Health Sector Report for 2015-16

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HEALTH SECTOR REPORT 2015-16

November 2016

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FOREWORD

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I am pleased to present the 2015-16 health sector report.

The importance of quality healthcare in any progressing country is emphasised in the sustainable development goals (SDGs) but, closer to home, in the National Development Plan (NDP) 2030.

The Auditor-General of South Africa includes in its reputation promise the vision to strengthen our country's democracy. It is in keeping with this vision that we continue to focus our efforts on adding value in our audits. We aim to support the sector in achieving the goals that have been set for achieving the 2030 vision.

International and national priorities

World leaders adopted 17 SDGs with which to address significant challenges facing countries across the globe by 2030. As part of these goals, Goal 3*: Ensure healthy lives and promote well-being for all at all ages*, sets out the goals for healthcare worldwide.

The National Development Plan 2030 (NDP 2030), issued by the National Planning Commission, sets out the strategic priorities for South Africa and aims to eliminate poverty and reduce inequality by 2030. The NDP sets out nine goals in relation to health and recommends that nine critical actions be taken to achieve these targets. These actions include addressing social determinants of health and disease, strengthening the health system, improving health information systems, preventing and reducing the disease burden and promoting health, financing universal healthcare coverage, improving human resources in the health sector, improving quality of health services by using empirical evidence, and implementing effective partnerships in the health sector.

The national Department of Health (NDoH) has aligned its five-year strategic priorities to the SDG 2030 and the NDP 2030. The following strategic priorities have been adopted for the health sector:

1. Prevent disease, reduce its burden and promote health
2. Make progress towards universal health coverage through the development of the National Health Insurance Scheme, and improve the readiness of health facilities for its implementation
3. Re-engineer primary healthcare by: increasing the number of ward-based outreach teams, contracting general practitioners and district specialist teams, and expanding school health services
4. Improve health facility planning by implementing norms and standards
5. Improve financial management by improving capacity, contract management, revenue collection and supply chain management reforms
6. Develop an efficient health management information system for improved decision-making
7. Improve the quality of care by setting and monitoring national norms and standards, improving a system for user feedback, increasing safety in healthcare and improving clinical governance
8. Improve human resources for health by ensuring adequate training and accountability measures.

The health sector has faced numerous challenges in addressing the healthcare needs of the population, a large part of it stemming from the imbalances of the past. The NDoH has acknowledged the following challenges that must be overcome to move the country closer towards achieving its goals:

1. A complex, quadruple burden of disease[1]
2. Concerns about the quality of healthcare
3. An inefficient and ineffective health system
4. Spiralling private healthcare costs

In addition to the above, the country is experiencing fiscal constraints, impacting on the amount of resources available for healthcare. Funding must be stretched to meet the growing demands of the population and address the fundamental challenges affecting the sector. The General Statistics Survey 2013, published by Statistics South Africa, indicated that 69,9% of households relied on public clinics or hospitals as their first point of access for their healthcare needs. The general public is therefore heavily reliant on public health facilities for their basic healthcare needs.

Sector focus areas

Health is a key national and international priority. It affects the quality of life of all citizens. It is for this reason that health remains a sector focus area for the Auditor-General of South Africa (AGSA).

Since the 2007-08 audit cycle, we have reported on specific aspects of service delivery relevant to the health sector. In the past three years, there were five sector focus areas. Key findings are summarised in the table below:

[1] Consists of (i) the HIV/Aids epidemic and high levels of tuberculosis, (ii) high maternal and child mortality, (iii) non-communicable diseases such as cardiovascular disease, type 2 diabetes, cancer, chronic lung disease and depression and (iv) violence and injuries.

Table 1: Sector focus areas for past three years (2012-13 to 2014-15)

Focus areas	Key findings
Infrastructure	Weaknesses with the construction and utilisation of health facilities at various projects, which included significant delays in completing projects, budget overruns, fruitless and wasteful expenditure and underutilisation of facilities
HIV and Aids grant	Weaknesses in monitoring and evaluation systems
Emergency medical services*	Slow response times and shortfall of ambulances and emergency services employees
Healthcare waste management	Expired medicines and healthcare waste were not properly stored, managed and disposed of
Information systems	Poor infrastructure and weaknesses with security. Lack of integration in the systems used for health information, billing, revenue and pharmaceuticals. Systems were not always used due to poor connectivity and downtime.

* Not included in 2014-15 audit cycle

For the 2015-16 financial year, the focus areas were reviewed to broaden the scope of audits performed and to focus on critical service delivery matters. The health sector is highly complex and encompasses many areas in the delivery of healthcare. We have considered the level of maturity of the sector and focused on the fundamental building blocks that must form the foundation of an efficient and well-performing health sector.

The value chain for the delivery of health is based on the building blocks of the health care system (Figure 2). First, infrastructure needs to be established and human resources appointed to deliver services. Equipment, medicines and medical products are then required to provide care to patients. These all lead to the delivery of services, which include clinical and support services. A health information system is established for the collection, management and utilisation of health data for decision-making and underpins crucial decisions to be made by the sector. The effective functioning of each building block is underpinned by strong leadership, effective governance and efficient financial management.

Based on this value chain, the following sector focus areas were selected for the 2015-16 financial year:

- Use and maintenance of medical equipment
- Planning and maintenance of infrastructure
- Information technology

Medicine and medical products represent a significant element of the value chain. An in-depth performance audit has been performed on pharmaceuticals and the report on this audit will be tabled in parliament.

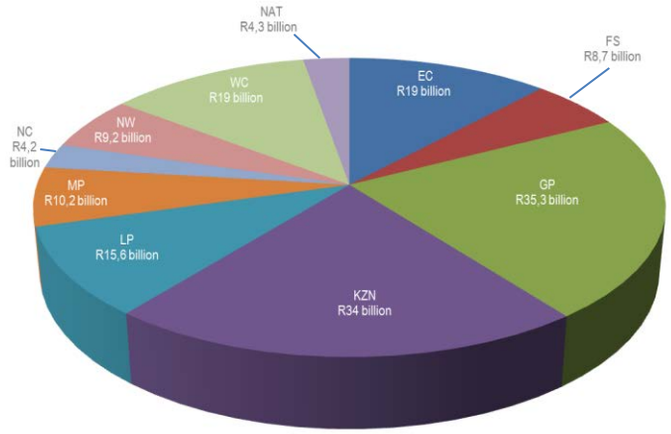
The risks posed by healthcare waste continued to receive media attention during the year under review. A follow-up audit of healthcare waste is included in this report.

In addition to the above, we analysed the audit outcomes and related root causes identified during our recent audits.

Funding in the health sector

In this report, the health sector refers to the NDoH and the nine provincial departments of health. The national department is primarily responsible for policy development and plays an oversight role over the nine provincial departments. The provincial departments implement policy and drive the service delivery objectives of the country through facilities (hospitals and clinics) across the country.

In accordance with the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996), each department operates autonomously and is funded primarily by voted funds. The national department exercises oversight over certain government spending following the transfer of conditional grants. The total budgeted expenditure by auditees in the health sector for the 2015-16 financial year was R159,5 billion (2014-15: R145,2 billion).



Key objectives of the report

We aim to highlight the key audit findings, internal control deficiencies and related root causes identified during our recent audits. This will guide those charged with governance and oversight in critical matters to be addressed as they work towards improving service delivery and achieving financially unqualified audit opinions on financial statements with no findings on either compliance with laws and regulations or reporting on predetermined objectives (i.e. clean audit outcomes).

Overview of audit outcomes

The audit outcomes and the findings raised for each of the sector focus areas indicate that there is considerable work to be done to achieve an effective, efficient and well-performing health sector that serves the needs of the country.

The findings, root causes and recommendations in this report were discussed with the relevant heads of departments, members of the executive councils of the provincial departments and the minister. In addition, these were discussed at the National Health Council (NHC).

In paving the way to the National Health Insurance (NHI), the minister has commenced with a number of initiatives to improve service delivery in the health sector. However, implementation at provincial level is slow. The health sector is characterised by legislated legal structures in the three spheres of government, which limits the powers of the minister to take corrective action to address poor audit outcomes. I would therefore urge the leadership of each department, including the NDoH, to commit to working together as a sector to address the poor audit outcomes.

I would like to thank the executive authorities, accounting officers and relevant staff of the national and provincial departments of health for supporting this audit and engaging with us. I would also like to thank my office's audit teams for their diligent efforts in strengthening our country's democracy.

Auditor-General

Pretoria

November 2016

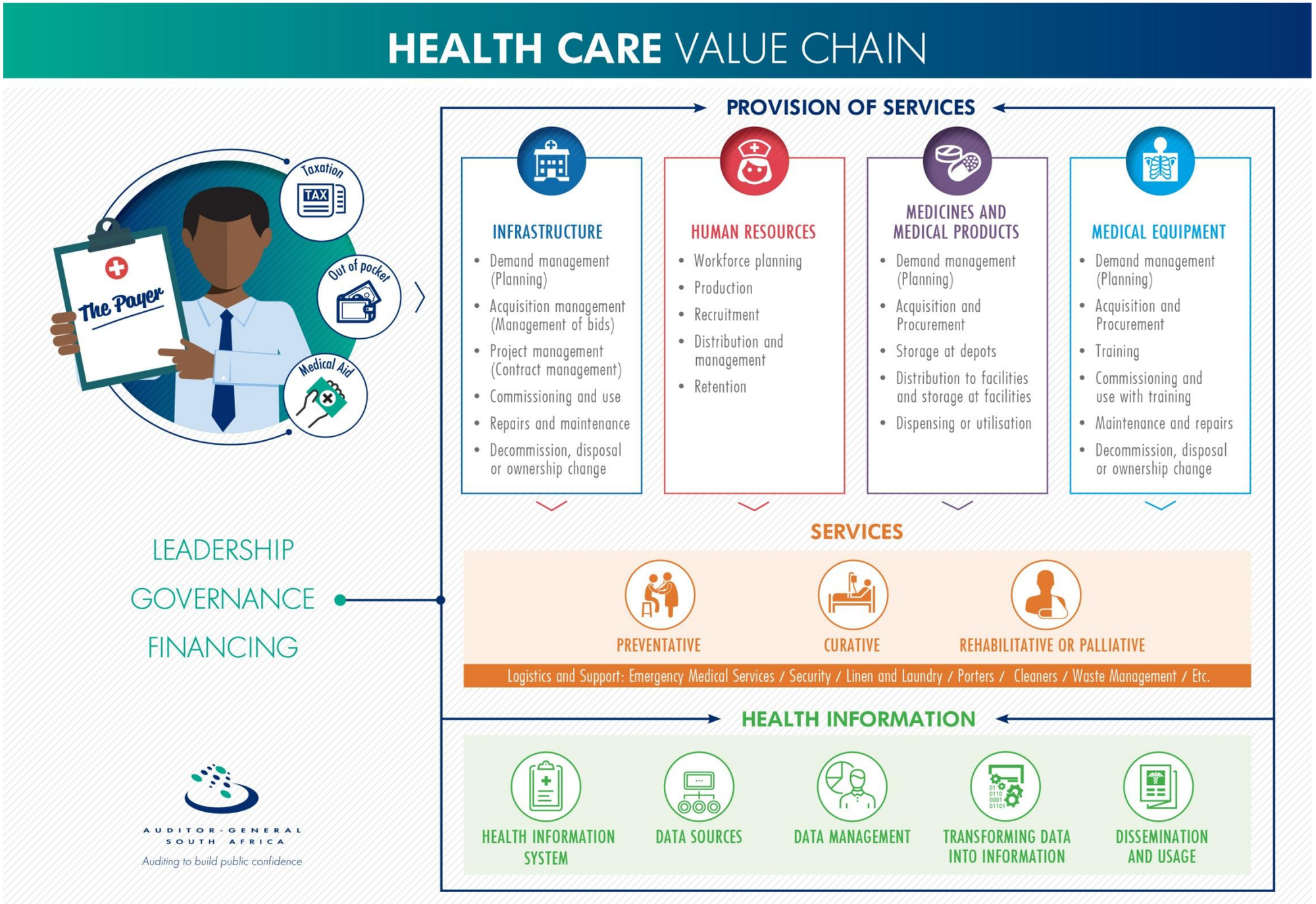


Figure 2: Healthcare value chain

Notes

EXECUTIVE SUMMARY

The significant aspects of the 2015-16 service delivery and audit outcomes are summarised below.

Service delivery outcomes

Use and maintenance of medical equipment

Service delivery objective:	**Why we audited the use and maintenance of medical equipment:**
The sector made a commitment to improve the quality of hospital services by improving compliance with the national core standards at all central, tertiary, regional and specialised hospitals. This includes the management and maintenance of medical equipment.	Medical equipment represents a number of substantial assets in the healthcare delivery system and needs to be managed efficiently. The effective use and maintenance of equipment can influence the quality of healthcare delivered to patients. This audit was performed to provide insights into the planning, use and maintenance of medical equipment at selected central, regional and tertiary hospitals.

Key audit findings:

Planning and procurement of medical equipment

- In eight provinces, there were limited budget allocations for the procurement and maintenance of equipment.
- In some provinces, there were no approved standard operating procedures for the procurement and maintenance of equipment.
- Delays in the process of procuring new equipment were noted in a number of instances.

Use of medical equipment

- Equipment was not always used optimally due to infrastructure deficiencies such as poor temperature control, insufficient space, etc. The use of equipment was also affected by a lack of sufficient and appropriately skilled staff and inadequate planning for maintenance and/or repair deficiencies in identified instances.

Maintenance and repairs of medical equipment

- At the hospitals visited, delays were noted in maintaining and/or repairing equipment.
- Condemned or written off equipment was not removed from functional or clinical areas timeously.
- Staff shortages were identified in clinical engineering departments.
- Shortages of essential equipment were identified in medical workshops.
- Proper records were not maintained in certain hospitals to allow for the proper planning of required maintenance of and/or repairs to equipment.

Planning and maintenance of infrastructure

Service delivery objective:	**Why we audited the planning for and maintenance of infrastructure:**
Public health infrastructure forms a key pillar in building the fundamentals for a successful national health insurance programme. The health sector has made significant investments in infrastructure through the hospital revitalisation grant to improve health infrastructure across the country.	The current public health infrastructure cannot support the service delivery needs of the country adequately. This has been a key priority area of government for a number of years; however, slow progress has been made in addressing the audit concerns raised over the past few years. This audit was undertaken to provide insights into planning of infrastructure projects and the maintenance of existing infrastructure.

Key audit findings:

Planning of infrastructure projects

- Contractors did not always produce work of good quality.
- Certain new and/or upgraded health facilities identified were unutilised/underutilised due to poor planning/project management.
- Infrastructure needs were not always identified and/or prioritised during the planning process.
- A project brief that addressed the needs of the project was not always developed properly.
- Feasibility studies were not always done during the project planning phase.
- The detailed designs of projects were not well developed and documented.
- Various elements of projects were not coordinated to allow projects to be completed within the agreed time frames.

- The projects were not planned and implemented using a systematic approach incorporating good project management principles.
- The use of people to be assigned to the project was not planned.
- The contract was not administered properly.
- Documentation was not retained and filed.
- User asset management plans did not always comply with the requirements of the Government Immovable Asset Management Act, 2007 (Act No. 19 of 2007) (Giama).

Infrastructure maintenance

- Departments did not always have a policy to address routine maintenance.
- Certain departments did not plan and/or budget for routine maintenance.
- Targets and time frames for routine maintenance of health facilities were not always achieved.

Information technology

Service delivery objective:

The sector is responsible for achieving priority 3: *Improve health information systems* of the NDP 2030 in order to realise the overall goals of the health sector. The NDP calls for synergy between the national, district, facility and community health information systems and describes critical actions to achieve this.

Why we audited the information systems:

Health information systems in South Africa are characterised by fragmented information systems that differ from province to province, a network infrastructure that is outdated and does not support the use of information systems, and a lack of coordinated processes and resources.

Therefore, the audit was performed to assess progress in achieving the goals of the ehealth strategy. We focused on the upgrading of network infrastructure and connectivity, with specific focus on pharmaceutical and billing and revenue systems.

Key audit findings:

Status of the implementation of the ehealth strategy

- Provinces did not always develop provincial ICT strategies aligned to the overall ehealth strategy.
- eHealth initiatives were not always prioritised and implemented properly.
- Operational and oversight committees were not adequately set up to support the ehealth strategy.
- Adequate monitoring and reporting mechanisms were not in place in some provinces.

Network infrastructure and connectivity

- Outdated infrastructure at six provinces did not fully support health information systems.
- Firewalls, patch and anti-virus management were not adequate.
- Environmental controls necessary to protect information system assets against environmental hazards such as temperature fluctuations, water leakages, etc. were not managed adequately.
- Decentralised networks contributed to inadequate connectivity.

Billing and revenue systems

- System controls to validate whether input into the system was accurate and complete were noted in most provinces.
- At all provinces, these systems did not interface with accounting systems.
- System downtime impacted on the capturing and completeness of patient and billing information
- Tariff codes were not always correctly set up.

Pharmaceutical systems

- Pharmaceutical systems were not integrated among pharmacies, the depot and hospitals.
- Most provinces did not use all of the modules in the system effectively.
- Trend analyses were not always done at facilities to manage pharmaceuticals optimally.
- Pharmaceutical systems were not always used due to poor connectivity and slow system response times.

Management of healthcare waste

Service delivery objective:	Why we audited healthcare waste:
The departments of health must meet the requirements of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (Nema) and the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (Nemwa), in handling, storing and disposing of healthcare waste. As the holders of healthcare waste, the departments are responsible for waste from its generation to its eventual disposal. In accordance with these acts, the health sector has a responsibility to protect the environment, healthcare workers and the general public from the significant risks of pollution and contamination by properly managing healthcare waste.	We have audited healthcare waste for more than five years. Significant findings were identified which required corrective action from management; however, the progress in addressing these findings has been slow. Negative media attention and a complaint received resulted in a follow-up audit having been done. The audit was performed to determine whether management addressed the findings of the prior year. In addition, specific procedures were undertaken to address additional risks identified relating to internal control weaknesses and procurement and contract management.

Key audit findings:

Internal control weaknesses in healthcare waste management

- Actions plans were not always prepared and/or implemented to address prior year findings.
- Written policies and procedures for the handling and disposal of healthcare waste were not in place in two provinces. Where policies and procedures were in place, they were not implemented adequately across all provinces.
- Weaknesses in internal control processes were noted in all provinces.

