



AUDITOR - GENERAL
SOUTH AFRICA

Auditing to build public confidence

Report of the Auditor-General

**on a performance audit of the Forensic Chemistry
Laboratories at the national Department of Health**

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Auditing to build public confidence

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REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON A PERFORMANCE AUDIT OF THE FORENSIC CHEMISTRY LABORATORIES AT THE NATIONAL DEPARTMENT OF HEALTH

1. EXECUTIVE SUMMARY

- 1.1 After a number of media reports and consultation with the management of the Programme: Non-Communicable Diseases of the national Department of Health, it was decided to conduct a performance audit of the Forensic Chemistry Laboratories. The 13-point criteria matrix and problem-orientated approach as prescribed in paragraphs 3.17 and 3.20 of the *Performance Audit Manual, 2008*, that contains the policies, standards and guidelines for the planning, execution, reporting and follow-up of performance audits in the public sector, were used in the determination of the Forensic Chemistry Laboratories as a possible focus area.
- 1.2 The performance audit revealed that various factors impacted negatively on the ability of the national Department of Health to execute efficiently and effectively its role/mandate of providing analytical toxicology support and scientific evidence in support of drunken driving prosecutions, as well as establishing cause of death and analysing food samples.

The challenges in short are as follows:

Low staff morale as the laboratories are situated in unsuitable buildings; inadequate storing space for samples; a high vacancy rate; no backup power supply to ensure that samples or specimens are not spoiled; a total disregard for the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993); and inadequate information systems. These factors have resulted in backlogs that have a negative impact on the criminal justice system and on the broader public in the country.

The root causes are the following:

- Lack of leadership in the national Department of Health to address the challenges at the laboratories and ensure that adequate actions are taken and followed up.
- Inadequate monitoring and supervision of the laboratories by the national Department of Health.
- Inadequate performance management of staff at the laboratories.
- The Forensic Chemistry Laboratories of the national Department of Health had not been accredited to ensure formal recognition of competency despite this having been one of their key strategic objectives since the 2001-02 financial year.



- Capacity challenges existed at senior staff level and there were backlogs at the Forensic Chemistry Laboratories.
 - Adequate accommodation to house the Forensic Chemistry Laboratories was lacking.
 - Nine hundred and eight (4,64%) of the specimen samples received from the South African Police Service during 2007 were rejected since they did not conform to the set criteria to be followed when samples are delivered to the Forensic Chemistry Laboratories.
 - The management information system used by the Forensic Chemistry Laboratories was inadequate.
- 1.3 The accounting officer in his final comments, dated 4 November 2008, gave the assurance that the outstanding matters raised in the management report would be attended to.
- 1.4 During an information session with the Minister of Health on 14 September 2009 on the content of this report he undertook, inter alia, to:
- resolve the long outstanding issue of the non-accreditation of the Forensic Chemistry Laboratories with the South African National Accreditation System
 - implement his strategy to reward the staff of the Forensic Chemistry Laboratories adequately
 - give due attention to the matters raised in this report.

2. PURPOSE AND CONTENT OF THE REPORT

- 2.1 The performance audit of the Forensic Chemistry Laboratories (FCLs) at the national Department of Health (NDoH) was conducted in terms of section 188(4) of the Constitution of the Republic of South Africa, 1996, read in conjunction with sections 5(3) and 20(3) of the Public Audit Act, 2004 (Act No. 25 of 2004). The purpose of this report is to facilitate public accountability by bringing to the attention of the executive authority and Parliament the findings of the performance audit.
- 2.2 Audit work was performed to provide sufficient audit evidence for the findings set out herein.
- 2.3 It is anticipated that this report, which reflects the comments of the accounting officer (AO), will give rise to corrective steps that would contribute constructively to the establishment and implementation of appropriate management measures and controls and, consequently, to improved value for money.
- 2.4 The responsibility for instituting these management measures rests with management. The primary objective of performance auditing is to confirm

independently that these measures do exist and are effective and to provide management, Parliament and other legislative bodies with information, by means of a structured reporting process, on shortcomings in management measures and examples of the effects thereof.

3. AUDIT PROCESS

- 3.1 Performance audits are conducted in accordance with the *Performance Audit Manual, 2008* that contains the policies, standards and guidelines for the planning, execution, reporting and follow-up of performance audits in the public sector.
- 3.2 After consensus was reached on the factual correctness of the findings in the management report during the steering committee meeting, the findings were brought to the attention of the AO.
- 3.3 The final comments from the management of the NDoH were received on 6 April 2009 and are incorporated into this report.
- 3.4 The report was again circulated to the AO and the management of the NDoH during July 2009 to determine and confirm the factual correctness of the report.

