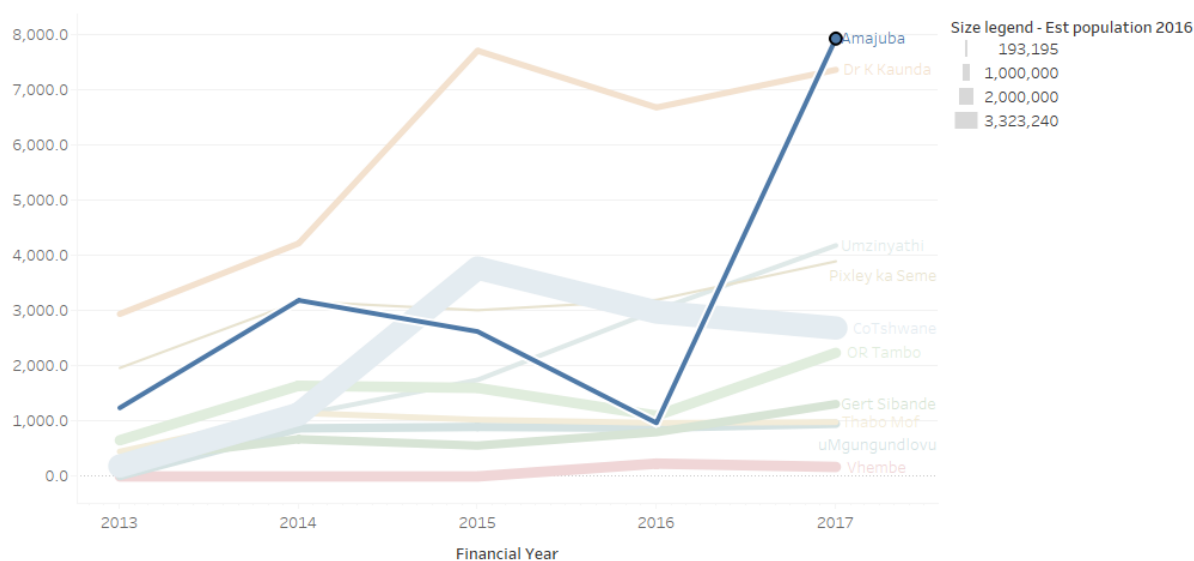A perceived increase in 2015 however a decrease in 2016 and 2017

**Figure 15: Immunisation under 1 year. Amajuba compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

An increase with the district ending 2017 as 3$^{rd}$ best of the pilots.

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**Figure 16: OHH Total visits. Amajuba compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
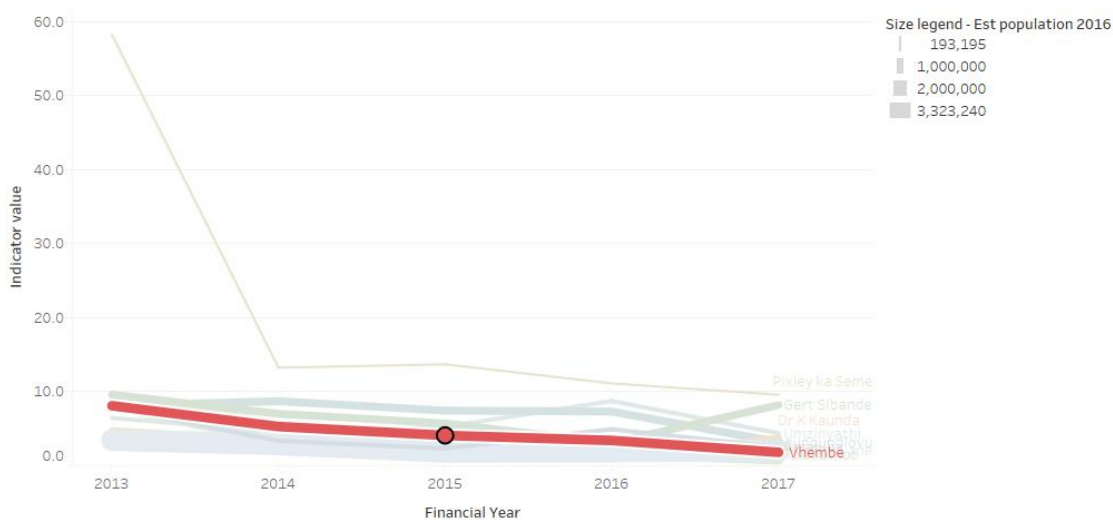


**KEY OBSERVATIONS:**

Huge improvement from 2016 to 2017 and ending 2017 as the best of the pilot districts,
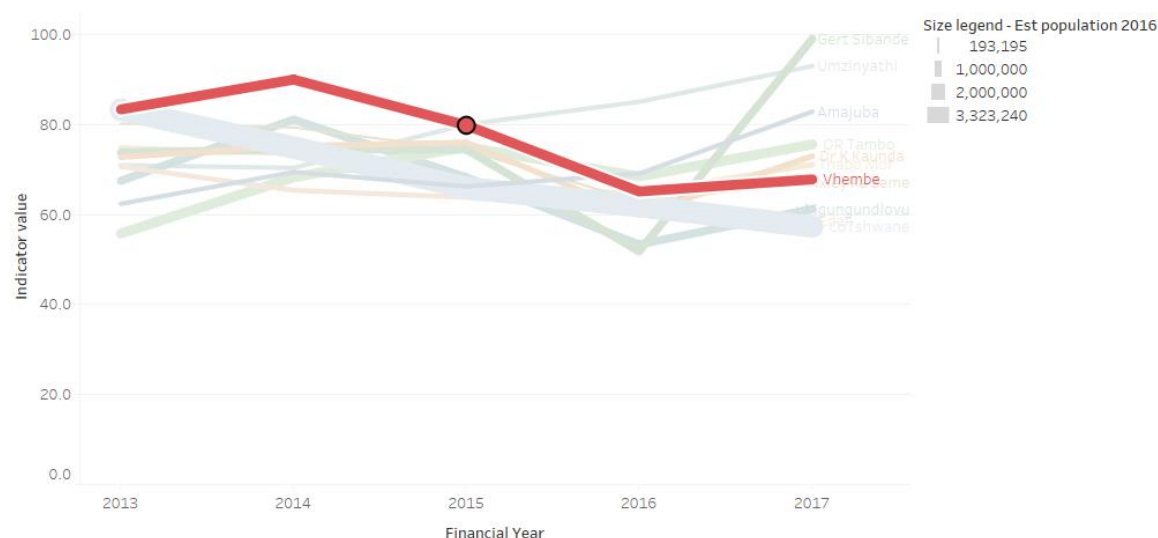
## 18.5.2.6.    Vhembe District