Procurement and contract management

- Service providers did not always adhere to the conditions of contracts/SLAs.
- Irregularities were noted in the awarding of contracts in two provinces.
- General waste was not separated from regular waste for one province, possibly resulting in excessive payments to suppliers.
- Health facilities did not always obtain proof from the service provider that waste was properly disposed of.

Compliance with Nema and Nemwa

- All departments had findings on instances of non-compliance with Nema and Nemwa.

Audit outcomes

The sector reflected two improvements in audit outcomes and two regressions, resulting in an overall stagnation in audit outcomes. Four departments were financially unqualified with findings on compliance and/or predetermined objectives. The remaining six departments were qualified with findings on compliance and/or predetermined objectives.

Internal control weaknesses in supply chain management resulted in significant amounts of irregular expenditure being disclosed for the sector. The audit has revealed weaknesses in budgeting and cash flow management in certain provinces, impacting on the financial health of these departments. An assessment of key internal controls reflects a slow response by the leadership to address the audit findings raised and weaknesses in the daily and monthly financial reporting internal controls in all provinces.

The department reports on predetermined objectives in its annual performance report. Material findings were reported in all provincial departments' audit reports. Performance information was assessed as not being useful in some provinces due to inadequate systems in place to collect information, inconsistencies with the annual performance plan and inadequate evidence to support variances. The complex structures and reporting processes, availability of supporting documentation and inadequate information systems, contributed to certain information not being reliable.

We assessed compliance with key legislation and reported instances of material non-compliance at nine departments. Non-compliance within the health sector is a result of inadequate discipline to monitor and review daily activities and the failure to hold staff accountable for not complying with laws and regulations.

Overall root causes

We have considered the slow progress made by the sector in addressing the root causes of poor audit outcomes and service delivery challenges and note the slow response by the political leadership and senior management, lack of consequences for poor performance and transgressions and instability caused by vacancies as the overall root causes.

Overall recommendation

In addressing the overall root causes, the leadership must take ownership of the service delivery challenges and poor audit outcomes by strengthening leadership skills of senior management at provinces and facilities, implementing a culture of accountability and filling vacancies in key positions with appropriately skilled officials.

Notes

SECTOR OUTCOMES

Focus area 1: Use and maintenance of medical equipment

Service delivery objective

According to the NDoH's strategic plan for the period 2015-16 to 2019-20, a commitment was made to improve the quality of hospital services by improving compliance with the national core standards at all central, tertiary, regional and specialised hospitals.

Their annual performance plan for 2015-16 to 2017-18 focuses on the percentage compliance with vital and extreme measures. All the measures for health technology services, which include the management and maintenance of medical equipment, are considered vital for the delivery of services as measured by the Office of Health Standards Compliance.

Why we audited the use and maintenance of medical equipment?

Medical equipment represents a number of substantial assets in the healthcare delivery system and needs to be managed efficiently. The way in which it is purchased, managed and used can influence the quality of healthcare delivered to patients. Medical equipment that is not managed and used properly can pose a health risk to patients and staff.

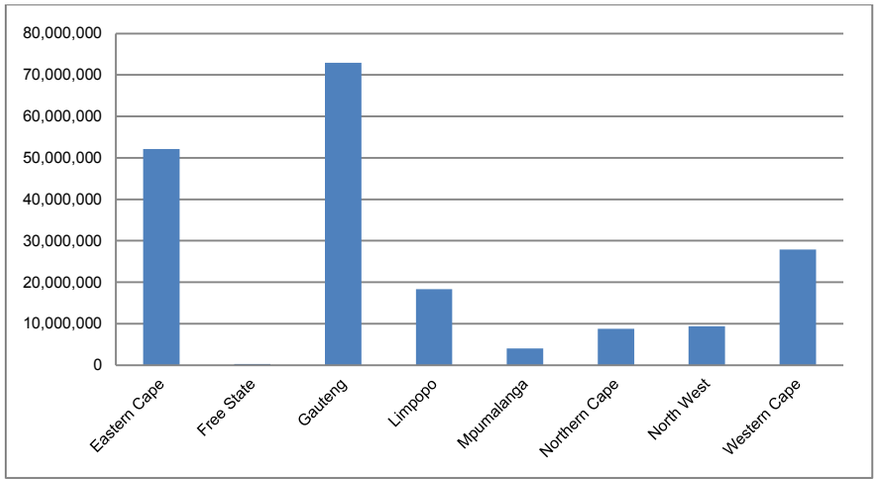
This audit was done to provide insights into the planning, use and maintenance of medical equipment at selected central, regional and tertiary hospitals. The audit focused on medical equipment in the neonatal wards and radiology departments. Neonatal wards were included because the reduction of infant mortality is one of the key objectives of the health sector as stated in the NDP 2030. The radiology departments were included because the equipment used in these departments are of high value and are sensitive to fast technological changes in the global environment. Table 1 provides a summary of the hospitals visited during the audit.

Table 1: Hospitals visited during the audit

Province	Name of hospital	Facility level
Eastern Cape	Frere Hospital	Tertiary Hospital
	Livingstone Hospital	Tertiary Hospital
Free State	Boitumelo Hospital	Regional Hospital
	Pelonomi Hospital	Tertiary Hospital
Gauteng	Dr George Mukhari Hospital	Central Hospital
	Kalafong Hospital	Tertiary Hospital
	Leratong Hospital	Regional Hospital
KwaZulu-Natal	Addington Hospital	Regional Hospital
	King Dinuzulu Hospital Complex	Regional Hospital
Limpopo	Pietersburg Hospital	Tertiary Hospital
	Mankweng Hospital	Tertiary Hospital
Mpumalanga	Rob Ferreira Hospital	Tertiary Hospital
	Witbank Hospital	Tertiary Hospital
Northern Cape	Kimberley Hospital	Tertiary Hospital
	Dr Harry Surtie Hospital	Regional Hospital
North West	Joe Morolong Memorial Hospital	Regional Hospital
	Klerksdorp Tshepong Hospital Complex	Tertiary Hospital
Western Cape	Red Cross War Memorial Children's Hospital	Tertiary Hospital
	Worcester Hospital	Regional Hospital

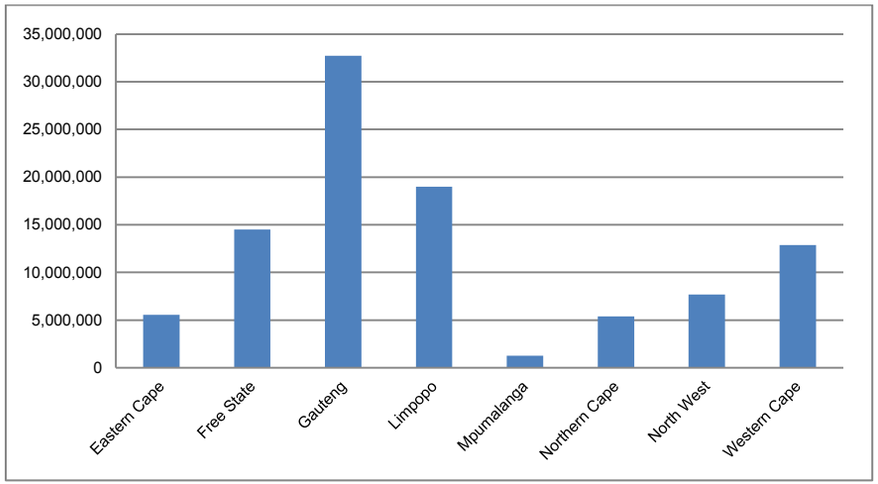
During the 2015-16 financial year, the hospitals visited spent R194 million on the procurement of new medical equipment and R99 million on the maintenance of existing equipment. Figures 1 and 2 show this information:

Figure 1: Expenditure on the procurement of new medical equipment at the hospitals visited



Note: *Three hospitals were visited in Gauteng. The amounts exclude the expenditure on medical equipment for the hospitals visited in KwaZulu-Natal as the expenditure was only available for the province and not for individual hospitals. In the Free State, R301 245 was spent on the procurement of new medical equipment during the 2015-16 financial year. The expenditure on the medical equipment excludes leased medical equipment.*

Figure 2: Total expenditure on the maintenance of existing medical equipment at the hospitals visited

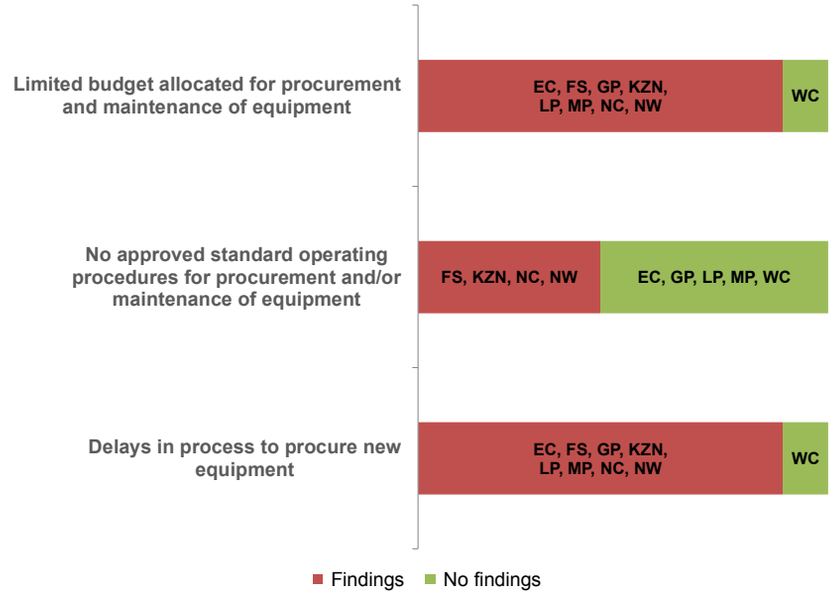


Source: *Extracts from the Basic Accounting System (BAS) was used for all the provinces except KwaZulu-Natal and Northern Cape. For the Northern Cape, manual information was provided for expenditure on medical equipment for Dr Harry Surtie Hospital and for KwaZulu-Natal the amounts were excluded from the graph as the expenditure was only available for the province and not for individual hospitals.*

The following uneconomical, inefficient and ineffective practices contributed to medical equipment not being used optimally, ultimately resulting in poor healthcare delivery.

Key findings on the planning and procurement of medical equipment

Figure 3: Key findings on planning and procurement of medical equipment



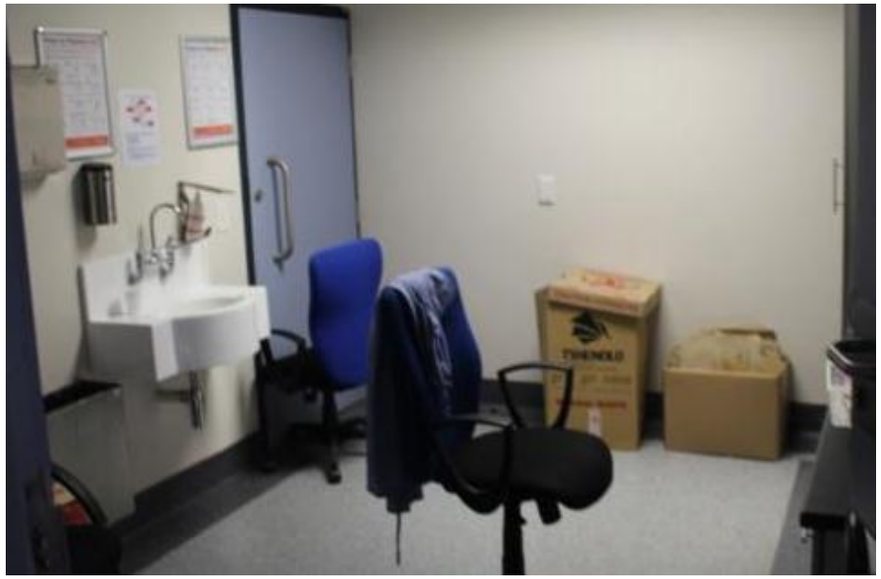
Note: *Management at some hospitals visited indicated that their budgets for the procurement of new medical equipment and maintenance of existing equipment were not sufficient*

Although there is a concern regarding the availability of budgets, delays in the procurement of new specialised medical equipment and consumables led to the underspending of annual budgets, which ultimately resulted in commitments at financial year-end[2] in some provinces. In some instances, the procurement of new medical equipment took longer than two years. The following serve as examples:

[2] A commitment is an undertaking by the hospitals to commit expenditure at a future date

- At the Dr Harry Surtie Hospital in the Northern Cape, the approval for procurement of a mammography machine was granted in 2014. Due to delays in the procurement process, the machine has not yet been procured as at June 2016. As a result, the mammography service was outsourced to a private hospital. Picture 1 shows the empty mammography room at the hospital.
- At the Kalafong Hospital in Gauteng, the procurement of a head-cooling machine was delayed as the procurement documentation was lost. The machine was re-ordered in December 2015 and as at March 2016, the machine had not yet been delivered. Ice packs were used for head cooling due to the shortage of head-cooling machines. Although ice packs are considered to be a means of providing head cooling, it poses a risk in terms of consistently controlling the temperature to remain between the required 32ºC and 34ºC.

Picture 1: Empty mammography room



Picture 1 was taken at the Dr Harry Surtie Hospital in the Northern Cape

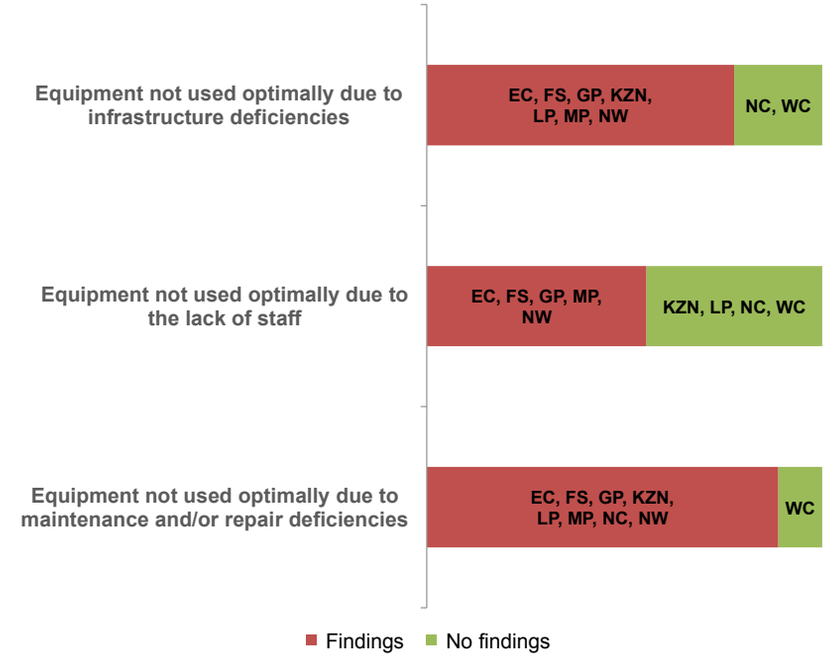
The following contributed to the prolonged procurement processes:

- Procurement documentation was lost due to poor document management.
- Bid evaluation committee meetings were cancelled and rescheduled.
- End users, including doctors, nurses and radiographers, did not have the knowledge necessary to prepare bid specifications, resulting in delays.
- Prospective suppliers did not meet the bid specifications, resulting in the re-advertisement of tenders.
- There were limited medical equipment suppliers in certain provinces.
- There were staff shortages in the units responsible for supply chain management.
- Poor planning – hospitals did not plan and prioritise in advance for the procurement of medical equipment.

Delays in the procurement process made it difficult to plan for services at hospital level and resulted in the lack of medical equipment to provide essential services to patients.

Key findings on the use of medical equipment

Figure 4: Key findings on the use of medical equipment



Medical equipment was not always used optimally at the hospitals visited because of maintenance and/or repair deficiencies. Equipment was not always repaired in time, resulting in equipment not functioning for extended periods. The following serve as examples:

- At the Livingstone Hospital in the Eastern Cape, a fluoroscopy[3] machine was kept in the radiology department, although it has not been functional since 15 December 2014. The staff indicated that the x-ray generator and the image intensifier tube of the machine were broken. Picture 2 shows the fluoroscopy machine that has not been functional since December 2014.

  At the Kimberley Hospital in the Northern Cape, a fluoroscopy machine developed a software problem during February 2016 and has not been functional since then. The maintenance contract with the supplier ended on 30 September 2015. Patients were referred to hospitals in Bloemfontein to undergo fluoroscopy imaging. Picture 3 shows the fluoroscopy machine that was not functioning.

Pictures 2 and 3: Fluoroscopy machines not functional

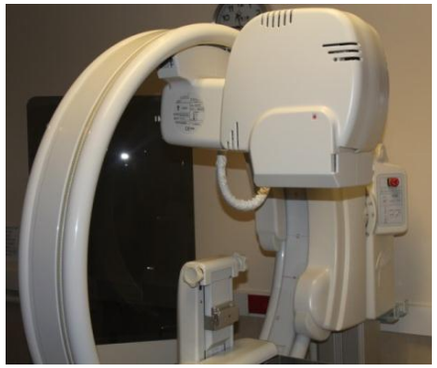
Picture 2 was taken at the Livingstone Hospital in the Eastern Cape and picture 3 at the Kimberley Hospital in the Northern Cape

- At the Frere Hospital in the Eastern Cape, a mammography machine was kept in the radiology department even though it has not been used since 23 February 2016. The quotation of R56 935 to repair the machine was not accepted due to budget constraints. Pictures 4 and 5 show the machine valued at R4,4 million that was out of order on the day of the visit.

This affected the patients' waiting times negatively as they were asked to return when the machine is functional. As at 4 April 2016, nine weeks after the compression paddle and headrest broke, the backlog was already estimated at four weeks with 218 patients on a waiting list to be examined once the machine has been repaired. During the nine-week downtime period, 104 patients could not be attended to and another 114 patients made appointments with the hope that the machine would be repaired in the near future.