4. AUDITING SCOPE

- 4.1 In conducting the performance audit, reliance was placed on the documentation and other information provided by the NDoH, as well as on the information obtained from interviews conducted. The FCL consists of three laboratories situated in Pretoria, Johannesburg and Cape Town. A more comprehensive review was conducted at the Pretoria and Johannesburg FCLs. Findings that arose from information received from the management of the Cape Town FCL were, however, included in the report.
- 4.2 The performance audit of the FCLs focused on management measures with the following sub-focus areas, as agreed with the management of the FCLs during the first steering committee meeting:
 - Accreditation of the FCLs
 - Vacancy rate and backlogs
 - Rewarding of staff
 - Accommodation
 - Back-up power supply
 - Food analysis laboratory services

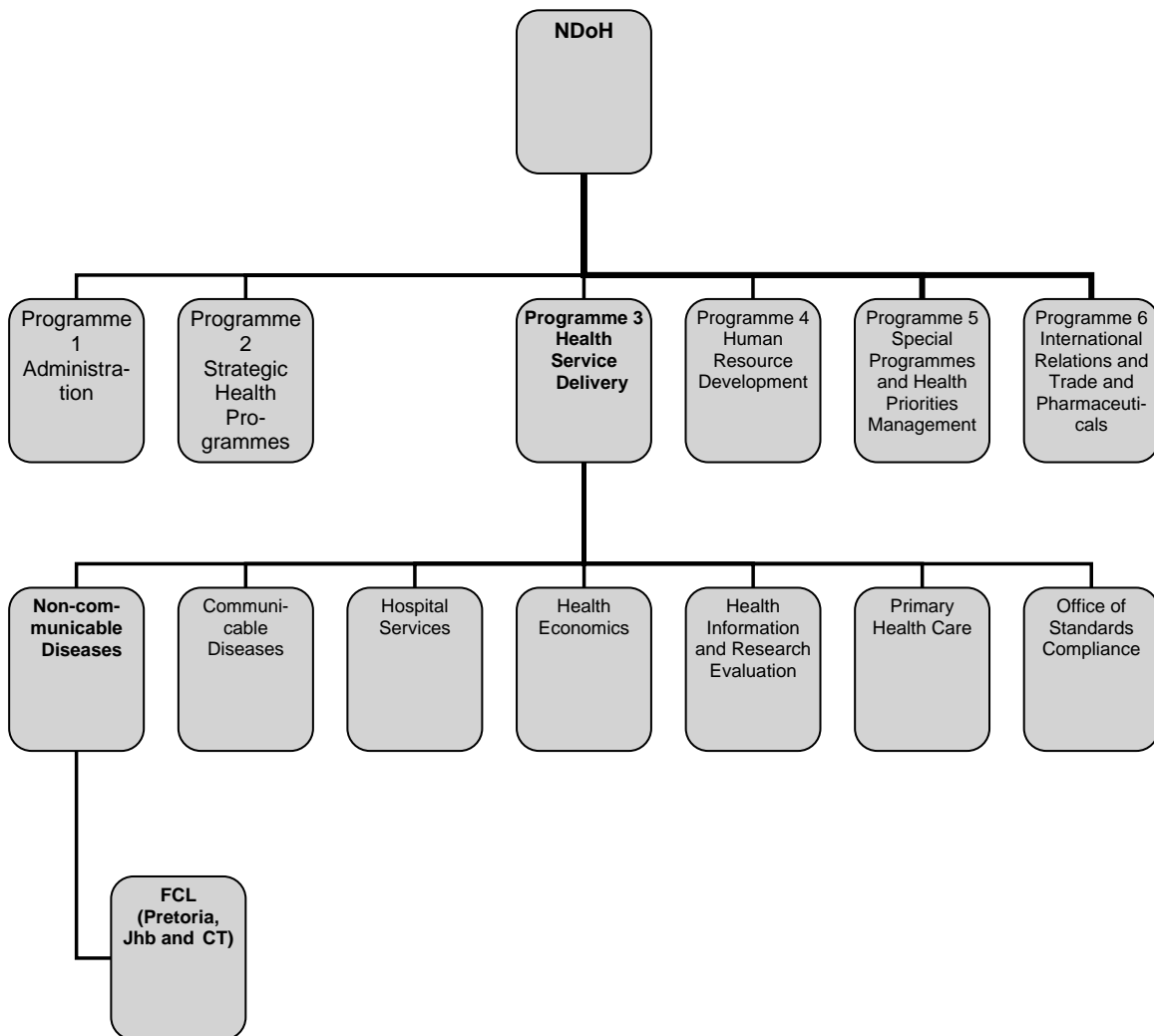


- Adherence to legislation and security requirements
- Collection of reports by users
- Quality of samples provided to the FCLs
- Laboratory information management system

5. OVERVIEW

5.1 The NDoH has six programmes, of which Health Service Delivery is Programme 3. The main purpose of this programme is to support service delivery, primarily in the provincial and local spheres of government. This programme consists of seven sub-programmes, of which non-communicable diseases is one. The diagram below reflects the position of the FCLs within the organisational structure of the NDoH:

Figure 1: Organisational structure of the NDoH which depicts the position of FCLs ¹



¹ Restructuring was effected during 2008-09 resulting in the formation of Programmes 5 and 6.