**Figure 17: Diarrhoea with dehydration under 5. Vhembe compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

There was an improvement in this indicator with the district ending 2017, 2nd best of the pilots.

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018
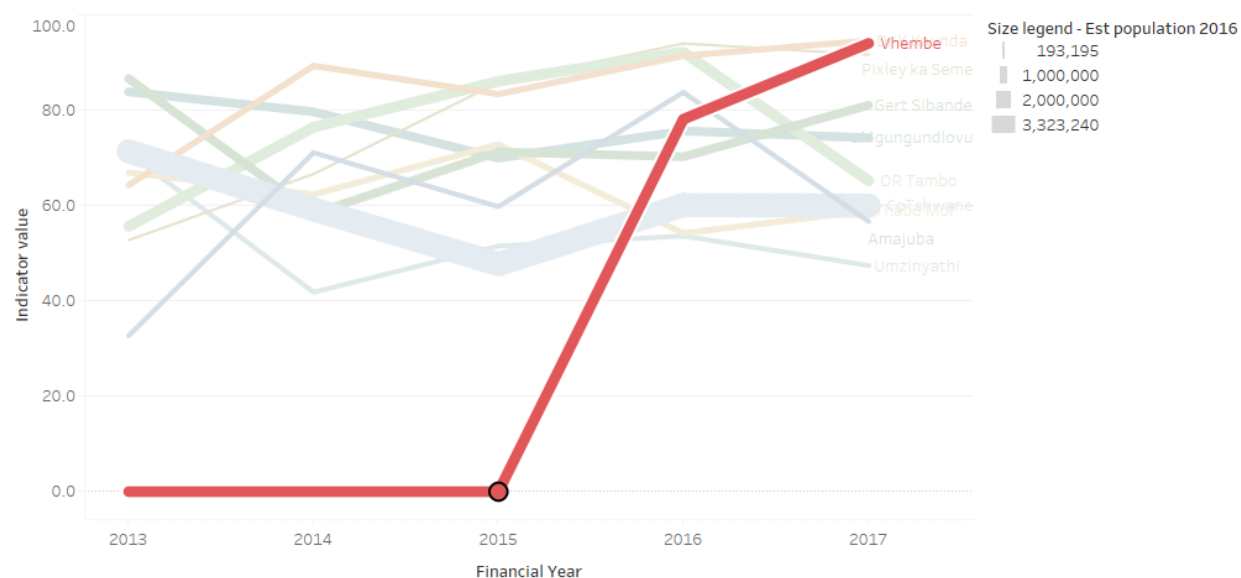
**Figure 18: Immunisation under 1. Vhembe compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

There was sharp decrease in the performance of this indicator. Qualitative information revealed the lack of DCST's being functional and the speculation that they need to be dismantled and a new solution found. This is potentially problematic because with poor immunisation coverage, there is a higher risk for poor child health- DCSTs will then be critical to ensure child mortality does not increase.

**Figure 19: OHH follow up rate. Vhembe compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

A large improvement from 2015 to 2017 with the district ending 2017 as the highest of the pilots.