[3] An x-ray machine that produces immediate images and motion on a screen

Pictures 4 and 5: Mammography machine awaiting repairs



- At the Pietersburg Hospital in Limpopo, one of the two CT scanners was not functional. A key mechanism required for the functioning of the machine was broken. In addition, the CT scanner had a small uninterruptible power supply (UPS) that only supported the software and not the entire unit during power failures. There was not enough space in the room to install a bigger UPS. Picture 6 shows the CT scanner that was broken.
- At the Boitumelo Hospital in the Free State, a mobile ultrasound machine has not been used since January 2013 as it was awaiting repairs. The machine required a battery and a generator to function. Picture 7 shows the mobile ultrasound machine that has not been used since January 2013.

Pictures 6 and 7: CT scanner not functional and mobile ultrasound machine awaiting repairs

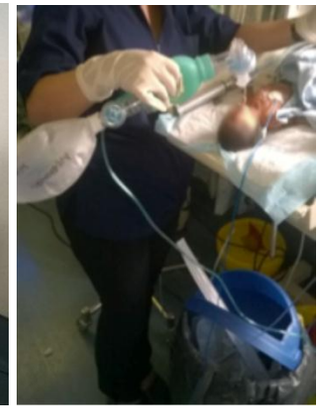
Picture 6 was taken at the Pietersburg Hospital in Limpopo and picture 7 at the Boitumelo Hospital in the Free State

- At the Rob Ferreira Hospital in Mpumalanga, a number of infant flow SiPAP[4] systems have been out of order since 2015. These systems are used to provide gentle respiratory support to infants. In the absence of the SiPAP systems, the staff used manual resuscitators to provide positive pressure ventilation to infants who were not breathing or not breathing adequately.

  The lack of functional equipment could compromise the health care of premature babies. Pictures 8 and 9 show the broken SiPAP systems and picture 10 shows the one manual resuscitator that was used. This resuscitator required manual bagging while the SiPAP does automatic ventilation of infants at the required pressure.

Pictures 8 to 10: Broken SiPAP systems and manual resuscitator used instead





- At the Dr Harry Surtie Hospital in the Northern Cape, an ultrasound machine experienced water damage in November 2014 as a result of a burst water pipe in the roof. The damage was not covered by the maintenance contract. Funding had to be secured before the machine could be repaired and it was repaired in November 2015 (one year later). As at April 2016, the machine was still not functioning as the internet protocol address of the machine had not been configured.

  As a result, three other ultrasound machines were overused because of this non-functioning machine. In addition, the ultrasound machine was placed next to a water basin, exposing it to a risk of water damage. Picture 11 shows the non-functioning ultrasound machine.

Medical equipment was not always used optimally at the hospitals visited because of infrastructural deficiencies. Infrastructural deficiencies included poor temperature control due to faulty air conditioners, insufficient space and equipment not connected to generators. The following serve as examples:

- At the Livingstone Hospital in the Eastern Cape, there was an air conditioner that has not been functional since 2015 in a CT scanner examination room. This resulted in the CT scanner overheating, which in turn contributed to unreliable x-ray results of patients or, in some instances, automatic system shutdowns for a period. Picture 12 shows the CT scanner that was not used optimally due to a deficient air conditioner.
- At the King Dinuzulu Hospital Complex in KwaZulu-Natal, a dual detector x-ray machine has been located in the TB surgical ward since 2014. It has never been used as the TB complex building has not been commissioned. Even though the machine has not been used, there was a maintenance contract to the value of R366 411 for it and this amount was paid to the supplier. Picture 13 shows the dual detector x-ray machine that was not used.

Picture 11: Non-functioning ultrasound machine

[4] Synchronized inspiratory positive airway pressure

Pictures 12 and 13: CT scanner not used due to deficient air conditioner and dual detector x-ray machine not used

Picture 12 was taken at the Livingstone Hospital in the Eastern Cape and picture 13 at the King Dinuzulu Hospital Complex in KwaZulu-Natal

Some hospitals did not have sufficient staff to operate specialised medical equipment such as CT scanners, ultrasound equipment, x-ray machines and mammography equipment. As a result, this equipment was underutilised or not used at all. The following serve as examples:

- At the Boitumelo Hospital in the Free State, a CT scanner has not been used optimally for seven months during 2015, as no radiologist was employed on a full-time basis. The images were provided to a sessional radiologist for interpretation and to provide reports to the doctors. Some of these reports were delayed by up to three days at a time. For emergency cases, patients were referred to the Pelonomi and Universitas Hospitals.
- At the Livingstone Hospital in the Eastern Cape, some general x-ray units and the CT scanner were not used optimally due to the shortage of radiologists. As at April 2016, some appointments have already been scheduled up to one year and three months in advance. For example, appointments for CT scans have already been made until 28 June 2017.
- Limited ultrasound examinations were performed at the Klerksdorp Tshepong Hospital Complex in North West from April 2016, as there were no sonographers to perform these examinations. The contracts between the hospital and the sonographers expired on 31 March 2016. The hospital has four ultrasound machines.
- At the Rob Ferreira Hospital in Mpumalanga, three ultrasound machines have not been used from January 2016 to May 2016 as the sonographer was on maternity leave and there were no other staff to operate these machines. Pictures 14 to 16 show the ultrasound machines that were not used due to a lack of staff.

Pictures 14 to 16: Ultrasound machines not used due to a lack of staff

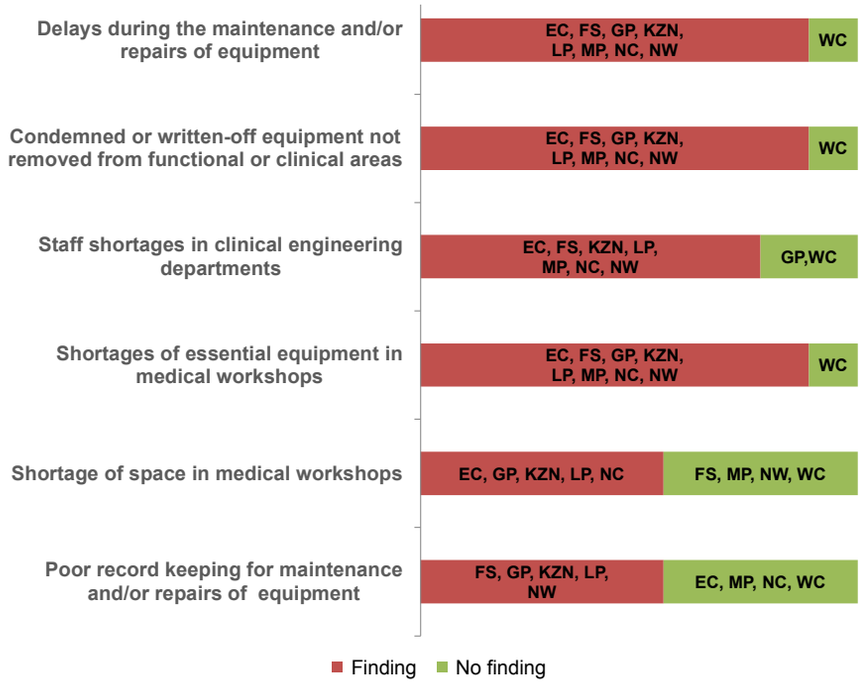
- At the Rob Ferreira and Witbank hospitals in Mpumalanga, the mammography machines were not used due to a lack of staff to operate these machines. No mammographers were employed by the hospitals to screen female patients for, amongst others, the early detection of breast cancer. Pictures 17 and 18 show the mammography machines that were not used due to a lack of staff.

Pictures 17 and 18: Mammography machines not used due to a lack of staff

Picture 17 was taken at the Witbank Hospital and picture 18 at the Rob Ferreira Hospital in Mpumalanga

Key findings on the maintenance and repairs of medical equipment

Figure 5: Key findings on maintenance and repairs of medical equipment



The maintenance and/or repairs of medical equipment was delayed at some of the hospitals visited. Table 2 includes examples where delays were experienced during the maintenance and/or repairs of medical equipment.

Table 2: Examples where delays were experienced with the repairs and/or maintenance of medical equipment

Hospital	Type of medical equipment	Date of request for repair or maintenance	Date repair or maintenance completed	Period in months
Frere Hospital, Eastern Cape	Ultrasound machine	1 April 2015	7 October 2015	6 months
Pelonomi Hospital, Free State	Infusion and syringe pumps and three saturation monitors	22 October 2014	Not yet repaired at 13 April 2016	Ongoing – 17 months
Leratong Hospital, Gauteng	Avea ventilator screen	April 2015	February 2016	10 months
Addington Hospital, KwaZulu-Natal	Polymobil x-ray unit	8 July 2014	9 May 2016	22 months
Mankweng Hospital, Limpopo	Two incubators	May 2015	Not yet repaired at 11 April 2016	Ongoing – 11 months
Witbank Hospital, Mpumalanga	C-arm x-ray unit	20 August 2015	February 2016	5 months
Dr Harry Surtie Hospital, Northern Cape	Infant incubators	31 August 2015	9 December 2015	3 months
Klerksdorp Tshepong Hospital Complex, North West	Various medical equipment	July 2013	Not yet repaired at April 2016	33 months

Reasons for delays in the maintenance and/or repairs of medical equipment included:

- staff shortages in the clinical engineering departments
- delays in the supply chain management process
- external service providers did not have the required service or replacement parts in stock
- inexperienced staff in clinical engineering departments who required training, monitoring and supervision
- no standardised information system that recorded information on the maintenance and repairs of medical equipment
- funding constraints.

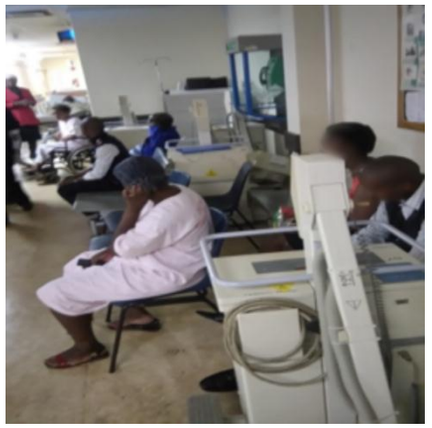
The long time it took for the maintenance and/or repairs of medical equipment to be finalised had a negative effect on service delivery. Patients had to be referred to nearby hospitals, waiting times for procedures increased, other working equipment were overused and staff at hospitals were demoralised in the absence of functional medical equipment.

Condemned or written off medical equipment was not always removed from functional and clinical areas at the hospitals visited. Equipment was mainly not removed from these areas due to insufficient storage space. The following serve as examples:

- At the Klerksdorp Tshepong Hospital Complex in North West, a C-arm unit in the radiology department has been awaiting a condemnation letter from the supplier since 2012, a period of more than four years. Picture 19 shows the C-arm unit stored in the department.
- Picture 20 shows a condemned general x-ray machine at the Kalafong Hospital in Gauteng and picture 21 shows a condemned ultrasound machine that was stored in the neonatal ward at the Witbank Hospital in Mpumalanga. Picture 22 shows four condemned mobile x-ray machines that were stored in the waiting area of the radiology department at the Mankweng Hospital in Limpopo.

Pictures 19 to 22: Unused or condemned medical equipment stored in clinical areas

Picture 19 was taken at the Klerksdorp Tshepong Hospital Complex in North West and picture 20 at the Kalafong Hospital in Gauteng



Picture 21 was taken at the Witbank Hospital in Mpumalanga and picture 22 at the Mankweng Hospital in Limpopo

The clinical engineering departments (including the medical workshops)at some of the hospitals did not have sufficient staff to function effectively. At some hospitals, only one staff member was appointed to provide maintenance and repair services on medical equipment for the entire hospital. Vacant positions were not always filled due to, amongst others, funding constraints. Staff shortages contributed to the following:

- Delays during the maintenance and/or repairs of medical equipment
- Poor quality of maintenance and repairs

- Preventative maintenance not performed
- Limited communication between the clinical engineering department and clinical areas
- Delays during the disposal of redundant medical equipment
- Maintenance records did not exist or were not updated regularly
- Lack of maintenance plans or maintenance not done in accordance with maintenance plans
- Limited monitoring of the quality of external and internal maintenance and repair

Furthermore, in five provinces, the hospitals visited did not keep proper records of the maintenance and repairs of medical equipment. This made it difficult to identify delays in the repair of equipment or to identify equipment that is in need of preventative maintenance.

Some of the clinical engineering departments at the hospitals visited did not have all the essential equipment to function efficiently and effectively. This included the necessary consumables and spare or service parts to maintain and repair medical equipment. Tools, consumables and parts were not always acquired because of funding constraints.

Most prevalent root causes

1. Lack of communication between management at hospitals and the staff at the provincial departments who are responsible for supply chain management and for the timely procurement of new medical equipment and consumables (or parts) for the maintenance and/or repairs of existing equipment.
2. Lack of technical staff and/or space to conduct preventative and corrective maintenance and/or repairs on the hospital premises.
3. Lack of communication and coordination between staff in the clinical areas and the technical staff in the clinical engineering departments when equipment required repairs.
4. Lack of maintenance plans or the non-implementation of existing maintenance plans and/or schedules. Adherence to the maintenance plans was not always monitored.

What needs to be done differently?

1. The budgets for the procurement of new medical equipment and maintenance and/or repairs of existing equipment should be based on the approved procurement and maintenance plans of hospitals. Sufficient contingency funds should be set aside for urgent repairs and the replacement of critical medical equipment.
2. Where possible, orders for the procurement of new medical equipment should be placed within the first quarter of the financial year and prioritised for processing. Maintenance of existing equipment should be based on the approved maintenance plan and scheduled in advance as far as possible.
3. A comprehensive needs analysis, with the inputs from end users, should be performed to determine the staffing, equipment and infrastructure requirements in the clinical areas and clinical engineering departments in the hospitals. Areas where deficiencies have been identified should be prioritised in line with available funding.
4. Strengthen communication and/or reporting lines between staff within the various departments in hospitals and also between management at the hospitals and staff at the provincial departments of health responsible for supply chain management.

Focus Area 2: Planning and maintenance of infrastructure

Service delivery objective

The purpose of the health facility revitalisation grant is to help accelerate the construction, maintenance, upgrading and rehabilitation of new and existing health infrastructure; to supplement expenditure on health infrastructure delivered through public-private partnerships; and to enhance capacity to deliver health infrastructure. It is aimed at improving the quality of care in line with national policy objectives. This aim is accomplished by ensuring that infrastructure projects are well planned and the economical procurement of services takes place, thus strengthening the quality of service delivery.

Why we audited the planning and maintenance of infrastructure

Public health infrastructure forms a key pillar in building the fundamentals for a successful national health insurance programme. However, according to the National Service Delivery Agreement (NSDA), the current public health infrastructure cannot support the service delivery needs of the country adequately. Health facility planning, including the provision of new hospitals and clinics and the upgrading of established facilities, needs to be expedited in order to increase citizens' access to high standard healthcare facilities.

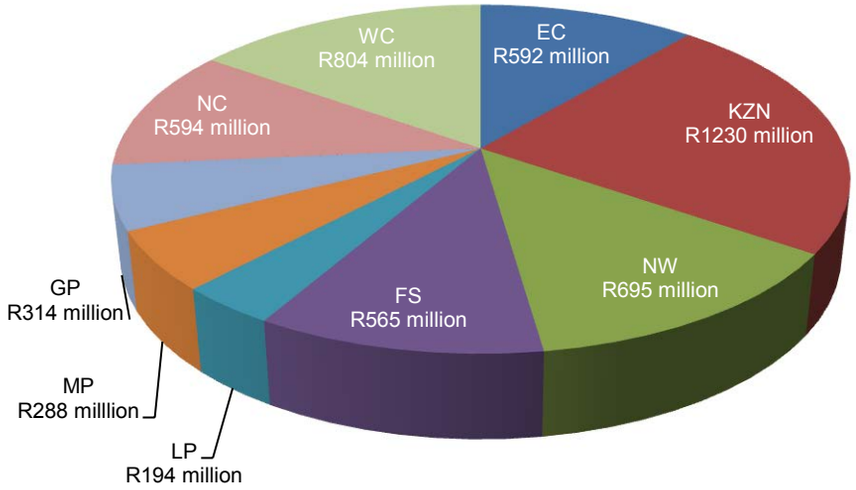
The focus of the audit this year was on the planning cycle for infrastructure delivery, the infrastructure maintenance processes as well as the adoption of the Infrastructure Delivery Management System (IDMS). The IDMS was developed by the National Treasury and issued in November 2012. It is a guideline for departments on how to deliver infrastructure projects based on best practices endorsed by the CIDB. Although the IDMS was only adopted officially from July 2016, we felt it imperative to test the state of readiness of the national and provincial departments to implement it effectively. Since the IDMS premises on generally acceptable good practices within the built environment, the focus was on the aspects that the departments should already be implementing.

Health sector budget

The health sector remains a priority for government and receives a large share of voted government funding. The health departments used the health facility revitalisation grant to fund their infrastructure development programme. The grant funding amounted to R5,3 billion in 2015-16, which is a small reduction from the R5,5 billion in 2014-15. In addition, the national department used funding from the in-kind grant to implement specific infrastructure projects. The in-kind grant is money spent on behalf of the provincial departments and the purpose of the in-kind grant is to enhance the capacity and capability to deliver infrastructure for NHI pilots. The amount of this grant was R612,7 million in 2015-16. The allocation of the health facility revitalisation grant by province totalling R5,276 billion is shown in figure1 below.

With regard to routine maintenance of infrastructure, there was inadequate planning and budgeting. The focus was only on reactive maintenance and lacked that of preventative maintenance which promotes stability, efficiency, effectiveness and economical use of the infrastructure.

Figure 1: Source: Hospital Revitalisation Grant



This audit was performed to provide insights into two focus areas, infrastructure planning and maintenance of existing infrastructure. This entailed the auditing of planning processes for the health infrastructure development programme, the resource planning of infrastructure by the provincial and national departments as well as effective infrastructure delivery. In this regard, a sample of 80 projects was audited. The key findings thereof are outlined below.

Key findings on the planning for infrastructure projects

The findings below raised in prior year sector audits indicate slow progress by the sector in addressing the audit findings raised:

- Poor record-keeping by departments and implementing agents.
- Lack of consequences for poor project management by implementing agents.
- Projects experiencing undue delays.
- Contractors delivering poor quality workmanship.