## 18.5.2.7. Dr K Kaunda District

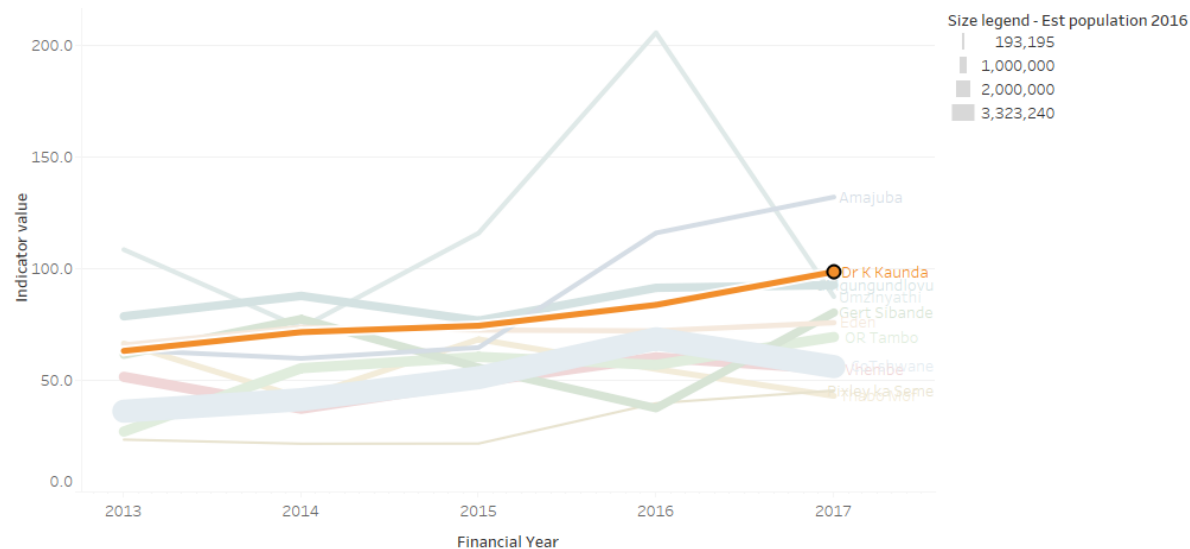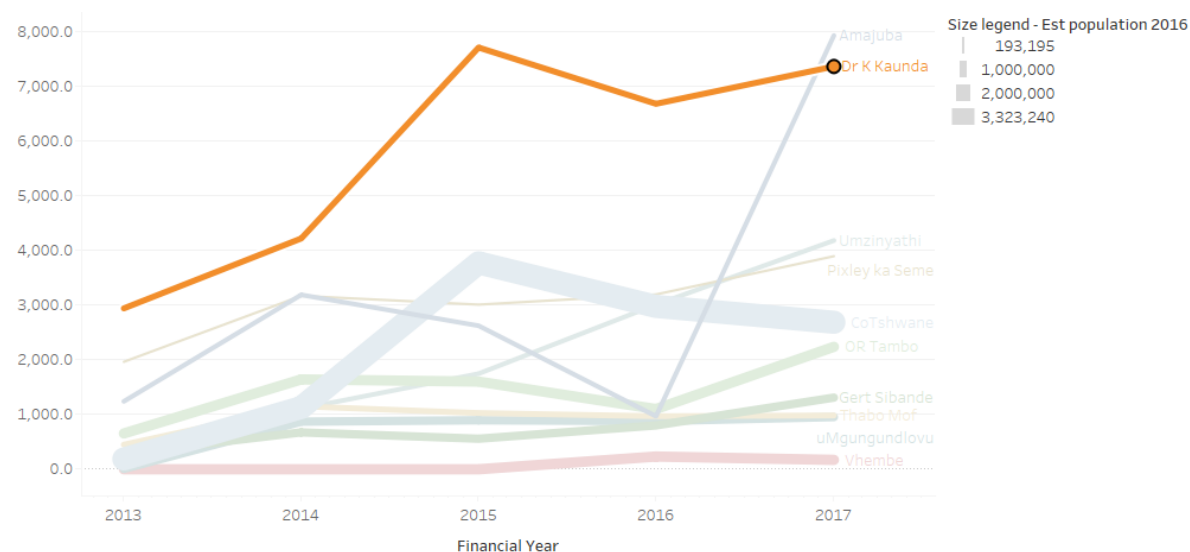**Figure 20: Cervical cancer screening over 30. Dr K Kaunda compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**Figure 21:OHH Total visits. Dr K Kaunda compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

There was an improvement in this indicator with the district ending '17 as it performed 2nd best of the NHI pilot districts.

## 18.5.2.8.    Eden District

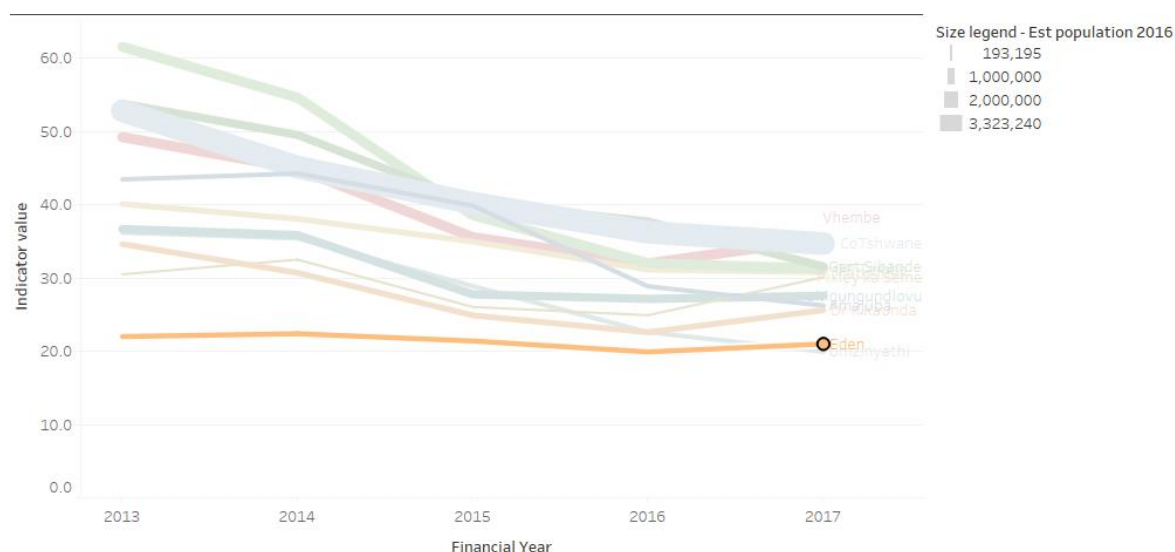**Figure 22: Antenatal first visit after 20 weeks. Eden compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
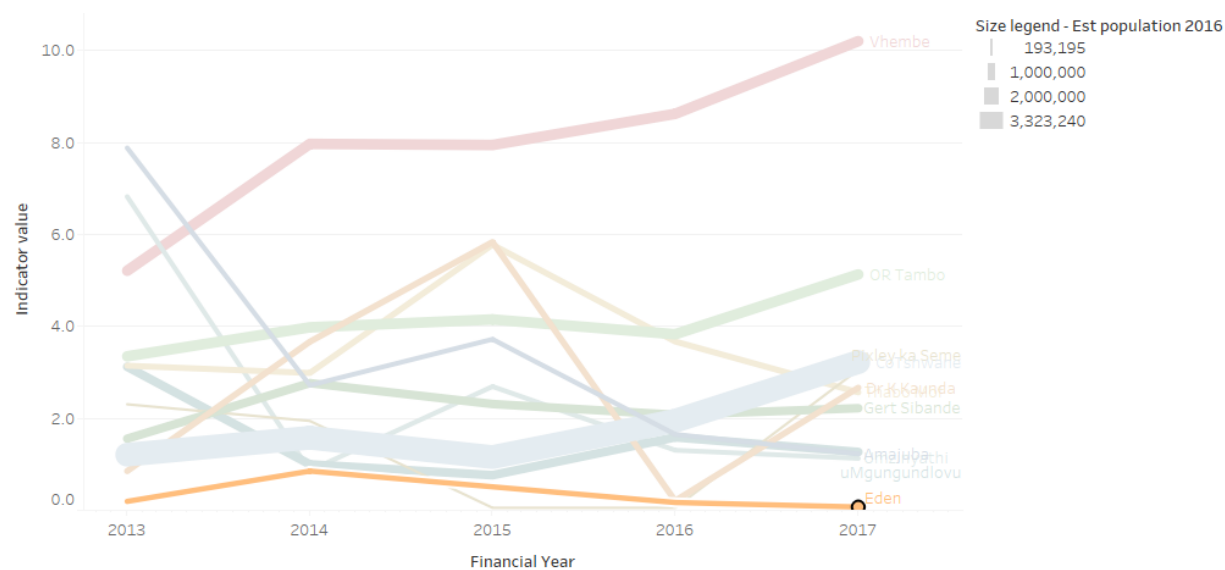


**Figure 23: Tracer drugs stock outs. Eden compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
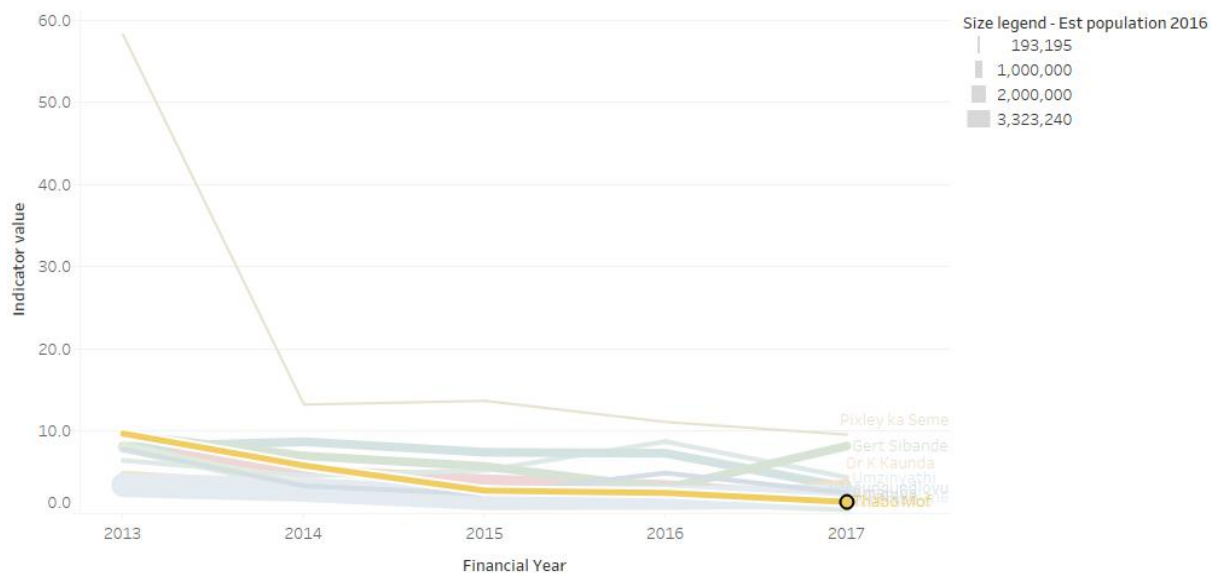


**KEY OBSERVATIONS:**

Consistently the lowest stock out rates of the pilot districts.

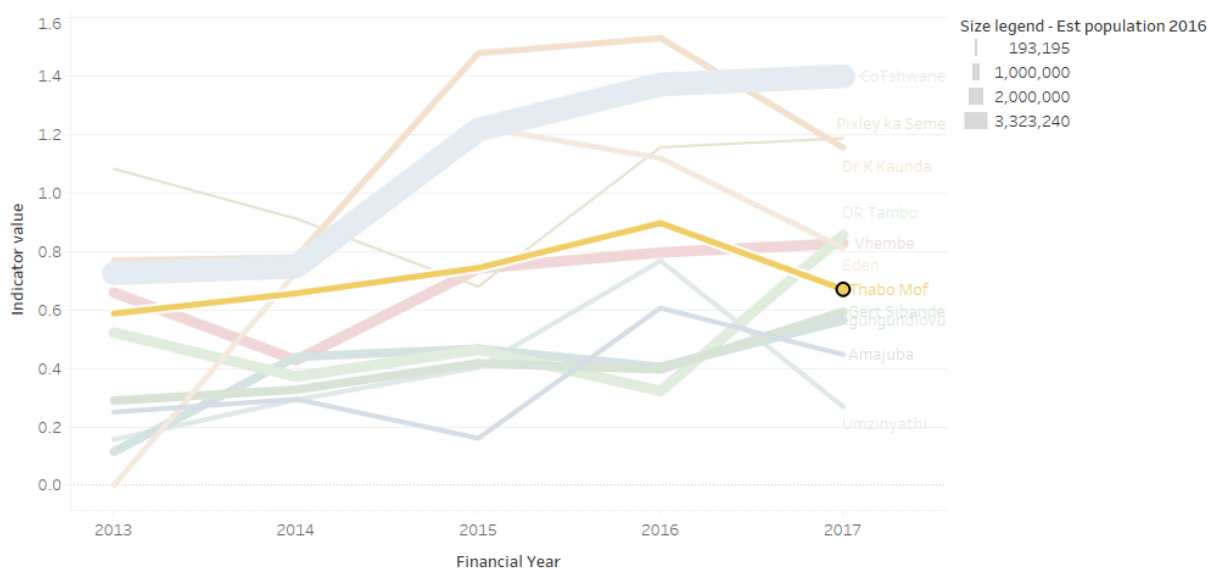## 18.5.2.9. Thabo Mofutsanyana District

**Figure 24: Diarrhoea with dehydration under 5 years. Thabo Mofutsanyana compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

A large improvement with this indicator ending 2017 as the best pilot district.