As part of the audit, we assessed whether health departments and implementing agents formally adopted the IDMS methodology and implemented it. The IDMS is a system for planning, budgeting, procurement, delivery, maintenance, operation, monitoring and evaluation of infrastructure. It is at the heart of infrastructure management and it requires adherence to the controls to be effective. On all the projects audited, it was found that the prescripts of the IDMS had not been fully implemented, as seen in figure 2 below. This had an effect on the compilation and existence of the user asset management plans (U-AMPs) in three provinces where it was found that the GIAMA requirements were not fully adhered to. As a result, the U-AMPS of three provinces did not contain the minimum contents prescribed by GIAMA. As such the evaluation of the effectiveness of the IDMS as well as the infrastructure delivery is compromised. This has a negative impact on service delivery. Figure 2 below indicates that the demand management processes in most provinces have shortcomings.

Not all health departments conducted feasibility studies in their demand management process. This inconsistent approach created infrastructure which is not properly utilised. The uncoordinated health service planning activities within the health department resulted in poorly defined project briefs and ill-defined needs.

In six provinces, critical project documentation was not retained and filed in such a manner that it would be readily available. This resulted in information either not being available during the audit or departments providing incomplete project information. We also noted that in many provinces, project information had to be sourced from the various implementing agents, as it was not stored at the health departments. In five provinces, selected contracts were not administered according to the provisions of the contract and the National Treasury Standard for a Construction Procurement System .

Figure 2: Key findings on infrastructure delivery

Most prevalent root causes

- A general lack of compliance with technical specifications by the selected contractors.
- The implementing agents appointed by the health departments engaged in poor project planning, supervision, monitoring and coordination.
- Insufficient guidance from the health services planning division when infrastructure needs were determined.
- The appointed implementing agents failed to use a generally accepted methodology such as IDMS to deliver projects in a programmed manner.

- The health department did not monitor their submissions to the treasury to ensure that their procurements plans were submitted before the deadline.
- The management of documents and records by implementing agents and health departments was deficient.
- The health departments did not review their U-AMPs to ensure that it contained the required content as prescribed by legislation.
- The information used by health departments to compile U-AMPs is outdated.
- The health departments did not fill all the posts in their infrastruture units, enabling the units to meet the human resource demand on projects.

Project quality management

Figure 2 shows the contractors in seven provinces did not produce quality work. There were inadequate quality assurance and quality control activities, resulting in the conditions shown in the photographs below. The project managers and contract managers relied on the drawings and specifications to ensure that the work was done rather than following proper project principles such as timely, on-site inspections, proper supervision and review, and active visibility on the projects. Tighter controls were not implemented to ensure that deviations from building norms and standards were addressed timeously.

Most prevalent root causes

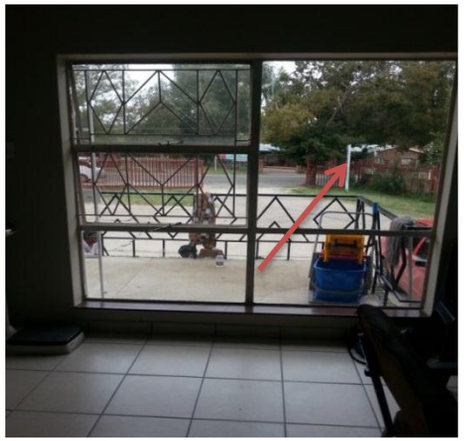
- The absence of proper quality plans to coordinate activities hampers quality management.
- The lack of supervision, inspections and performance management on project sites lead to poor quality management.
- Contracts were not terminated and penalty clauses were not implemented, resulting in a lack of consequence management towards contractors.
- The lack of leadership by implementing agents on the projects.

Pictures of quality issues

Picture 1: Ponding at surface bed due to poor sloping of surface at Vaal Bank Clinic (Eastern Cape)

Picture 2: Honeycombing of concrete surface due to inferior concrete mix, at Midoroni Clinic (Limpopo)

Picture 3: Hairline crack around entire external wall, due to inferior plaster mix, at Thembisa Hospital (Gauteng)



Picture 4: Incomplete burglar bar at clinic window, at Soet Water Clinic (Free State)

Picture 5: Crack on the pavement, due to inferior concrete mix, at Evander Hospital (Mpumalanga)

Picture 6: Newly installed tiles already cracked at Excelsius Nursing College (North West)

Picture 7: Inappropriate access to the 2nd of two disability ablutions, due to poor planning during needs analysis, at CH Baragwanath Hospital (national facility)

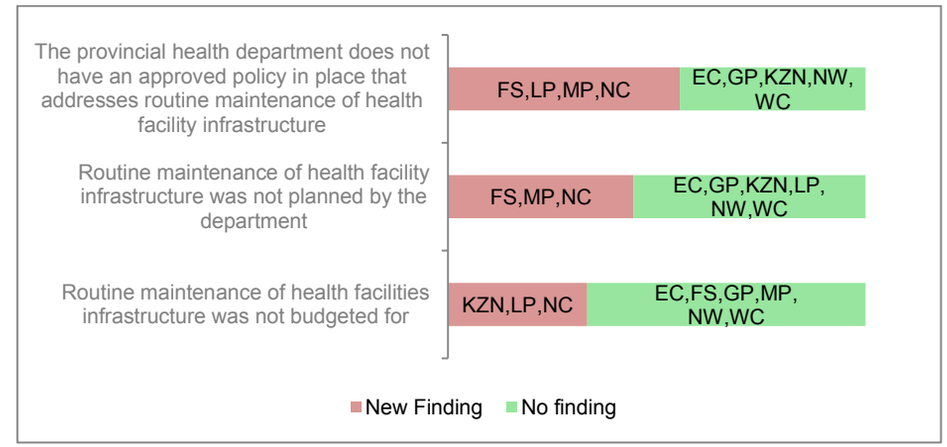
Picture 8: Elevator not complete due to poor quality work done, at CH Baragwanath Hospital (national facility)

Maintenance of health infrastructure

During the audit, we found that maintenance was not adequately planned and budgeted for, including preventative maintenance at facility level, which was due to inadequate allocations by hospital or clinic management. Therefore, only breakdown and critical maintenance were done and no preventative maintenance was planned or performed.

The planning for maintenance should begin when infrastructure is conceptualised. The maintenance needs should be revisited throughout the life of the asset. According to earlier research conducted by the CSIR, the condition of health facilities was at level 3 on a scale of 1 to 5, where 1 is the worst and 5 the best. The level 3 rating required an investment at 23% (estimated at R40 billion) of asset replacement value in maintenance backlogs at the time. Due to limited funds, health departments tend to perform reactive maintenance and only a small amount of backlog maintenance to ensure that facilities are functional.

Figure 3: Key findings on the maintenance of infrastructure



Most prevalent root causes

- Almost all the departments have a shortage of professional personnel such as architects, engineers, quantity surveyors and project managers. In addition, the use of an inspectorate is a past best practice that has fallen by the wayside.
- Lack of a proper, well-informed maintenance plan.

- Maintenance was not sufficiently considered in the planning phase of projects.
- Limited funding has turned maintenance into a reactive process rather than it being a well-planned preventative process.
- Key project documents that are critical to maintenance are not retained and filed in a manner that is easily accessible such as building plans and specifications.

What should be done differently?

- The department should implement the National Health Infrastructure Maintenance Strategy after it has been adopted by the NHC to address the infrastructure risk.
- The leadership should develop an action plan, including deliverables and timelines to address the findings raised. The delivery of this plan should be part of the key performance areas and performance assessment of the officials. Non-performance by officials should have consequences.
- The department should adopt the IDMS methodology to plan and perform all projects and officials must be trained in it.
- The supply chain officials must ensure that contractors with the appropriate CIDB ratings are appointed when contracts are awarded. This will reduce many of the problems with poor quality, cost overruns and time delays.
- The department must improve on its contract and project management practices and ensure proper oversight of the professional service providers. Any underperformance should have consequences.
- Conduct regular condition assessments as per GIAMA to ensure that the data in the U-AMP is current and reliable.
- Develop a strategy to deal with the funding of infrastructure maintenance, repairs and renovations.
- Develop and implement a filing plan for project documents.

Focus area 3: Information technology

Service delivery objective

The effective use of information technology (IT) in the health sector enhances health services and can bring about an age of patient and public centred health information and services in the following manner:

- By improving health care quality and safety
- By increasing the efficiency of health care and public health service delivery
- By improving the public health information infrastructure
- By supporting health care in the community and at home
- By facilitating clinical and consumer decision-making
- By building health skills and knowledge

Adequate IT systems and infrastructure are critical in expanding the collection of data to better understand the effects of health and IT on the population health outcomes, health care quality and health disparities. It will also assist the national department in making informed strategic decisions on health sector related matters.

The importance of moving forward in the area of IT has been highlighted in the NDP 2030. The sector is responsible for achieving priority 3: *Improve health information systems* in order to realise the overall goals of the health sector. The NDP calls for synergy between the national, district, facility and community health information systems and includes the following actions:

- Prioritising the development and management of effective data systems
- Integrating the national health information system with the provincial, district, facility and community information systems. The national health information system should link to secure, online, electronic patient records and other databases, such as for financial, pharmacy, laboratory and supply chain management data.
- Developing human resources for health information
- Investing in improving data quality

Information systems will also play a huge role in the successful implementation of the NHI. The importance of effective and efficient information systems has also been highlighted in the NHI White Paper. The envisaged NHI Fund will depend on an integrated and enhanced National Health Information Repository and Data System.

Why we audited health information technology

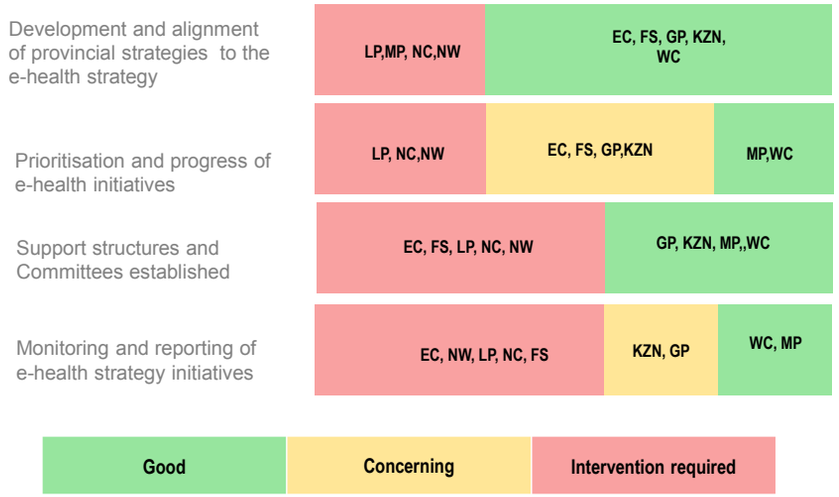
Health information systems in South Africa are characterised by fragmented information systems that differ from province to province, a network infrastructure that is outdated and does not support the use of information systems, and a lack of coordinated processes and resources. With more than 3 200 health facilities across the country, this proved to be unmanageable. These challenges placed too much dependence on and diversion to manual controls where patient information, medical records and patient billings were predominantly processed manually and kept in manual patient files. The sector has not capitalised on automated IT systems.

The e-health Strategy South Africa 2012-16 provides a road map for the public health sector to achieve a well-functioning National Health Information System (NHIS). One of the principles of the e-health strategy is to get the basics right. The responsibility for getting the basics right lies with national and provincial departments of health.

The audit focus areas selected were structured with a view to covering selected strategic initiatives in the e-health strategy to improve health information systems. For the year under review, these covered ICT infrastructure and connectivity, and pharmaceutical systems. We also included billing and revenue systems as a focus area due to its significance in accrued revenue and debt management processing. We evaluated the status of the implementation of the e-health strategy to assess the sector's progress in achieving the goals that have been set for the sector.

Status on implementation of the e-health strategy

Figure 1: Implementation of e-health strategy



The objective of the e-health strategy was to set out the IT goals of the health sector for achieving a well-functioning patient-centred electronic national health information system. The strategy covered the period from 2012 to 2016. In assessing the status of implementation of the strategy, we focused primarily on the following strategic priorities:

- Leadership and strategy rollout at provincial level
- Governance oversight over the rollout and implementation of the strategy
- Monitoring and evaluation of the implementation of the e-health strategy

Figure 1 above indicates that five provinces (Eastern Cape, Free State, Gauteng, KwaZulu-Natal and Western Cape) have developed provincial health strategies in support of the e-health strategy. These are aligned and mapped back to the requirements in the national e-health strategy. The key initiatives in these strategies have been defined and the pilot hospitals identified as part of the provincial strategies.

The other four provinces (Limpopo, Mpumalanga, Northern Cape and North West) have not started with the development of the strategy. This is due to a lack of awareness and inadequate skills relating to project governance in general.

In the absence of a provincial strategy, the North West, Limpopo and Northern Cape departments have not developed and implemented any initiatives to support the e-health strategy. Four provinces (KwaZulu-Natal, Eastern Cape, Free State and Gauteng) had developed strategies; however, these were not adequately implemented. It was noted at these four provinces that they did not allocate adequately skilled resources to effectively drive and implement the initiatives identified. In the Western Cape and Mpumalanga, we noted clearly defined oversight structures that were in place, including adequately skilled resources, in support of the e-health initiatives.

The necessary support structures (operational and oversight committees) around the implementation of the strategy have not been adequately set up in five provinces (Eastern Cape, Limpopo, Free State, Northern Cape and North West) and this may result in gaps and delays in the implementation of the strategy. In these provinces, there is no integration between the e-health strategy and the ICT strategy as the CIOs are not involved at all in the implementation of the e-health strategy. The CIOs should be involved in these initiatives, especially regarding governance and technical specifications of information systems, as they will be expected to support the systems after the implementation process has been completed.

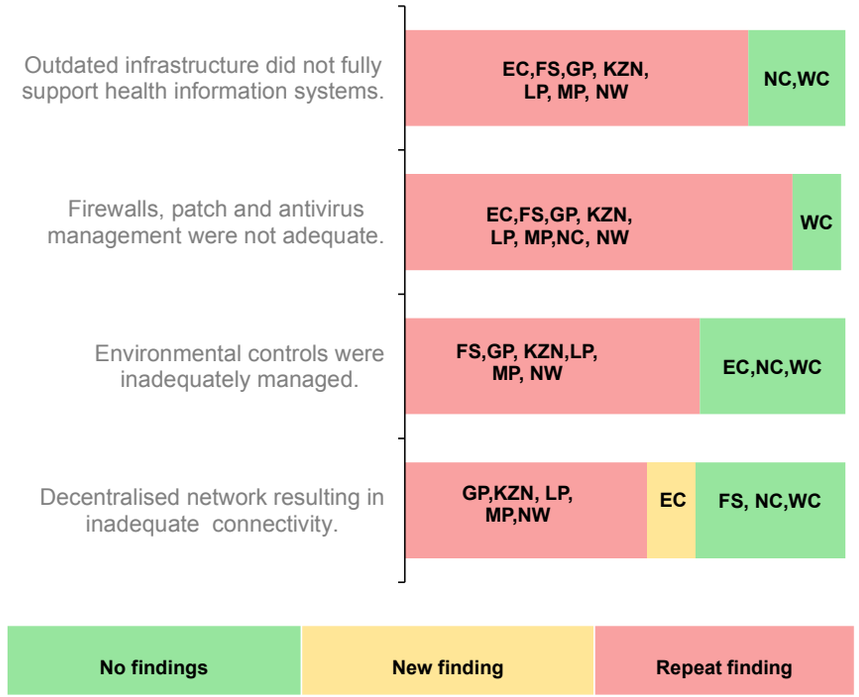
Monitoring and reporting mechanisms were in place in four provinces (Western Cape, Mpumalanga, KwaZulu-Natal and Gauteng); however, these were not consistently followed at all times in the KwaZulu-Natal and Gauteng departments. The remaining departments did not implement adequate monitoring and reporting mechanisms.

The national department has started with the development and piloting of the Health Patient Registration System (HPRS). The project is in a very early stage and it is expected that the full implementation of the system as envisaged by the NHI White Paper will take longer than five years.

In assessing the status of implementation of the e-health strategy, we have noted that there has been slow progress by the sector in implementing the e-health strategy. Key initiatives relating to the updating of the network infrastructure and the integration of pharmaceutical and billing and revenue systems are also indicators of slow progress in addressing the e-health priorities. Refer to our findings on these focus areas in the following sections.

Key findings on network infrastructure and connectivity

Figure 2: Network infrastructure and connectivity



The status of the network infrastructure, which entails the hardware and software resources of an entire network that enable network connectivity, communication, operations and management of an enterprise network, used at the health care facilities has not improved since the previous year. As reported previously, the infrastructure is outdated and does not fully support the current demands of the health information systems at seven provinces. There was a lack of sufficient network bandwidth to allow concurrent running of health information systems and other applications, including web servers.

As part of the e-health strategy implementation, the Department of Health in Gauteng has commenced with the project of upgrading its infrastructure and this is anticipated to be completed by the end of 2018. The Western Cape and the Northern Cape have implemented effective controls in terms of the infrastructure.

In the Northern Cape, the upgrade of infrastructure has already been done in 2012-13 and this has made a positive contribution, as no major network challenges were noted. As for other provincial departments, they are still assessing the current IT needs, including infrastructure, before they can prioritise what should be upgraded based on the availability of funds.