**Figure 25: School learner screening coverage. Thabo Mofutsanyana compared to other NHI Pilot Districts (FY 2013 – FY 2017)**

## 18.5.2.10.   Pixley ka Seme District

**Figure 26: BCG Dose coverage. Pixley Ka Seme compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Best performer of the pilots and but reduced coverage.

**Figure 27: HIV positive on IPT. Pixley Ka Seme compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

Consistently the lowest performer in the NHI pilot districts.

Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

**Figure 28: OHH headcount under 5. Pixley Ka Seme compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

One of the best indicators in the pilot districts and could be the reason the BCG indicator is also performing

## 18.5.2.11. City of Tshwane District

**Figure 29: Antenatal visit before 20 weeks. City of Tshwane compared to other NHI Pilot Districts (FY 2013 – FY 2017)**



**KEY OBSERVATIONS:**

The lowest performer of the NHI pilot districts.

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Evaluation of Phase 1 implementation of interventions in the National Health Insurance (NHI) pilot districts in South Africa, Evaluation Report, Final. NDOH10/2017-2018

**Figure 30: Diarrhoea with dehydration under 5 years. City of Tshwane compared to other NHI Pilot Districts (FY 2013 – FY 2017)**
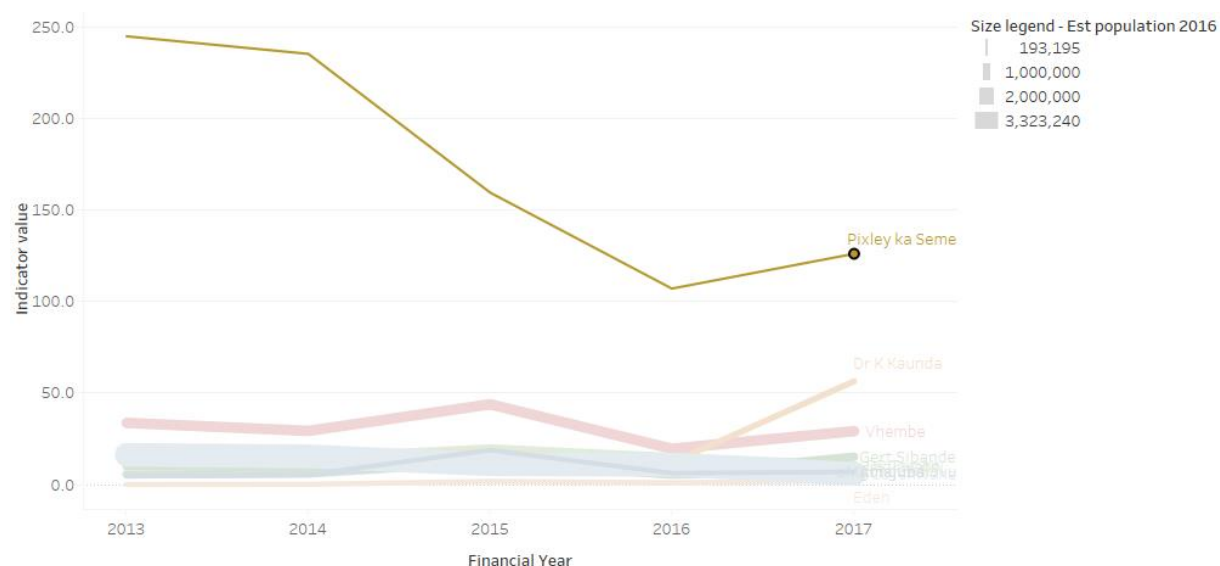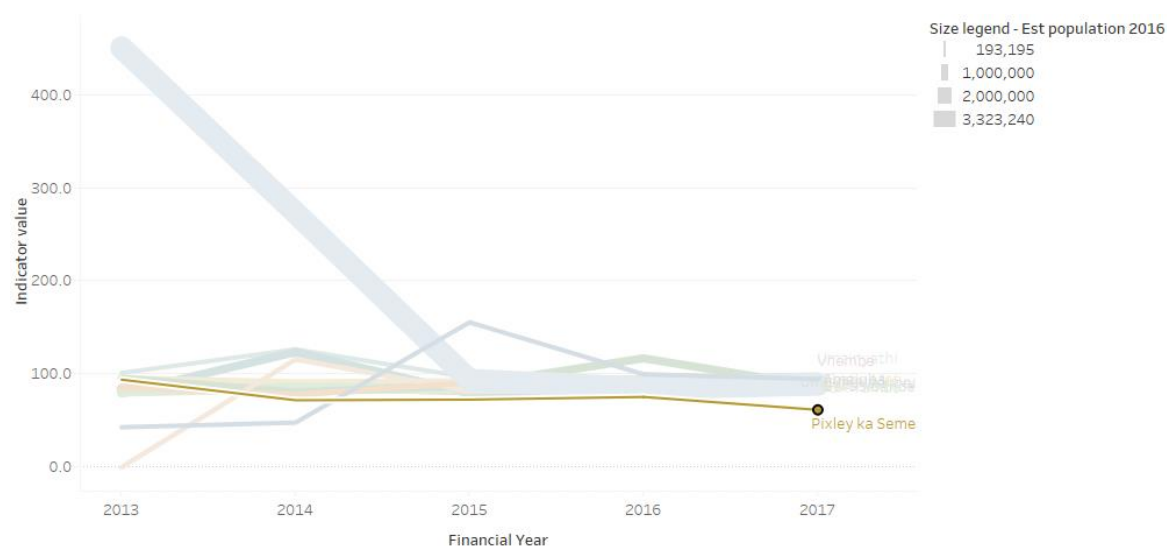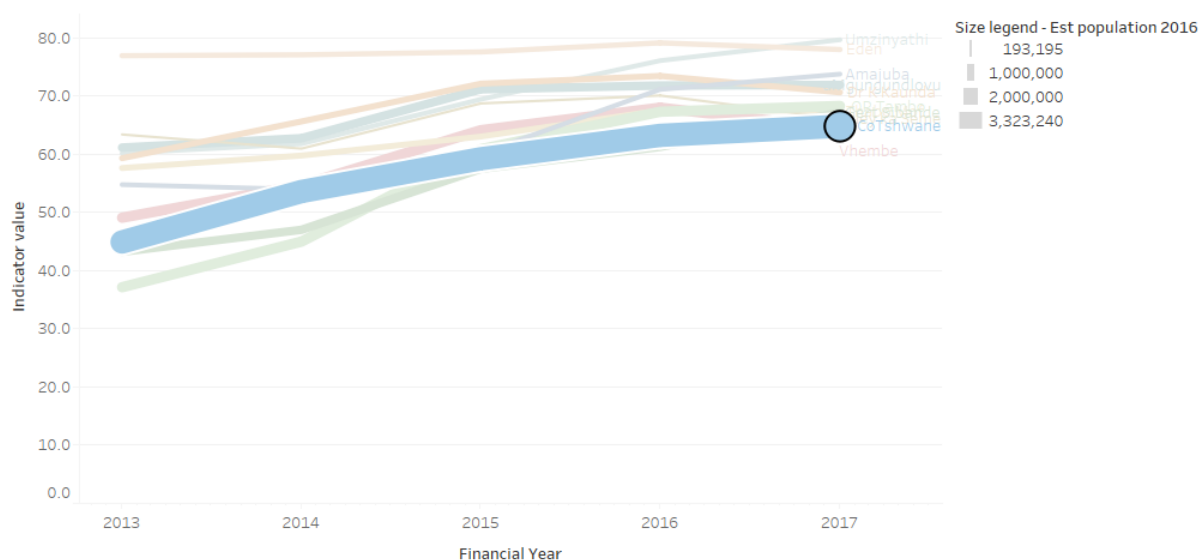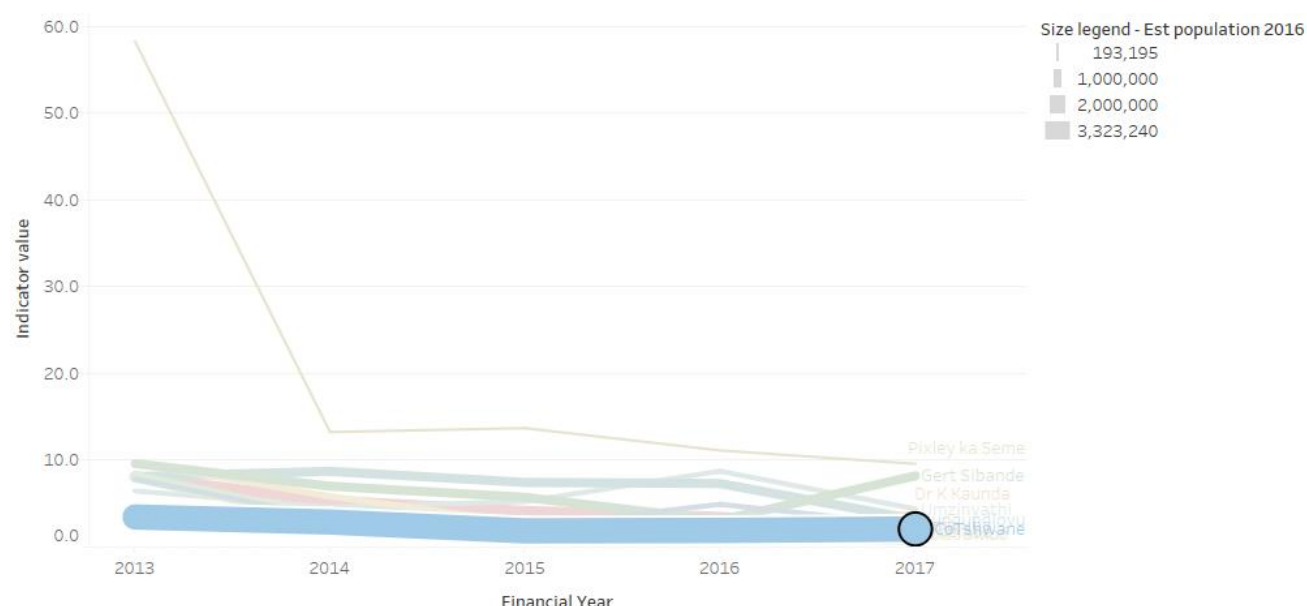


**KEY OBSERVATIONS:**

One of the best indicators for this district.

# 19. ONGOING USE OF THE DASHBOARD

The development of the dashboard tool has allowed key health indicators to be analysed and compared across the pilot districts and across non-pilot districts in the same Province. This has allowed for areas of improvement to be recognised and success stories to be used as lessons learned for other districts. The dashboards have shown that there is no consistent trend of the pilot districts performing better than non-pilot districts however there are several encouraging improvements in the key health indicators as highlighted in the graphs above.

The dashboard tool has been made available to the NDoH and will allow for ongoing further analysis and comparison between the various health indicators, the key NHI programmes and the performance of the districts. It is advised that the NDoH continue with this analysis and refine the dashboards in line with the upscaling and implementation of the NHI phase 2 initiative. This will allow for the NHI project office to proactively identify areas requiring improvement and additional assistance, as well as areas / initiatives that are showing marked improvement in line with the targets set. The dashboard is merely a reflection of the data in the DHIS however through the functionality of the Tableau software the user will be able to rapidly analyse the data in a meaningful and proactive manner making ongoing performance tracking and reporting more effective.