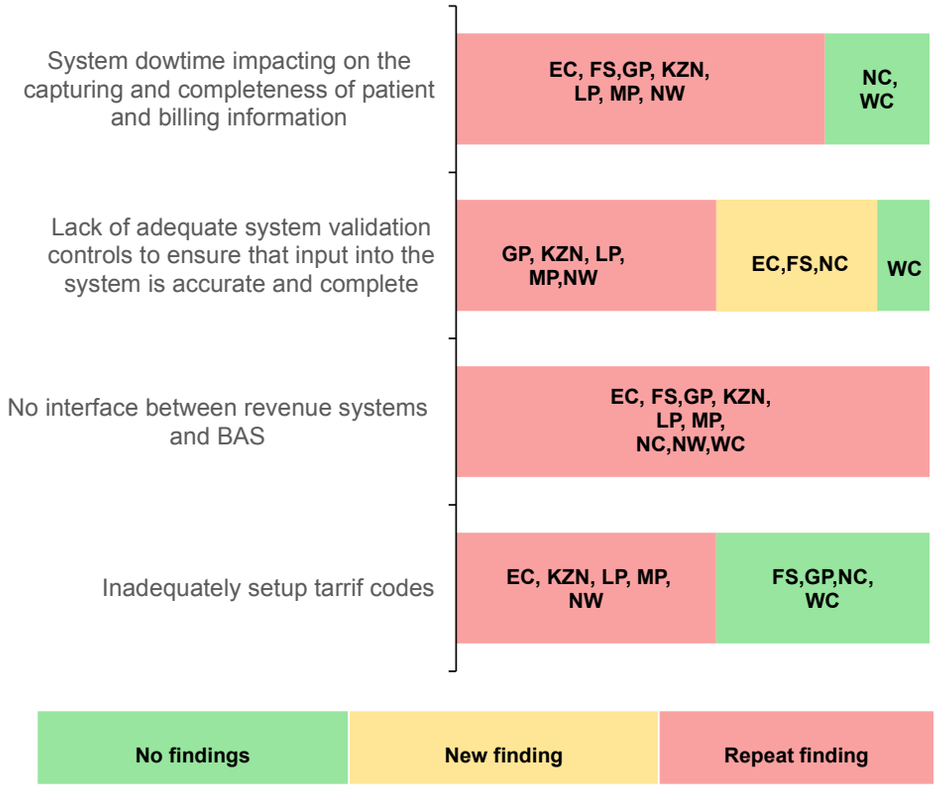
Weaknesses surrounding inadequate firewall security, patch management and anti-virus management controls still existed, exposing these departments to the risk of external and internal vulnerabilities and intrusions, which may allow unauthorised access to confidential data stored in the information systems. In addition to this, environmental controls are implemented to protect information system assets against environmental hazards posed by temperature fluctuations, water leakages, etc. and to ensure the integrity, performance and accessibility of systems and information. These controls were inadequately managed at six departments. These departments did not have sufficient resources to support the number of facilities in a province adequately and the decentralised networks at each of these facilities resulted in the weaknesses identified.

Inadequate connectivity due to the decentralised network remains a challenge at six provinces. The Free State, Northern Cape and Western Cape departments have centralised networks that promote adequate management of connectivity between the provincial department, hospitals and facilities.

It was further noted that health departments were dependent on other coordinating ministries and agencies, i.e. Office of the Premier (OTP) and SITA, to provide network and support services, which prolonged the implementation of adequate data lines. Some departments did not always have adequate service level agreements that clearly defined roles and responsibilities between the health departments, the OTP and SITA.

Key findings on billing and revenue management systems

Figure 3: Billing and revenue systems



Revenue systems are not standardised across the sector and the systems covered under the scope for billing of patients and recording of revenue included Unicare (Eastern Cape), PADS (Free State), Meditech (Free State, KwaZulu-Natal), PAAB (North West, Mpumalanga), Nootroclin (Northern Cape) and Medicom (Gauteng). These systems have been in use for six and more years, some for more than 15 years.

Seven provinces have not adequately updated the network infrastructure that supports these systems. This resulted in system downtime affecting the accurate capturing and the complete recording of patient and billing information. The Western Cape and Northern Cape were supported by adequate network infrastructure. The system downtime can also be attributed to power outages and instability of the connectivity between the hospitals, clinics and provincial departments. (Refer to the findings under network infrastructure).

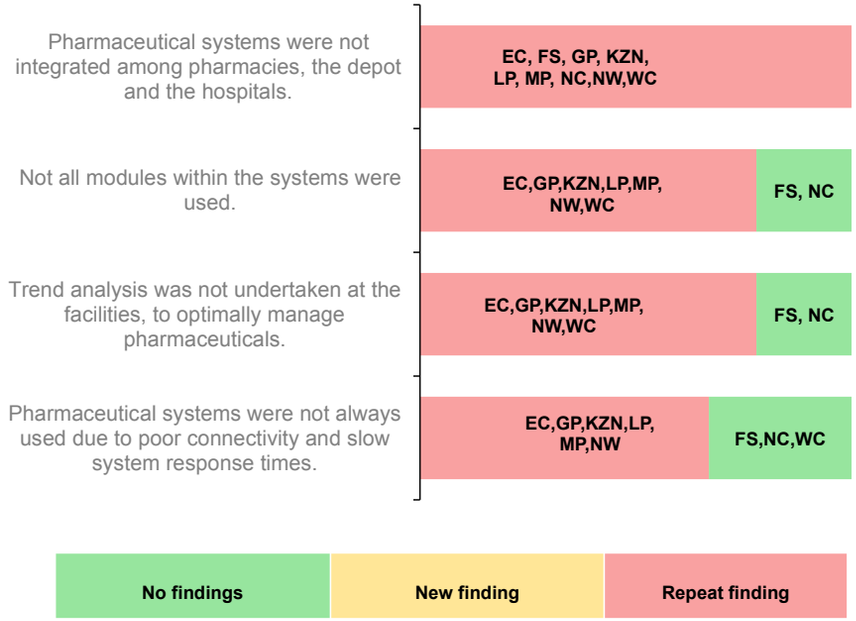
Health information systems in eight provinces did not have adequate validation controls to ensure that important information such as registration dates, discharge dates, duplicate information, etc. were properly validated during the capturing stage for accurate billing purposes. Only the Western Cape had implemented all the validation controls.

As previously noted, each province used a different system for patient registration and billing purposes, and each of these systems did not have an automated interface with the financial system (BAS). This lead to much manual intervention, which resulted in manipulation of information and inaccurate information having been reported on the financial system.

For the 2015-16 financial year, three departments (Free State, Limpopo and Northern Cape) received qualifications on accrued departmental revenue due to inadequate systems and internal controls in place to properly account for patient debtors. Although the Northern Cape received a qualification, the systems in use were supported by adequate network infrastructure. However, this infrastructure was not used consistently and there was a lack of adequate support by the internal ICT department due to governance issues of the current service level agreement.

Key findings on pharmaceutical systems

Figure 4: Pharmaceutical management status



Pharmaceutical systems, like revenue and billing systems, are not standardised across the sector. Key systems in use include Medsas (Eastern Cape, Free

State, KwaZulu-Natal and Western Cape), NootroDepot (Northern Cape), PDSX (Limpopo), Meditech (Free State) and DSMS (North West). These systems, which have been in use for six to 15 years and more, have become outdated and do not adequately support the information system needs of the provinces.

Figure 4 above indicates that there is no improvement in the findings on pharmaceuticals systems raised in the prior year.

It was noted at all departments that pharmaceutical systems were not integrated between the pharmacies, depots and hospitals. As a result, hospitals and pharmacies were unable to place electronic orders with depots. The manual systems in place to order stock from depots created delays in the time between ordering and delivering stock. It was further noted that the pharmaceutical systems were not integrated with other health information systems, including revenue and billing systems. In preparation for the NHI and the establishment of the NHI fund, the NHI White Paper requires pharmaceutical systems to be fully integrated with secure, online, electronic patient records and other databases.

It was noted at seven departments that not all modules in the system were being used effectively. Trend analysis functions available on pharmaceutical systems were also not used effectively by management to manage the re-ordering of pharmaceuticals optimally and to prevent facilities from ordering out of their prescribed schedule of pharmaceuticals per facility type.

The outdated infrastructure and poor connectivity remains a challenge at six departments. This has impacted on the ability of hospitals and pharmacies to manage the distribution and management of stock levels within the hospital or pharmacy effectively. Often the pharmaceutical management system in place will not be supported by adequate network connectivity, resulting in manual ordering and management of pharmaceutical stock within the facility.

Most prevalent root causes

The concerns/drivers for the poor management of information technology systems are as follows:

- Departments were not prioritising the implementation of the e-health strategy due to a lack of funding at provincial level. This has resulted in insufficiently skilled staff available at provinces.
- There were inadequate skills and capacity at the health facilities within the provinces to be able to support and address basic challenges within the IT environment.
- The CIO was not involved or kept up to date with the progress of current projects relating to e-health in some provinces.
- The provincial ICT strategy priorities did not fully support the e-health strategy.
- The service level agreements for support and maintenance of the network infrastructure with SITA, through which the backup services were part of the SLA services, were outdated. Where the SLAs were in place, they were inadequate.
- IT recommendations were not included in the departmental action plans, with the result that IT control deficiencies were not addressed timeously.
- The sector has not addressed the goals set out in the e-health strategy and the NHI White Paper to improve connectivity and effectively integrate pharmaceutical and revenue and billing systems.

What needs to be done differently?

- The NDoH needs to strengthen monitoring and evaluation structures in place as defined in the e-health strategy. These structures need to have sufficient authority to intervene and to escalate or implement punitive measures where project delays are experienced.
- The NDoH is encouraged to oversee integration processes that will see provinces not operating in isolation, but harmonising and sharing information and resources that work well, like in the Western Cape. This can be strengthened through the current structures already established, i.e. provincial HIS committee (PHISC) and other structures for e-health strategic projects.
- Network connectivity challenges need to be prioritised at provincial level in order to facilitate inter-operability and integration. This is not only an ICT issue, but requires cooperation from all clusters and that the executive management be involved.
- In order to achieve the goals of the NDP 2030 and the successful implementation of the NHI, the sector needs to assess the current status and enhance its plan going forward.

Focus area 4: Management of healthcare waste

Service delivery objective

The World Health Organization defines healthcare waste as a by-product of healthcare that includes sharps, non-sharps, blood, body parts, chemicals, pharmaceuticals, medical devices and radioactive materials.

The departments of health must meet the requirements of the National Environmental Management Act (Nema) and the National Environmental Management: Waste Act (Nemwa) in handling, storing and disposing of healthcare waste. As the holders of healthcare waste, the departments are responsible for waste from its generation to its eventual disposal. Non-compliance with the act has the potential to harm the environment and expose healthcare workers, waste handlers and the community to infections, toxic effects and injuries. Poor management of healthcare waste can also result in death and illness from hazardous chemicals, pollution and contamination.

Why we audited the management of healthcare waste?

The audit of the management of healthcare waste has been a focus area of the sector audits for more than five years. During each of the audits, significant findings were identified that required corrective action from management; however, the progress in addressing these findings has been slow. In May 2014, the national department published draft regulations governing healthcare waste for public comment. As this was a significant step forward for the sector, a decision was taken initially not to include this as a focus area for the year under review.

However, the subject of healthcare waste has continued to receive negative media attention. The risks posed by poor management of healthcare waste at health facilities across the country were highlighted. A complaint was also received which highlighted various concerns and it was then decided to do a follow-up audit as part of the regularity audit process. The following risks were highlighted specifically for further follow-up as part of the regularity audits:

a. The total expense for medical waste may not be fairly presented in the annual financial statements.

b. There may be irregularities in the awarding of contracts to service providers.

c. The contract with the service provider may not be managed properly by the department.

d. Payments to service providers may be inflated where general waste is not separated from healthcare waste.

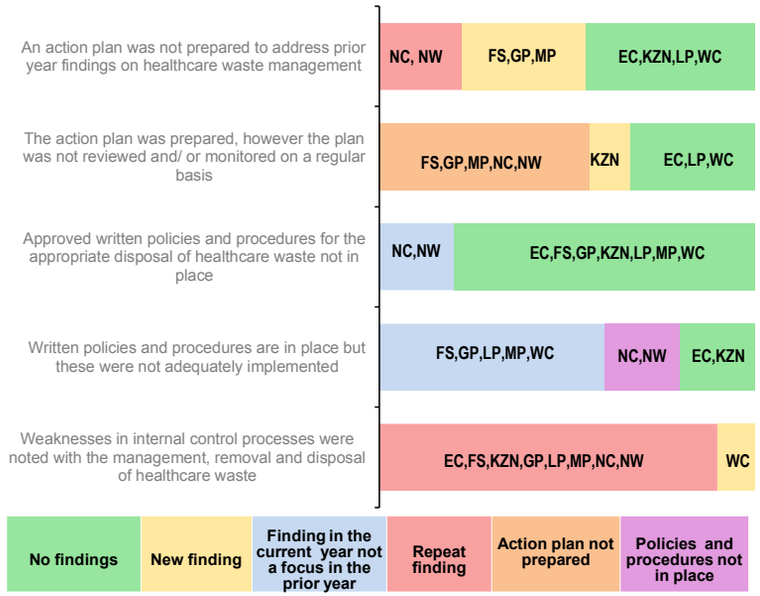
e. Facility management may not ensure that healthcare waste leaving the premises is disposed of adequately (cradle to grave concept).

A follow-up audit was performed to determine whether management addressed the findings of the prior year. In addition, the specific risks identified above were scoped into the audit procedures performed at a limited sample of facilities selected for auditing.

The audit of healthcare waste management focused on the handling, storage and disposal of healthcare waste to establish whether reasonable measures have been put in place for the appropriate management of healthcare waste and to test compliance with, primarily, Nema and Nemwa. The objective of these acts is to protect health, well-being and the environment. Our audit focused on addressing the risks identified including, compliance with the mentioned acts and on the contract management of service providers. Healthcare waste is a highly specialised subject and the extent of weaknesses in the environment may not be identified by this audit. It is recommended that the department commission a performance audit, incorporating the required level of skills (industry experts), for the sector to comprehensively address risks to the environment and to the public, and to evaluate matters of operational compliance.

Key findings on the management of healthcare waste

Figure 1: Internal control weaknesses in healthcare waste management

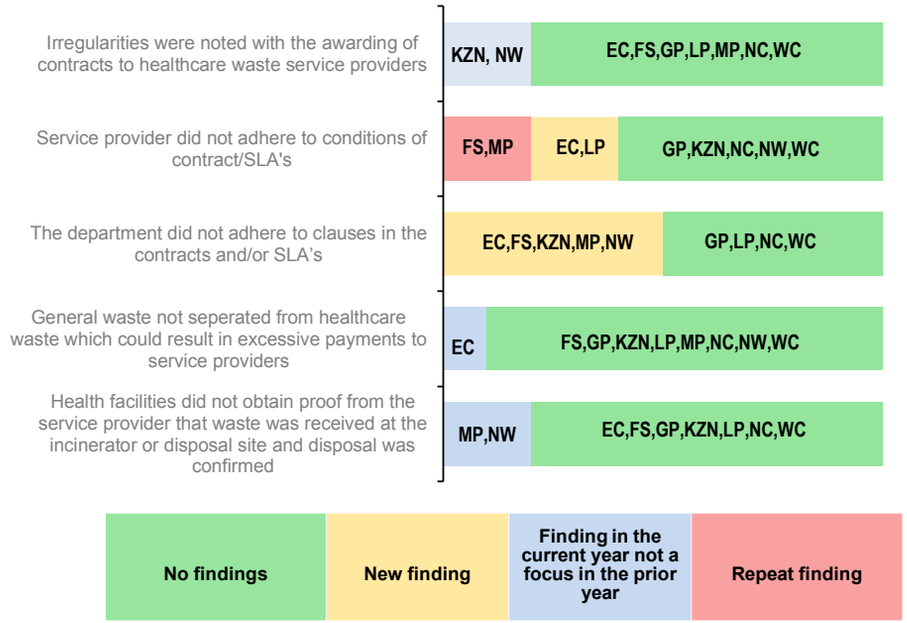


In five departments (Free State, Gauteng, Mpumalanga, North West and Northern Cape), action plans were not prepared to address the findings of the prior year. An action plan was prepared for the KwaZulu-Natal department; however, this was not properly monitored during the year under review.

Two provinces (North West and Northern Cape) did not have adequate policies and procedures in place. The North West department did not have an approved overall policy and procedure to address healthcare waste. It was the responsibility of each facility to develop and implement its own policy. The Northern Cape department had a policy in place, but did not have procedures to describe how the policy should be implemented by facilities in the province. Adequate policies and procedures to govern the management and disposal of healthcare waste were in place in the remaining departments; however, these policies and procedures were not adequately implemented at five departments (Free State, Gauteng, Limpopo, Mpumalanga and Western Cape).

We assessed the design and implementation of the internal controls in place at each department and noted weaknesses in the design and/or implementation of these internal controls at all departments.

Figure 2: Procurement and contract management



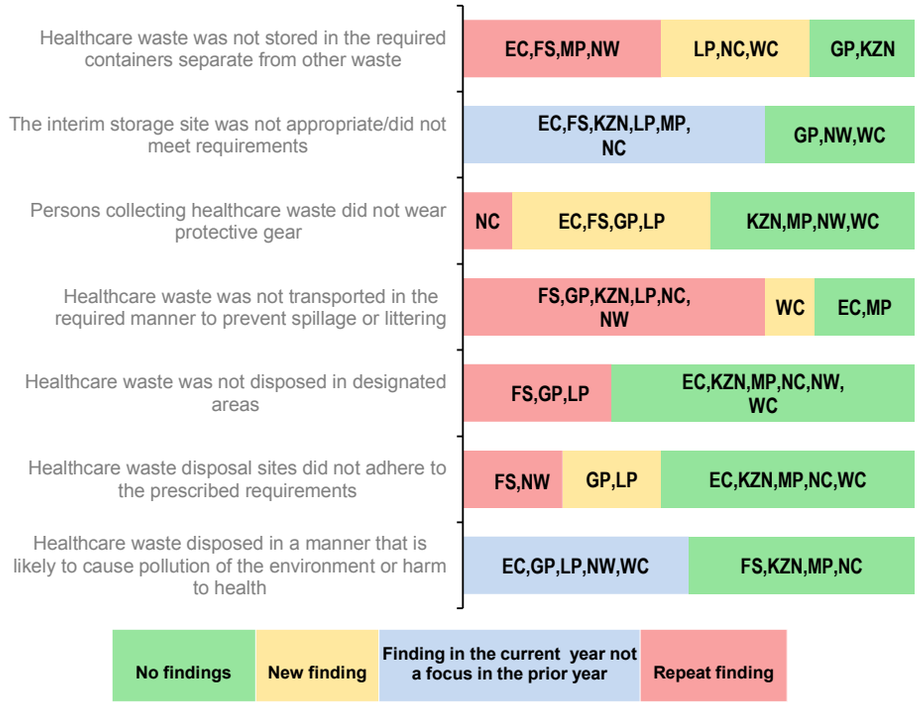
We further tested the procurement and contract management processes for healthcare waste. As part of this process we tested total payments made to suppliers of healthcare waste and noted no material misstatements in payments made to suppliers. Irregular expenditure was incurred in two provinces (KwaZulu-Natal and North West) due to procurement processes not being followed properly. It is the responsibility of the leadership to investigate the irregularities to determine why due process was not followed and whether any officials in the department should be held responsible for the irregularities.

Service providers in four provinces (Eastern Cape, Free State, Limpopo and Mpumalanga) did not adhere to certain clauses in contracts due to a lack of adequate monitoring with regard to disposal confirmations, collection times and waste collection supplies provided to facilities. We noted that the department did not adhere to certain clauses in the contracts in five provinces (Eastern Cape, Free State, KwaZulu-Natal, Mpumalanga and North West). These were mainly due to registers of daily collections not maintained, responsible officials not present when waste was collected and waste not being weighed at the facility prior to being collected.

It was only observed at the Eastern Cape department that general waste was not separated from regular waste, which could result in excessive payments to suppliers.

At two departments (Mpumalanga and Northwest) it was noted that, in certain instances, health facilities selected for auditing did not obtain proof (disposal certificates) from the service provider to confirm that the waste was received at the incinerator and that the disposal was confirmed.

Figure 3: Compliance with Nema and Nemwa



All departments had findings on instances of non-compliance with Nema and Nemwa. The general requirements for healthcare waste containerisation, storage, handling, transportation and disposal were not always adhered to, which increased health and safety risks to all exposed to it and it exposed the departments to potential claims being instituted against them.

The national department had published draft regulations for public comment in May 2014. These regulations had not been finalised at the date of the audit.

Most prevalent root causes

- Deficiencies in monitoring and evaluation controls are noticeable with regard to repeat findings across the sector to address matters reported over a number of years. There has been a slow response by departments in addressing matters previously reported. Action plans were either not developed or were not specific or effective in addressing the health and environmental risks associated with healthcare waste.
- The departments have not taken appropriate disciplinary action against responsible officials, resulting in similar findings being reported year after year.

What needs to be done differently?

Based on our findings, we recommend the following:

- The national department must finalise and gazette the healthcare waste regulations for implementation by all provinces as soon as possible. As part of this process, the national department must monitor the rollout and implementation of these regulations to ensure that all provinces strengthen their internal control processes' and facilities' adherence to the regulations.
- It is recommended that the provincial departments prioritise and strengthen their management, control and monitoring of healthcare waste from generation to ultimate disposal. In doing so, departments should also ensure compliance with Nema and Nemwa.
- It is further recommended that the national department should commission a performance audit to be performed by industry experts to address risks to the environment and the public and to evaluate matters of operational compliance.

Notes

AUDIT OUTCOMES

Overall audit outcomes

Figure 1: Five-year movement in audit outcomes

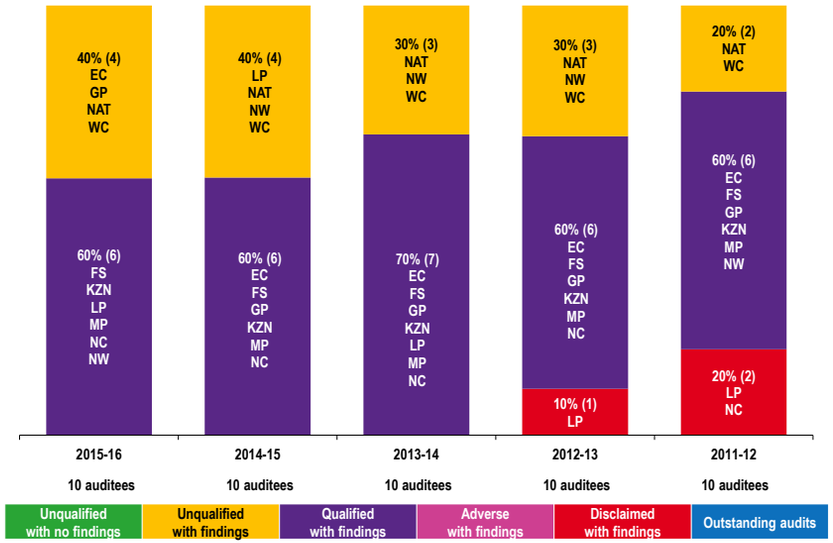


Table 1: Movement in audit outcomes

Audit outcome \ Movement	2 Improved	6 Unchanged	2 Regressed	0 Outstanding audits
Unqualified with no findings = 0				
Unqualified with findings = 4	Eastern Cape, Gauteng	National Department of Health, Western Cape		
Qualified with findings = 6		Free State, Kwa-Zulu Natal, Mpumalanga, Northern Cape	Limpopo, North West	
Adverse with findings = 0				
Disclaimed with findings = 0				

Colour of the provinces indicates audit opinion from which department has moved

Figure 2: Audit outcomes per audit area

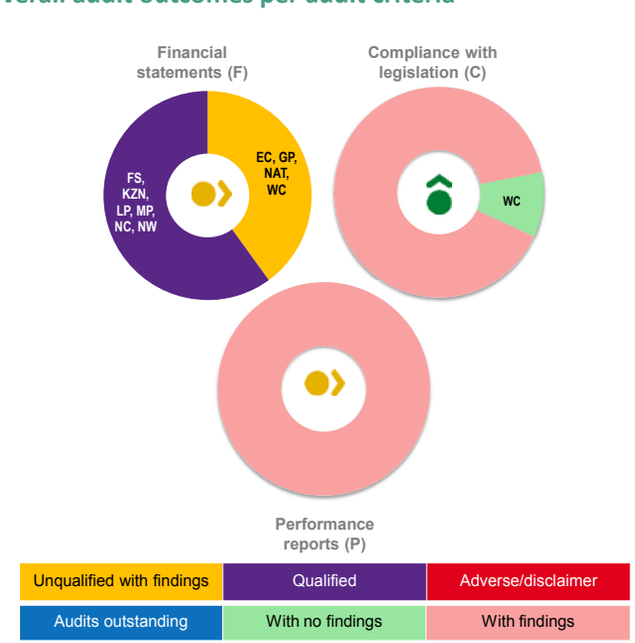


Figure 1 shows no overall movement in the audit outcomes for the sector. For the second consecutive year, the health sector achieved unqualified opinions with findings at four departments and qualified opinions at six departments. In table 1, a deeper analysis of the outcomes shows that there has indeed been significant movement that resulted in the audit outcomes.

The Eastern Cape and Gauteng departments must be commended for improving to unqualified opinions. These improvements can be attributed to direct and consistent involvement by the MEC, the HoD and the CFO in both the internal control and audit processes. For the year under review, stability in leadership contributed to a stronger internal control environment. The Eastern Cape department addressed skills gaps identified in the finance department. Both of these departments must continue to drive a strong internal control environment in order to sustain the unqualified opinions.

The most notable movements are the regressions in audit outcomes for the Limpopo and North-West departments of health.

The Limpopo department was placed under administration in the 2011-12 financial year. A number of interventions were introduced by the administration team to strengthen internal control processes. As part of this process, acting incumbents were appointed in the positions of head of department and chief finance officer. Under the guidance of strong leadership and a return to strengthening basic internal controls, the department made remarkable strides

and moved from years of disclaimers to a qualified audit opinion in 2013-14 and then an unqualified opinion in 2014-15. The audit outcome was not sustained in the 2015-16 financial year, as the acting HoD left the department during the year and the acting CFO left for a portion of the year. In the absence of strong and stable leadership, the basic internal controls were not prioritised, resulting in the regression for the year.

The North West department had sustained unqualified opinions for a number of years and regressed in the 2015-16 financial year with one qualification area. There have been no changes in the top structure of the organisation and the regression can be related to a lack of continuous review of the basic internal controls in place with a view to strengthening all areas affecting the financial statements.

The audit outcomes for the remaining departments have shown little movement over the past five years and reflect a lack of drive by the top structures to address basic internal control weaknesses identified and reported to management, to address the skills gaps that had a negative impact on the outcomes and to address non-performance by key officials.

Figure 2 shows the audit outcomes broken down per audit area. Consistent with the prior year, all departments had findings on the audit of performance reports. The Western Cape department had significantly improved on its compliance with key legislation audited, being the only department to reach this achievement in the current year. All departments had findings in this area for the previous four years.

Financial statements

The purpose of the annual audit of the financial statements is to provide the users thereof with an opinion on whether the financial statements fairly present, in all material respects, the key financial information for the reporting period in accordance with the financial framework and applicable legislation.

It is the responsibility of management to ensure that suitable internal controls are in place to prepare reliable and credible financial statements that accurately reflect the financial transactions undertaken by the department during the year and the financial status of the department at the end of the year.

Figure 3: Quality of financial statements submitted

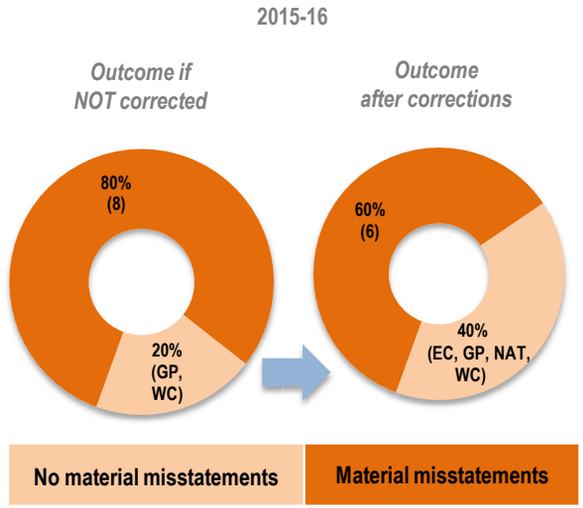


Figure 3 reflects the effectiveness of internal controls implemented by management to prepare quality financial statements.

It is notable that the Western Cape and Gauteng departments received unqualified audit opinions with no material corrections resulting from the audit. The NDoH and the Eastern Cape department achieved unqualified opinions after correcting material errors identified during the audit. The financial statements of the remaining departments contained material misstatements, some of which were corrected. Those that could not be corrected resulted in the qualified opinions.

Figure 4: The most common qualification areas

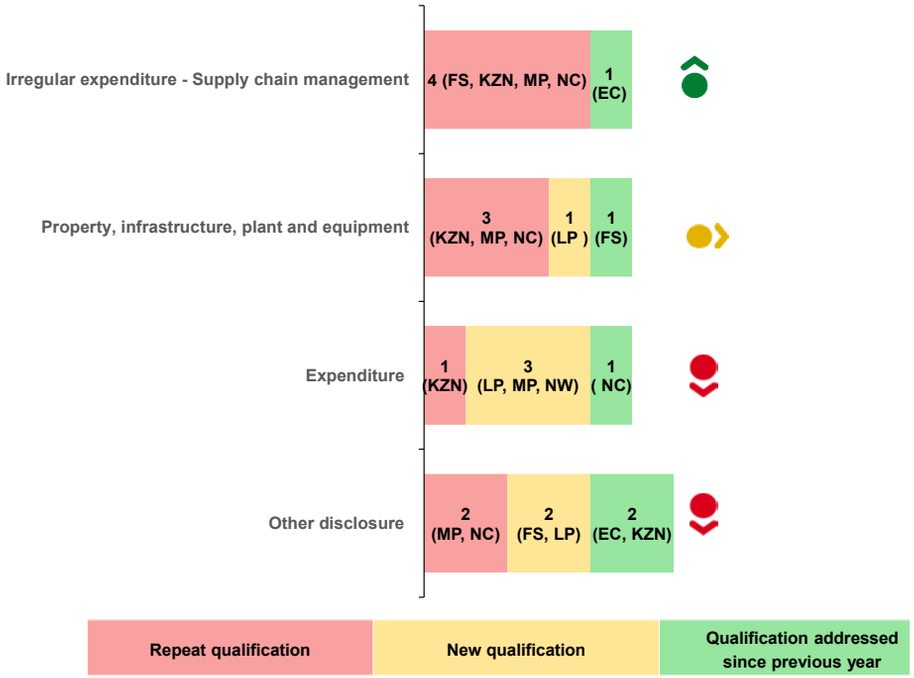


Figure 4 indicates the four most common qualification areas for the health sector, and the progress made in addressing these areas since the previous year. The major reason for not making the corrections was the unavailability of, or incomplete information or documentation to determine the correct amounts to be reflected in the financial statements.

Irregular expenditure

One of the most common areas of qualification relates to the complete identification and recording of irregular expenditure. We were not able to determine whether all irregular expenditure incurred by the Free State, KwaZulu-Natal, Mpumalanga and Northern Cape departments was disclosed in the financial statements. These departments were also qualified in the prior year. The Eastern Cape department strengthened their internal controls in this area and was able to clear the qualification of the prior year. Refer to page 41 for more details relating to irregular expenditure.

Property, infrastructure, plant and equipment

The asset registers of the KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape departments were not always properly maintained to ensure that all assets were completely and accurately recorded. The poor state of these registers resulted in inaccurate reporting in the financial statements. This was due to inadequate internal controls over regular physical counts and reconciliations with the asset registers. Adequate supporting documents and reconciliations were not always available for prior period errors identified at some departments. The Free State department improved their internal controls and cleared the qualification in the current year.

Expenditure

Four departments received qualifications on expenditure items. The KwaZulu-Natal, Limpopo, Mpumalanga and North West departments had inadequate internal controls in place to properly account for commuted overtime. In addition, the Limpopo department failed to provide adequate documentation to support expenditure on capital assets and the Mpumalanga department failed to provide adequate supporting documents for transfers and subsidies paid during the year.

Other disclosure items

Three departments, i.e. Free State, Limpopo and Northern Cape, did not have adequate systems and internal controls in place to properly account for accrued departmental revenue. Refer to focus area 3 for our findings on billing and revenue systems. Other areas of concern related to commitments, accruals, contingent liabilities and employee benefits that were not always properly accounted for at the four departments with qualifications in this area.

Compliance with key legislation

We continue to annually audit and report on compliance by auditees with key legislation applicable to financial and performance management and reporting as well as related matters, also shortened to key legislation in the rest of the report.

We focused on the following areas in our compliance audits: ■ the quality of annual financial statements submitted for auditing ■ budget management ■ expenditure management ■ unauthorised, irregular as well as fruitless and wasteful expenditure ■ consequence management ■ revenue management ■ strategic planning and performance management ■ transfer of funds and conditional grants ■ procurement and contract management (in other words, SCM).

Figure 5: Departments with findings on key legislation

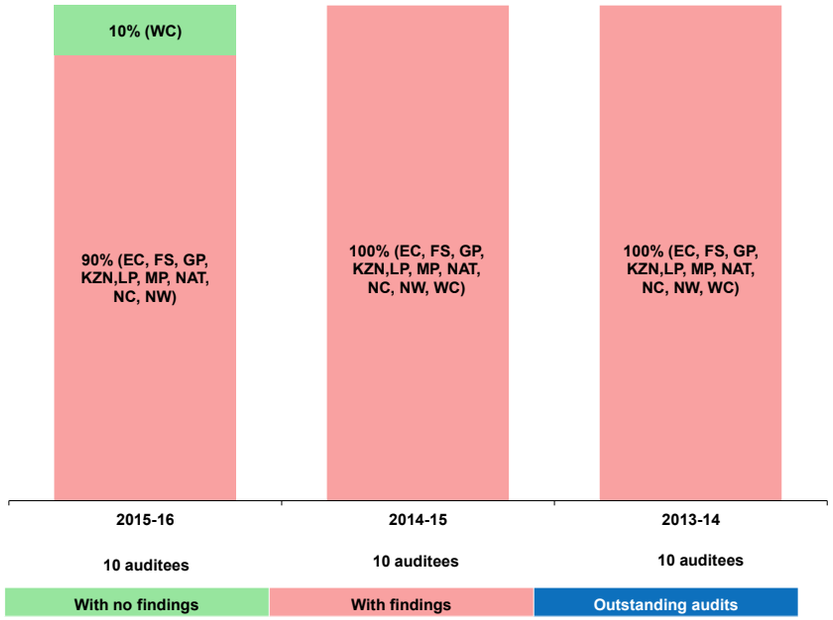


Figure 5 shows that all departments had material compliance findings over the past three years, with the exception of the Western Cape, which improved to no findings on compliance with key legislation in the 2015-16 financial year. It is commendable that the Western Cape department significantly improved their oversight and internal control processes to achieve this result.

Figure 6: Most common areas of non-compliance

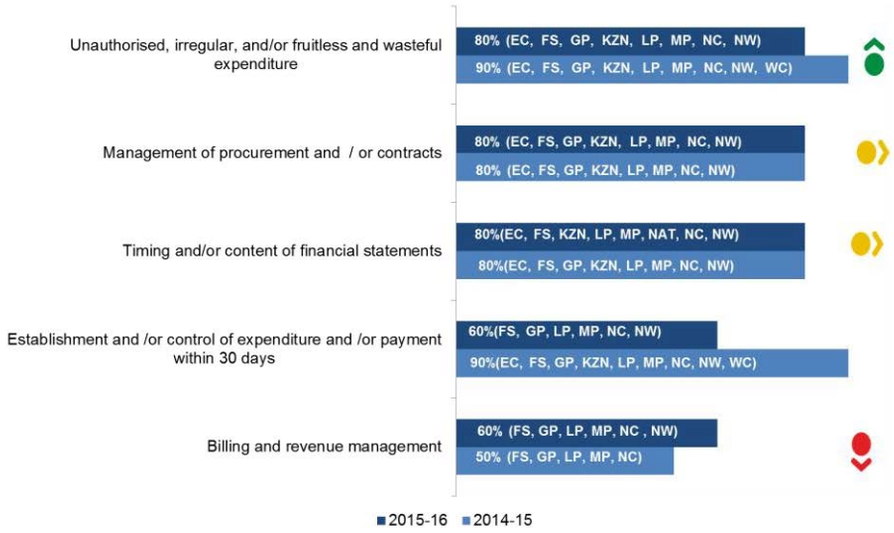


Figure 6 shows the most common non-compliance areas with material findings in the current year and the progress made in addressing these since the previous year.

Overall, the sector has shown little improvement in addressing the non-compliance findings of the prior year and much more needs to be done in these areas. The Western Cape department is the only department that improved in the area of preventing unauthorised, irregular, fruitless and wasteful expenditure. The national department had no material findings in this area for the past two years. Controls over expenditure and payments to creditors within 30 days continued to be a challenge at six departments. Significant improvements were noted at the Eastern Cape, KwaZulu-Natal and Western Cape departments in this area. Furthermore, at the same six departments, inadequate systems and processes were in place to administer the billing and control of revenue properly. Refer to focus area 3 for findings on revenue and billing systems.