6. *Effectiveness of NHI Phase 1.*
7. The preliminary findings were presented to the TWG, and then the evaluation team was able to refine the findings and fill data gaps based on these discussions. For example, the routine and outcomes data were used to locate findings within the sector trends.

8. This led to the development of recommendations, making use of all three data sources. The recommendations were again presented to the TWG and refined according to these discussions.
9. The final recommendations are presented in this evaluation report under *Strategic recommendations for NHI Phase 2.*

**Figure 61: Data analysis and synthesis process**
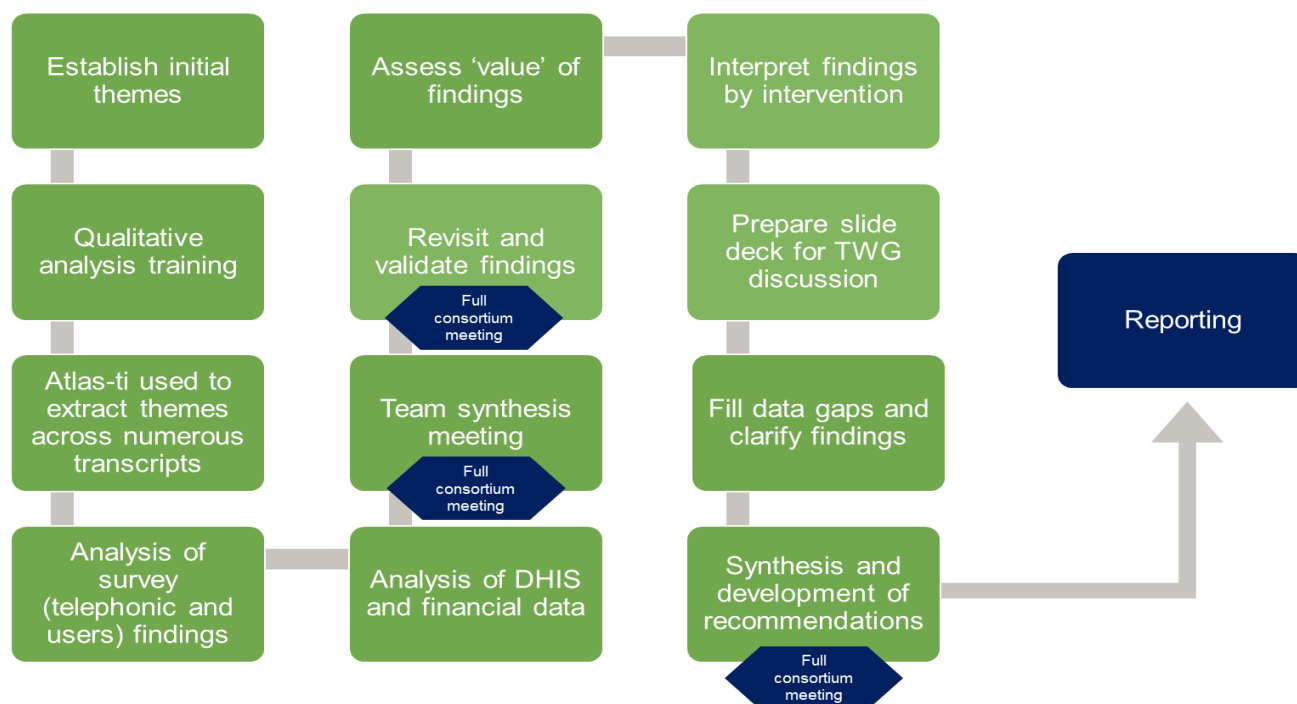


# LIMITATIONS OF THE EVALUATION APPROACH AND METHOD

The factors discussed in this section pose limitations to this evaluation, which are outlined below. Despite these limitations, the evaluation team is confident that the quality of the evaluation has not been adversely affected.

The evaluation is limited to the representivity of the national stakeholders included in interviews and surveys. Despite having conducted numerous interviews and surveys with stakeholders at all levels, some stakeholders were unable or unwilling to partake in this evaluation. Attempts were made to include additional stakeholders, for example, five more national-level stakeholders were interviews. However, in instances where there is unequal representation of stakeholders, data can be skewed. The evaluation team has mitigated this mis-representation by ensuring each intervention is analysed with equal consideration.

Stakeholders that had only recently been involved in the NHI phase 1 were unable to answer questions dating back from the onset of NHI phase1. Every effort was made to extract the most useful and pertinent information from these interviews.

A small sample bias, at some levels, presents as a limitation. For example, national level stakeholders may represent a single position. However, by analysing the data across the different stakeholder levels and by triangulating the results with the quantitative data and other reviews, information is unbiased of a single opinion. It should be noted that while only 60% of the sample for facility manager interviews was reached, the evaluation team is confident that this has affected the quality of data at a facility level as common themes arose in the 60 interviews and were triangulated by the other data collected.

Self-reported information is often subject to recall error or misreporting. Questions asking for data over reasonable intervals of time, as is the case with having to remember from 2011, can limit the recall error. Recall bias is also limited by triangulation of data, particularly within linking shared experiences to the indicator trends over time.

The evaluation team also recognise that the data is based on perspectives, which can be subjective as experiences are perceived differently by individuals. The risk of subjectivity biases was alleviated by asking interviewees to provide concrete examples of their experiences. The inclusion of various stakeholders also allowed the evaluation team to understand the complete picture.

A lack of financial data also presented as a limitation to the routine and outcome data dashboard development. The evaluation team was unable to perform financial analysis per district. However, the team still included financial analysis for each province.

Despite these limitations, this evaluation still achieved its overall aim and specific objectives, and that it answered the evaluation questions, as demonstrated in Appendix 2.