Irregular and unauthorised expenditure

The procurement of goods and services in the public sector is highly susceptible to manipulation and the risk of fraud and corruption. In addition, unfair and non-transparent processes can lead to the acquisition of goods and services that are over-priced or of incorrect quality. Due to these risks, the National Treasury has implemented rigorous processes and procedures to procure goods and services. The responsibility for compliance with all legislation rests with the accounting officer. Each department must implement appropriate internal control procedures to ensure compliance with the legislation, regulations and other prescripts of the National Treasury.

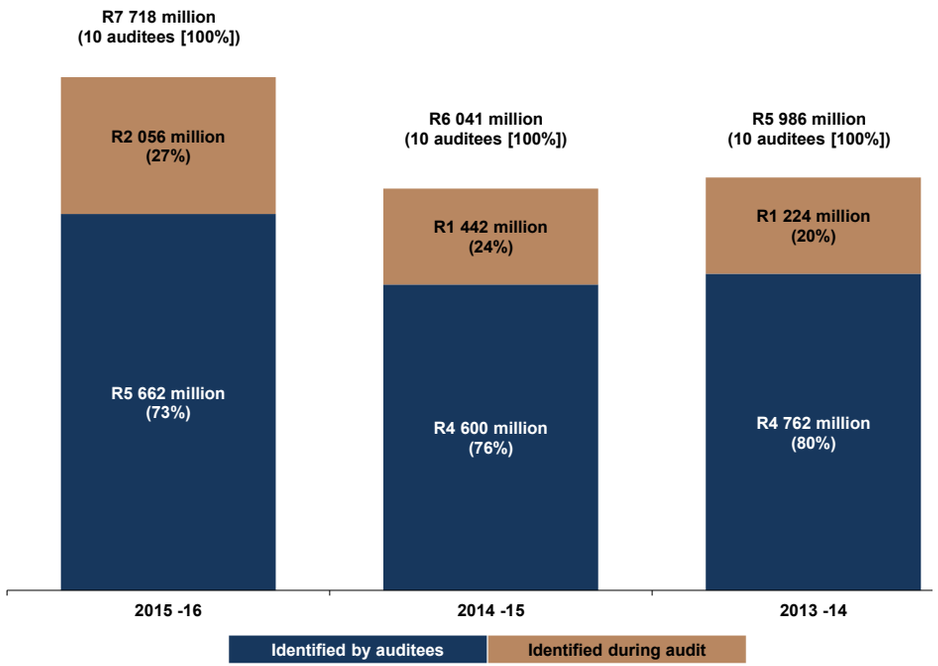
During our audit process, we tested compliance against the various legislations and regulations. In this report, we highlight the most significant cases of non-compliance as they relate to irregular and unauthorised expenditure.

Irregular expenditure

Irregular expenditure is expenditure that was not incurred in the manner prescribed by legislation. Such expenditure does not necessarily mean that money had been wasted or that fraud had been committed, but it creates an environment of opportunity for fraud.

Irregular expenditure is reported when it is identified – even if the expenditure was incurred in a previous year.

Figure 7: Three-year trend in irregular expenditure



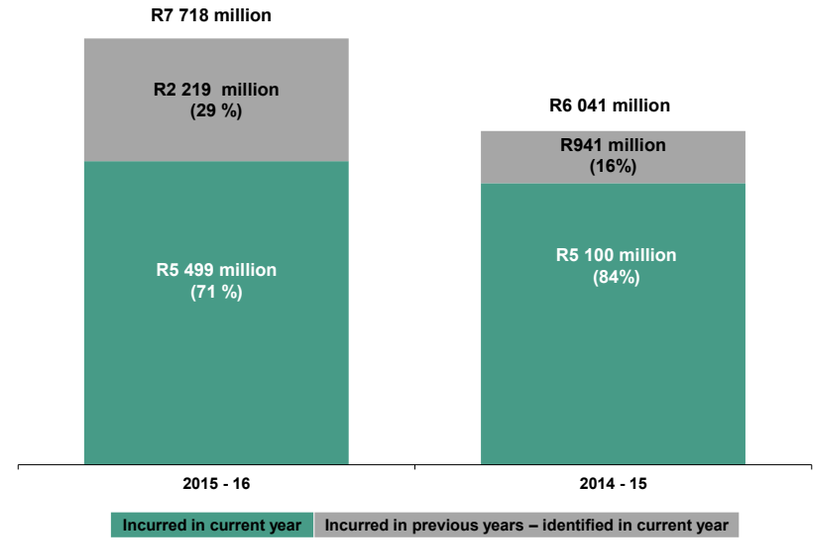
Eight departments incurred material irregular expenditure.

Figure 7 shows an increase of 28% (R1 677 million) from the previous year to the amount of irregular expenditure incurred. The following auditees were the main contributors (71%) to irregular expenditure in 2015-16:

- KwaZulu-Natal – R2 521 million (2014-15: R 839 million)
- Mpumalanga – R1 920 million (2014-15: R1 919 million)
- Northern Cape – R1 006 million (2014-15: R 622 million)

All three departments above, as well as the Free State department, were qualified on the completeness of irregular expenditure. The full amount is not known as these departments still need to investigate whether there was non-compliance of a similar nature in the current and previous years. This means that the amount of irregular expenditure for 2015-16 could have been higher had these investigations been completed.

Figure 8: Previous years' irregular expenditure identified in the current year



We analysed the timing of the irregularities to determine whether the irregular expenditure could be the result of prior year irregularities being identified and reported on in the current year. Figure 8 shows that 29% of the irregular expenditure amount was as a result of non-compliance in previous years.

The following were the main areas of SCM non-compliance as disclosed by the auditees in their financial statements, with an indication of the estimated value of the irregular expenditure:

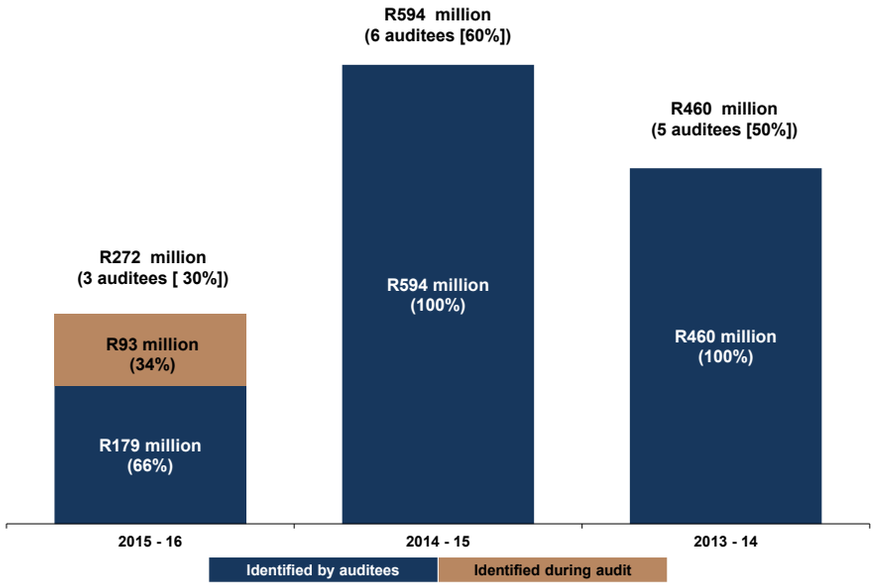
- Procurement without a competitive bidding or quotation process – R1 819 million (24%)
- Non-compliance with procurement process requirements – R5 068 million (66%)
- Non-compliance with legislation on contract management – R154 million (1 %)
- Other – R677 million (9 %)

Unauthorised expenditure

Unauthorised expenditure is expenditure that had not been spent by departments in accordance with the budget approved by the treasury. The PFMA requires the accounting officer to take all reasonable steps to prevent unauthorised expenditure. Auditees should have processes in place to identify any unauthorised expenditure incurred and to disclose the amounts in the financial

statements. The PFMA also includes the steps that accounting authorities should take to investigate unauthorised expenditure to determine whether any officials are liable for the expenditure and to recover the money if liability is proven.

Figure 9: Three-year trend in unauthorised expenditure



The three-year trend in unauthorised expenditure showed a regression in 2014-15 and an improvement in 2015-16. The amount for the current year decreased by R322 million (54%), compared to the previous year.

The following three departments were the only contributors to unauthorised expenditure in 2015-16:

- KwaZulu-Natal – R147 million (2014-15: R128 million)
- Northern Cape – R93 million (2014-15: R92 million)
- Free State – R32 million (2014-15: R11 million)

Overspending of the budget or main sections within the budget was the reason for the unauthorised expenditure. Poorly prepared budgets, inadequate budgetary control and a lack of monitoring and oversight were some of the reasons for the overspending.

Financial health

The health sector is critical to service delivery in South Africa. Apart from ensuring that financial statements are an accurate reflection of its financial position, ensuring that legislation is complied with and that performance is reported on accurately, it is also important for the health sector to ensure that it remains fiscally viable.

Against this background, our audits included a high-level analysis of 12 financial indicators to provide management with an overview of selected aspects of their current financial management and to enable timely remedial action where the auditees' operations and service delivery may be at risk. We also performed procedures to assess whether there were any events or conditions that might cast significant doubt on an auditee's ability to continue its operations in the near future.

Based on the analysis, each auditee was given an overall assessment as follows:

Good	Two or fewer unfavourable indicators
Concerning	More than two unfavourable indicators
Intervention required	Significant doubt that operations can continue in future and/or auditee received a disclaimer or adverse opinion, which means the financial statements were not reliable enough for analyses

Figure 10: Number of auditees with financial health risks

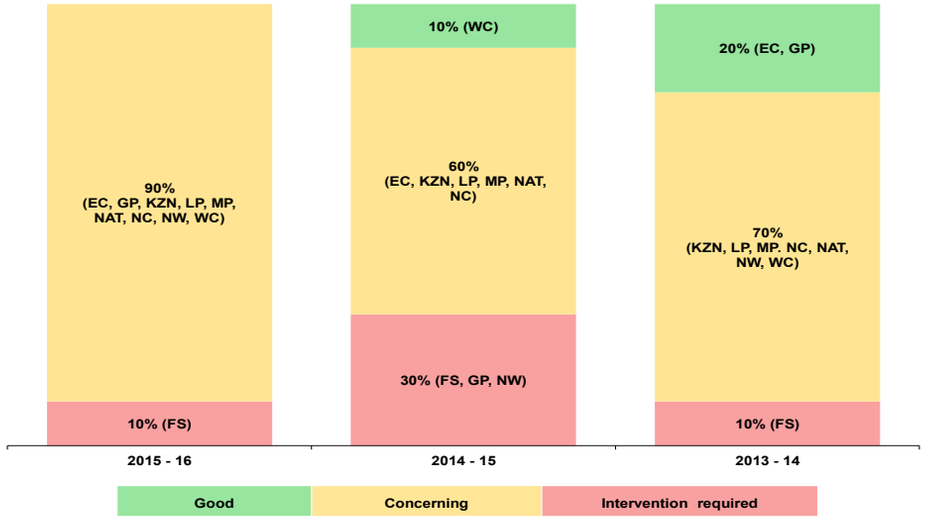


Figure 10 shows that the financial status of all departments was concerning, with the Free State department having the most serious outcome.

The Free State department disclosed in their financial statements that a material uncertainty existed with regard to their ability to meet

their financial obligations as they fall due and to achieve their service delivery objectives as outlined in the annual performance plan. The provincial treasury intervened in the management of the department in terms of section 36(3) since prior financial years. However, despite this, the department overspent on its appropriation per programme. Creditors were not always paid within the legislated 30-day period and effective and efficient steps were not always taken to collect money due to the department. In addition, the department had significant accruals and payables, and had not yet paid employee benefits at year-end. Although the bank balance was not in overdraft, the department did not have sufficient cash resources to surrender unspent funds to the provincial revenue fund.

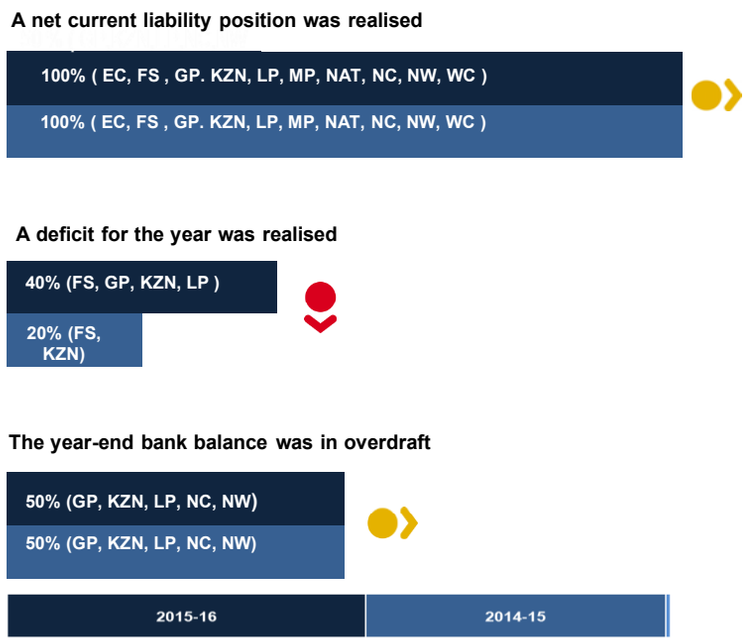
Auditees in poor financial position

We highlight in figures 11 and 12 the sustainability and revenue management indicators which contributed to the poor financial position of the sector.

Sustainability indicators

Figure 11 below shows some of the typical indicators of going concern uncertainty.

Figure 11: Sustainability indicators



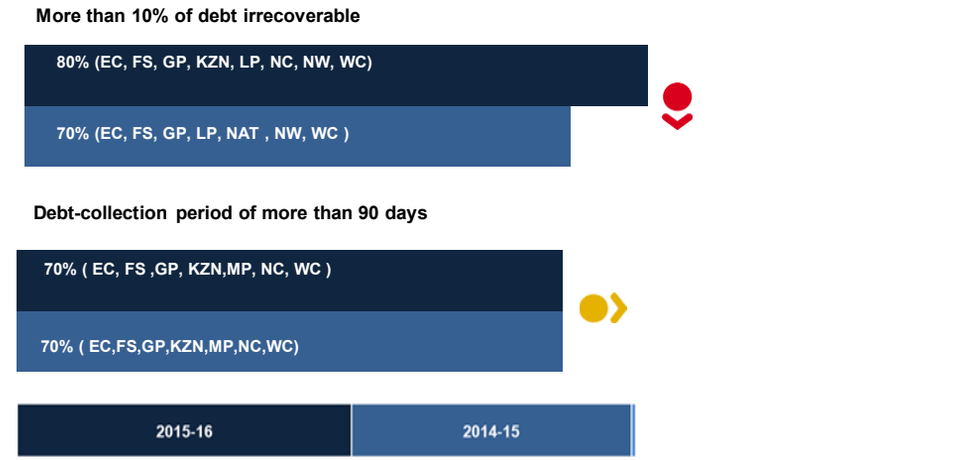
For all departments, the value of their current assets was less than that of the accrual-adjusted current liabilities at year-end (net current liability position), which could impact on their ability to pay creditors within the prescribed 30 days. In total, four departments (40%) spent more than the resources they had (and therefore a net deficit occurred). The year-end bank balance was in overdraft at 50% of the auditees. There was an increase in the number of auditees displaying these concerning indicators.

The poor financial position of auditees is caused by poor planning and budgeting and inadequate budgetary and cash flow management controls.

Revenue management

A significant portion of revenue collected by the departments relates to patient revenue. Figures 12 below shows the results from our analysis of revenue management.

Figure 12: Revenue management



Eight (80%) departments estimated in their financial statements that more than 10% of the outstanding debt owed to them would not be paid.

As part of our analysis, we calculated the average number of days it took for auditees to collect the money they determined to be recoverable. Figure 12 shows that seven (70%) of the departments had an average debt-collection period of over 90 days. The number of auditees with this financial risk indicator remained unchanged when compared to the previous year. The extended collection periods put the cash flow of the auditees under significant pressure.

Audit of annual performance reports

Auditees are required to measure their actual service delivery against the performance indicators and targets set for each of their predetermined performance objectives as defined in their annual performance plans (APPs) and to report on this in their annual performance reports.

We audit selected programmes annually to determine whether the information in the annual performance reports is useful and reliable for parliament, provincial legislatures, the public and other users of the reports to assess the performance of the auditee. The objectives we select are those that are important for the auditee to deliver on its mandate. In the audit report, we report findings from the audits that were material enough to be brought to the attention of these users.

As part of the annual audit, we audited the **usefulness of the reported performance information** by determining whether it was presented in the annual report in the prescribed manner and was consistent with the auditees' planned objectives as defined in their APPs. We also assessed whether the performance indicators and targets that were set to measure achievement of the objectives were well defined, verifiable, specific, time bound, measurable and relevant.

We further audited the **reliability of the reported information** by determining whether it could be traced back to the source data or documentation and was accurate, complete and valid.

The following minimum health programmes were audited at provincial departments based on the significance and relevance of the programmes to the mandate of the health sector, the amounts budgeted for these programmes, the link to the national development plan and the negotiated service delivery agreement, as well as the significance of the related outputs to the public:

- Programme 2: District health services
- Programme 5: Central and tertiary hospital services.

At the national department, the following programmes were selected for audit purposes:

- Programme 3: HIV and Aids, tuberculosis, maternal and child health
- Programme 5: Hospital, tertiary services and human resource development.

The departments' published annual performance reports included performance information that was not useful and/or reliable.