# APPENDIX 2: ACHIEVING THE EVALUATION AIMS, OBJECTIVES AND QUESTIONS

**Table 19: Evaluation aims, objectives and questions**

| | | Primary qualitative data | Primary quantitative data | Routine and outcomes data | Secondary data |
|---|---|---|---|---|---|
| **Aim** | Evaluate the inputs invested, outputs made and intermediate outcomes of the service delivery improvement and interventions, which were implemented as part of NHI Phase 1 pilot districts. | x | x | x | x |
| **Objective 1** | Evaluate progress made during NHI Phase 1 against the objectives and targets set at the outset of the NHI initiative. | x | x | x | |
| **Objective 2** | Identify NHI Phase 1 interventions (or aspects thereof) that are working, and analyse the factors that promoted their successful implementation. | x | x | | x |
| **Objective 3** | Identify NHI Phase 1 interventions that are not working, and analyse the factors that have been barriers to successful implementation, as well as possible unintended consequences of the implementation of these Phase 1 interventions. | x | x | | x |
| **Objective 4** | Assess the effect/s of interventions on service delivery in the pilot districts. | x | x | x | |
| **Objective 5** | Identify best practices in the implementation of NHI Phase 1. | x | x | | |
| **Objective 6** | Assess the required coordination and collaboration mechanisms that should have been put in place to enhance coherence in the implementation of identified interventions. | x | x | | |
| **Objective 7** | Assess sustainability measures that could facilitate the phased implementation of NHI, with a particular focus on NHI Phase 2. | x | x | | x |
| **Objective 8** | Describe what would be required to scale-up successful interventions in NHI Phase 2. | x | x | | |
| **Objective 9** | Make recommendations that are actionable, realistic and feasible. | x | x | x | x |
| **Objective 10** | Conduct a systematic review of reviews/assessments/evaluations that have been conducted in the NHI pilot districts | | | | x |
| **Objective 11** | Conduct a comparative literature review of the evaluation of NHI implementation between South Africa and other developing countries. | | | | x |

# APPENDIX 3: CASE STUDY TABLE

**Table 20: Case Studies**

| Case study title | Case study description |
|---|---|
| **1. Amajuba district** | Amajuba constitutes the 11th district of the 10+1 NHI pilot districts. This case study explored how the Amajuba district implemented the NHI interventions using provincial budgetary allocations rather than national budget allocations. This case study sought to understand the possible ease of spending using provincial funds and how the province identified spending priorities as part of the NHI interventions. |
| **2. Leadership and Governance** | This case study explored scenarios where good leadership was displayed and scenarios where good leadership was understood not to be displayed at a national, provincial, and/or district levels. The aim was to try to understand the importance of having champions at each level. |
| **3. Contracting Models** | This case study investigated the strengths and weaknesses of different contracting models explored during the implementation of NHI Phase 1. The focus was on contracting models, namely Centralised Chronic Medicines Dispensing and Distribution (CCMDD) and General Practitioner contracting (GPC). The aim was to better understand how external service providers can be used to fill gaps in provision of services and how these providers can be managed effectively in order to achieve positive outcomes. |
| **4. Differing Perceptions of the impact of interventions (particularly between national and other levels)** | This case study explored varying perceptions of the NHI Phase 1 interventions. The preliminary data analysis indicated that at various stakeholder levels (national, provincial, district and facility) there were varying perceptions of the extent to which the interventions had been successfully implemented and had been beneficial to communities at large. The aim was to identify bottlenecks in the implementation of the interventions. |
| **5. Budgeting and resourcing** | Ensuring adequate budgets, resources and training is crucial to implementing new inventions successfully. This involves detailed planning as well. This case study used various interventions as a lens to further explore how budgeting and resourcing contributed towards an intervention's success. |

| | |
|---|---|
| **6. Coordination, alignment and feedback** | The case study investigated how delegations are made between national and provincial levels. The case study sought to understand how conditional grants and equitable share funds are conceptualised at the national level and how their implementation is carried out at the provincial level. The case study interrogating the development of the Workload Indicators of Staffing Need (WISN) and its subsequent implementation at the national and provincial levels, respectively. |
| **7. External stakeholder and community buy-in** | Buy-in from external stakeholders, including the communities that facilities serve, is important for a successful and sustainable NHI. This case study sought to understand how community buy-in was achieved and the degree to which clinic committees feed back into the community. |
| **8. Adaptive programming: The example of Western Cape** | South Africa is a country with vastly different landscapes, regions and cultures. In this context, a national programme needs to be adaptable and flexible to suite its diverse environment. This case study identified Western Cape as a province that tailored interventions for a provincially adapted programme. Four interventions, namely WBPHCOTs, DCSTs, CCMDD and GP contracted are discussed to understand the lessons learnt for future adaptive programming. |
| **9. SDG 3.8.1 and 3.8.2** | The 2030 Agenda for Sustainable Development emphasises that achieving universal health coverage (UHC) (Target 3.8) is the core driver of SDG 3. This target is measured through two related indicators; indicator 3.8.1 (coverage of essential health services) and indicator 3.8.2 (proportion of a country's population with large household expenditure on health as a share of household total consumption or income). The relevance of these target indicators to NHI Phase 1 and NHI Phase 2 is clear. <br><br> In 2017, the World Health Organisations and the World Bank published the UHC Global Monitoring Report, which established a 2015 baseline for the service coverage ratio; a composite measure of national performance with respect to indicators 3.8.1 and 3.8.2. The service coverage ratio includes 16 tracer indicators and covers RMNCH, infectious disease, non-communicable disease and health sector capacity. <br><br> This case study assessed South Africa's readiness to report the service coverage ratio for 2017. It also assessed the feasibility of calculating South Africa's performance in relation to indicator 3.8.2, which is intrinsically linked to NHI Phase II. Finally, the case study considered the potential for national and subnational monitoring of the effective service coverage ratio (including measurement of the quality of care received by those who need care) and equity in service coverage |

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