Figure 13: Three-year trend – findings on the annual performance report

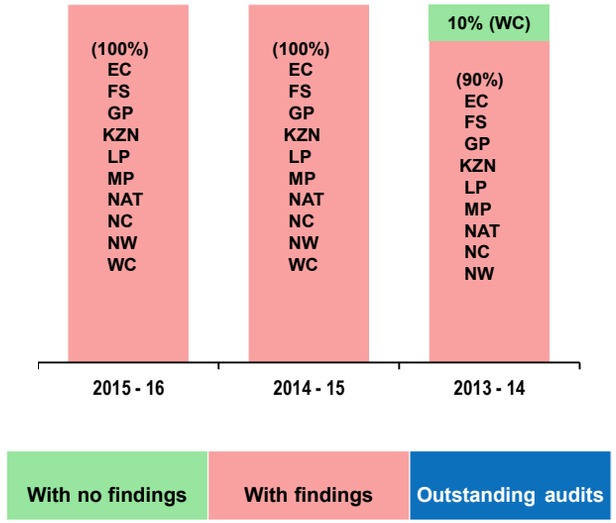
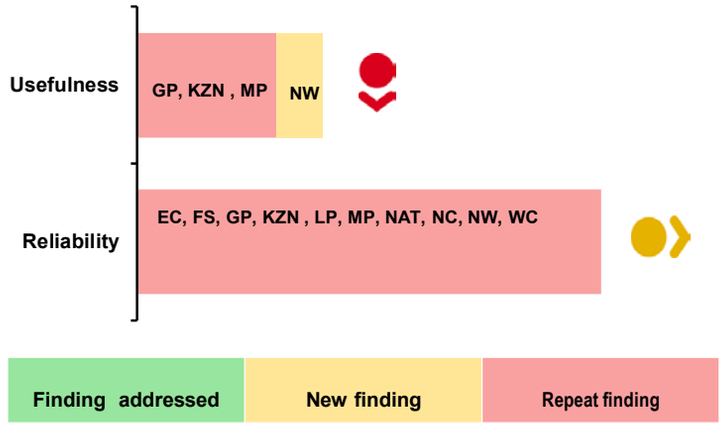


Figure 13 shows that all 10 departments (100%) had material findings in the current and prior period.

Figure 14: Findings on the usefulness and the reliability of the annual performance report



The usefulness of information for four departments with findings (Gauteng, KwaZulu-Natal, Mpumalanga and North West) must be improved by strengthening review procedures for preparing annual performance plans and annual reports. The formulation of objectives, indicators and targets is crucial in the planning phase to

ensure that performance reported on will be useful. This phase must include the design and implementation of suitable systems and controls to be able to report reliable information.

The Gauteng department could not support the reasons for variances between the planned performance and the actual performance adequately. At KwaZulu-Natal, proper systems and processes were not in place at clinic level to allow for the measurement and reporting on performance for 21% of the indicators. The Mpumalanga department included indicators that were not well defined. The North West department did not consistently report on approved objectives, indicators and targets in the annual performance plan and could not provide adequate evidence to support the reasons for the variances between the planned and actual performance.

All provinces had findings on the reliability of performance information. The reliability of information is primarily impacted on by inadequate information systems for the collection of data, as well as manual internal control processes at facilities (clinics and hospitals) under the control of provincial departments. The national department approved policies and procedures for primary transversal reporting systems. Provincial departments did not adequately implement these policies and procedures at facilities across the country. In addition, poor filing systems and inadequate space at a number of facilities resulted in the documentation not being available for audit purposes.

The DHIS is a system of totals used to collect routine data from facilities across the country. The system was implemented to collect routine data many years before the requirement to measure and report on performance information. In attempting to provide verifiable information, the system was adapted to include manual registers and manual internal controls to support the totals in the system. In order to improve audit outcomes, the department must develop and implement a suitable system and related internal controls to report reliable information. The national department has started with a project to move towards the electronic recording of patient information; however, this is a long-term project.

Most prevalent root causes

1. A key responsibility of the accounting officer, senior managers and officials is to implement and maintain effective and efficient systems of internal control. We assessed key internal controls to determine the effectiveness of their design and implementation in ensuring reliable financial and performance reporting and compliance with legislation. We discussed the status of these internal controls with management and the accounting officer and made recommendations to address these on a quarterly basis for more than five years. We noted slow progress by departments to address the control weaknesses identified. The status of internal controls at all departments is detailed in annexure 2.

   The leadership sets the tone for an effective, efficient and well-performing department and is the key driver of service delivery in the sector. We assessed the key leadership controls at all 10 departments as concerning, including the Mpumalanga department, which requires intervention to address material breakdowns in internal control processes.

   We further assessed the financial and performance management controls required to support the proper recording of financial and performance information. Five departments (50%) were assessed as concerning while intervention was required at the remaining five departments.

2. The effectiveness of any organisation is dependent on adequate and sufficiently skilled staff members whose performance and productivity are managed properly. Our audits included an assessment of human resource management. The status of internal controls at all departments is detailed in annexure 2.

   Only the national department and the Western Cape department's human resource management was assessed as good. The internal controls in this area were concerning for four departments and require intervention at the remaining four departments.

3. The audits revealed poor audit outcomes and internal control deficiencies for all three audit focus areas, i.e. financial, performance and compliance, for several years. The sector has reported significant unauthorised, irregular, and fruitless and wasteful expenditure. We noted inadequate consequences for the poor outcomes at eight departments. Refer to annexure 3 for the root causes assessed per department.

What needs to be done differently?

1. It is the responsibility of the leadership to drive the necessary actions to improve internal control deficiencies and the audit outcomes. The leadership interventions mentioned for the Eastern Cape and Gauteng departments serve as examples of what is possible with leadership intervention from the highest levels. The withdrawal of driven leadership interventions at the Limpopo department, which regressed during the year, supports this recommendation.
2. Sufficiently skilled leaders are required to turn the poor outcomes around. Leadership and senior management should continue to equip themselves with the knowledge and skills they need to perform their oversight and governance duties. Controls over human resource planning and organisation, management of vacancies

and performance management must be improved at eight departments where significant deficiencies were reported.

3. Staff at all levels must be held accountable for poor audit outcomes, weaknesses in internal controls and unauthorised, irregular and fruitless and wasteful expenditure incurred.

Notes

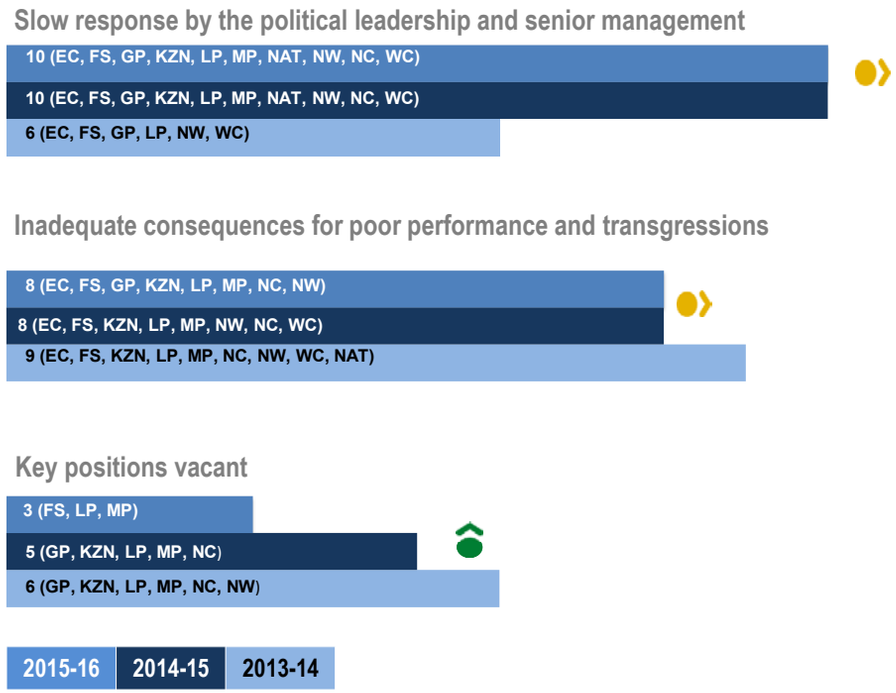
CONCLUSION

Conclusion

We have included an assessment of the most prevalent root causes and recommendations for each sector focus area as well as an analysis of the audit outcomes. The responsibility lies with the political and administrative leadership and senior management to investigate the root causes and take the necessary actions to address these.

In our assessment of the most prevalent root causes for not achieving the audit and service delivery objectives, we noted the following overall root causes.

Figure 1: Status of overall root causes



Slow response by the political leadership and senior management in addressing the root causes of poor audit outcomes

During the current and prior years, we have interacted with the political leadership and senior management at various forums to discuss our findings on the fundamental challenges affecting service delivery to the public. With each follow-up audit, we noted that there were improvements in addressing the findings of the selected focus areas, however at a very slow rate.

The NDoH has implemented various initiatives to improve the availability and quality of health infrastructure through their monitoring and oversight activities. The norms and standards for health infrastructure have been gazetted for implementation by provincial departments. The NDoH has also undertaken key infrastructure projects to assist with upgrading infrastructure in preparation for the NHI. We acknowledge that there is a concerted national effort to improve health infrastructure, however, fundamental weaknesses around the planning for infrastructure projects at provincial level are reported with each annual audit. Routine maintenance of infrastructure has also not been planned adequately at certain provinces.

We audited the use and maintenance of medical equipment for the first time, however, weaknesses in key controls over the planning for, procurement and optimal use of equipment have not received timely attention from management despite the problems evident at facility level. The maintenance and repair of equipment were also not prioritised at most provinces.

The national e-health strategy was developed for implementation during 2012 to 2016. Audit work done in 2016 shows slow progress in achieving the goals set for the sector.

In addition, we have reported the weaknesses in healthcare waste management for more than five years but internal control weaknesses and non-compliance with legislation in this area still persist. The NDoH published healthcare regulations for public comment in May 2014. At the date of the audit in 2016, these regulations have not yet been gazetted for implementation at provincial level.

The regularity audit outcomes have indicated fundamental internal control weaknesses and a lack of adequate skills and resources to improve the audit outcomes over the year.

The responsibility for the slow pace of positive change rests solely with the political leadership and senior management.

We recommend that the following actions be taken to address the root cause:

- The leadership and senior management must take ownership of service delivery weaknesses and poor audit outcomes. Management at facility level should be improved in order to implement the recommendations and these need to be regularly monitored by the leadership in each province.
- Senior management should ensure that they address the weaknesses in key controls reported by the AGSA and internal auditors. Attention needs to be paid to the monitoring and supervisory controls.
- Leadership should implement a culture of accountability.

Lack of consequences for poor performance and transgressions

We identified inadequate consequences for poor performance and transgressions to be a root cause of poor audit results at 80% of the departments, based on insufficient actions taken by departments and political leaders to hold officials accountable for actions that either have led, or have the potential to lead, to negative audit results. The lack of action taken by leadership to address repeat audit findings has created a culture of complacency where poor performance has been tolerated.

We recommend that the following actions be taken to address the root cause:

- Accounting officers should ensure that compliance findings are investigated to determine whether there are indicators of financial misconduct or misconduct in the SCM processes, followed by disciplinary hearings where misconduct has been confirmed.
- All unauthorised and irregular expenditure should be investigated promptly, as required by the PFMA, to determine whether such expenditure should be recovered from the responsible official(s).
- To improve the performance and productivity of officials, the leadership should set the tone by implementing sound performance management processes, evaluating and monitoring officials' performance and consistently demonstrating that poor performance has consequences.
- All service delivery failures should be followed up and corrective action implemented at all health facilities.

Instability or vacancies in key positions

We identified instability and/or vacancies to be a root cause of poor audit outcomes at 30% of the auditees based on the following:

- Vacancies and prolonged acting in key positions
- Key accounting and financial reporting functions not being adequately performed.

The vacancies have resulted in a lack of proper supervision and project management over key programmes affecting service delivery. It has contributed significantly to the poor audit results. We recommend that key positions be filled as soon as possible with officials who have the appropriate competencies to improve service delivery and financial outcomes.

Commitments by leadership

We have engaged the HoDs, MECs and the minister on the findings raised. Commitments were made by responsible officials to address the findings. The following key commitments are noted:

- The minister has committed to greater involvement in upgrading key infrastructure projects by involving skills and expertise from the national department. He will continue to do this through the in-kind grant for infrastructure.
- The national department has developed the national health infrastructure maintenance strategy. This strategy is tailored for the unique requirements of health facilities and is expected to improve on the manner in which health facilities are maintained. This will be presented to the NHC for approval.
- The national department will strengthen monitoring and evaluation structures over the implementation of the e-health strategy.
- The national department will gazette the healthcare waste regulations for implementation by provincial departments. They will also monitor adherence to the regulations by provincial departments.
- The national department will continue to engage with all CFOs at the established CFO forum to drive improvements in audit outcomes for all departments in the sector.
- The minister will continue to track progress against sector audit and service delivery outcomes at the NHC meetings.

Notes

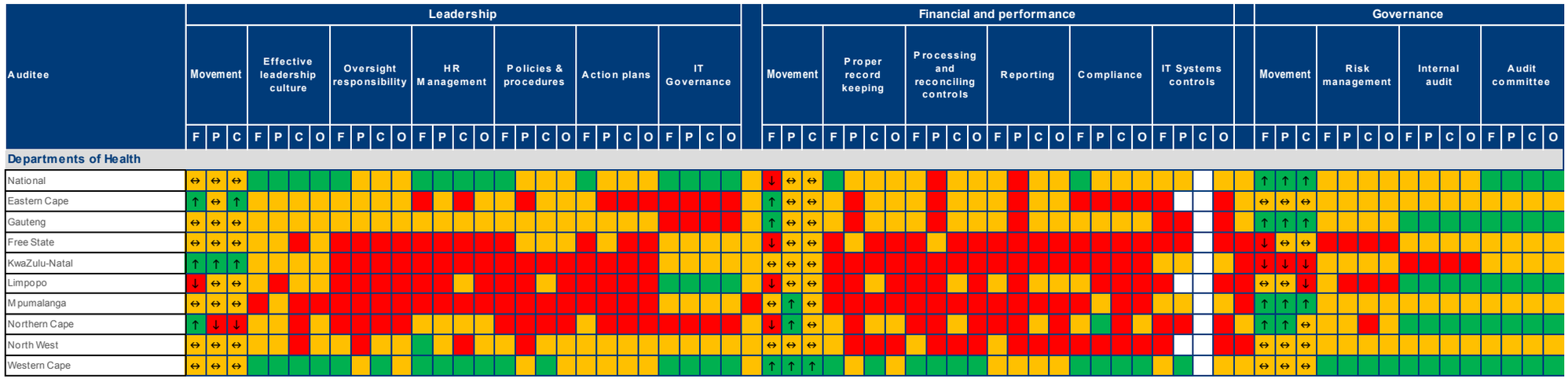
ANNEXURES

Annexure 1 - Auditees' audit outcomes, areas qualified, findings on predetermined objectives, non-compliance and specific focus areas

Auditee	2015-16 audit outcomes			2014-15 audit outcomes			Financial statement qualification areas									Findings on predetermined objectives				Findings on non-compliance																Findings on specific risk areas					Unauthorised, irregular as well as fruitless and wasteful expenditure		
	Audit opinion	Predetermined objectives	Compliance with legislation	Audit opinion	Predetermined objectives	Compliance with legislation	Non-current assets	Current assets	Liabilities	Capital and reserves	Other disclosure items	Revenue	Expenditure	Unauthorised, irregular, as well as fruitless and wasteful expenditure	Aggregate misstatements	Reported information not useful	Reported information not reliable	Information not submitted in time for audit	No annual performance report	Material misstatement or limitations in submitted AFS	Unauthorised, irregular, as well as fruitless and wasteful expenditure	Annual financial statements and annual report	Asset management	Liability management	Budgets	Expenditure management	Financial misconduct	Audit committees	Internal audit	Revenue management	Strategic planning and performance management	Transfer and conditional grants	Procurement management	HR management	Other	Quality of submitted performance reports	Supply chain management	Financial Health	Human resource management	Information Technology	Unauthorised expenditure Amount R	Irregular expenditure Amount R	Fruitles and wasteful expenditure Amount R
Departments of Health																																									
National		R	R		R	R											R			N									R					R	R	F			0.00	2.90	0.00
Eastern Cape		R	R		R	R					A			A			R			R	R								A			R	A		R	R	F			0.00	11.50	2.20
Gauteng		R	R		R	R		A								R	R			A	R						R			R	A			R	A		R	R	F			0.00	827.90	7.40
Free State		R	R		R	R	A		A		N			R			R			R	R		A	A			R	A			R	A	N	R	A		R	R	M			31.80	466.50	2.60
KwaZulu-Natal		R	R		R	R	R				A		R	R		R	R			R	R		A				A					A	R	R	A		R	R	F			147.10	2520.60	5.10
Limpopo		R	R		R	R	N				N		N				R			R	R		A		A	R	A			R	A			R	A		R	R	F			0.00	259.10	15.90
Mpumalanga		R	R		R	R	R		A		R		N	R		R	R			R	R		A			R	A	A		R	A			R	A		R	R	F			0.00	1919.60	1.00
Northern Cape		R	R		R	R	R	A	R		R		A	R			R			R	R		A			R	R			R	A			R	A		R	R	F			92.80	1006.20	4.40
North West		R	R		R	R							N			N	R			R	R			A		R	A			N	A	R	R	A		R	R	F			0.00	696.70	15.30
Western Cape		R	A		N	R											R				A															R	R	F			0.00	7.30	0.00

Legend (Audit outcomes)	Unqualified with no findings	Unqualified with findings	Qualified with findings	Adverse with findings	Disclaimer with findings	Audit not finalised at legislated	New auditee	Legend (Findings)	Addressed (A)	New (N)	Repeat (R)	Not reported (NR)	Financial health findings	Material unfavourable indicators	Unfavourable indicators	No unfavourable indicators	Legend (Expenditure)	Improved	Regressed

Annexure 2 - Assessment of auditees' key controls at the time of audit



Key drivers legend							
Good		In Progress		Intervention Required			
Improved	↑	Unchanged	↔	Regressed	↓		
Financial	F	Performance	P	Compliance	C	Overall	O

Annexure 3 - Root causes

Auditee	Root causes		
	Slow response by management and political leadership	Inadequate consequences for poor performance and transgressions	Instabilities and key positions vacant
Departments of Health			
National			
Eastern Cape			
Gauteng			
Free State			
KwaZulu-Natal			
Limpopo			
Mpumalanga			
Northern Cape			
North West			
Western Cape			

Addressed (A)	New (N)	Repeat (R)

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