5.2 Non-communicable diseases

This sub-programme establishes guidelines on the prevention, management and treatment of a range of chronic diseases, diseases of older people and oral health. It is also responsible for developing clinical forensic services; reducing injuries and non-natural deaths; organ donation and transplantation; rationalising blood transfusion services; and liaising with the National Institute for Communicable Diseases and the National Institute for Occupational Health. The FCLs form part of the national forensic pathology services.

The services rendered by the National Health Laboratory Services (NHLS) and the South African Police Forensic Laboratory Services are stated herewith to differentiate between their objectives and functions for purposes of this report.

The NHLS was established in 2001 and is the largest pathology service provider in South Africa with over 250 laboratories, serving 80% of the country's population, and conducts health-related research appropriate to the broader population needs, such as the human immunodeficiency virus/acquired immune deficiency syndrome (HIV/Aids), tuberculosis, malaria, pneumococcal infections, occupational health, cancer and malnutrition. The NHLS has its own board of members, its own head office in Johannesburg and received its mandate from the National Health Laboratory Service Act, 2000 (Act No. 37 of 2000). The NHLS was established as a single national public entity to provide public health laboratory services in the country. Liaison between the NHLS and the NDoH takes place within the framework of Programme 3: Health Service Delivery. The NDoH has an oversight function over the NHLS.

The South African Police Forensic Laboratory Services provide forensic services to the SAPS in order to effectively prevent and combat crime through the collection of physical evidence at crime scenes and the examination thereof by means of forensic techniques. Priorities include the following:

- Specialised assistance at crime scenes
- Forensic examination and exhibit management
- Evidence presentation in court
- Management of the Explosives Act, i.e. bomb disposal and post-blast investigations

5.3 Forensic chemistry laboratories

The FCLs provide scientific support for actions taken in terms of a variety of legislation, such as the Inquest Act, 1959 (Act No. 58 of 1959), the Criminal



Procedures Act, 1977 (Act No. 51 of 1977), the Road Traffic Act, 1989 (Act No. 29 of 1989) and the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972).

The FCLs are divided into the following sections:

- Toxicology section (Pretoria, Johannesburg and Cape Town)
- Blood alcohol section (Pretoria, Johannesburg and Cape Town)
- Food section (Pretoria and Cape Town)

Regarding the food section:

- The FCL performs the chemical analysis of food. Chemical analysis entails the identification of potentially harmful chemical substances, for example, prohibited food colourants.
- The NHLS performs the microbiological analysis of food. This entails the identification of potentially harmful bacteria, viruses and fungi.

6. FINDINGS, RECOMMENDATIONS BY THE AGSA, AS WELL AS COMMENTS PROVIDED BY THE ACCOUNTING OFFICER

6.1 Accreditation of the forensic chemistry laboratories

6.1.1 Finding

At the time of the audit the FCLs were not accredited with the South African National Accreditation System (SANAS), a section 21 company that was established in 1996. Accreditation by SANAS in terms of the Accreditation for Conformity Assessment, Calibration and Good Laboratory Practice Act, 2006 (Act No. 19 of 2006) serves to ensure formal recognition that a laboratory is competent to perform perceived tasks in accordance with international criteria.

As early as the 2001-02 financial year the NDoH began preparing for the first assessment in the accreditation process of the FCLs as one of the key objectives for the reorganisation of a range of supporting services.

The risk of the FCLs not being accredited laboratories might result in non-acceptance of the FCL results in court. In exceptional circumstances this has already occurred.

6.1.2 Recommendations by the AGSA



Outstanding matters in finalising the accreditation process of the FCLs should be pursued.

The NDoH, SANAS and other role players should liaise to set fixed dates for the finalisation of the accreditation process.

The NDoH should liaise with the national Director of Public Prosecutions on the progress made with the accreditation process of the FCLs to ensure that the work of the FCLs is accepted in all courts.

6.1.3 **Comments of the accounting officer**

If a laboratory is not accredited it does not mean that the results are of poor quality. If this were the case then all results produced to date should be ignored and all convictions based on these results be reversed. Accreditation is an ongoing process. Many NHLS laboratories are not yet accredited; neither are the SAPS forensic laboratories. There has been continued liaison with SANAS over this matter. There were internal delays at SANAS which have now been resolved. It has been decided that, provided that analysts have been taken through a written training programme and have received a certificate of competence, the accreditation procedure will be observed in a less vigorous manner, still applying acceptable standards.

6.2 **Vacancy rate and backlogs**

6.2.1 **Finding**

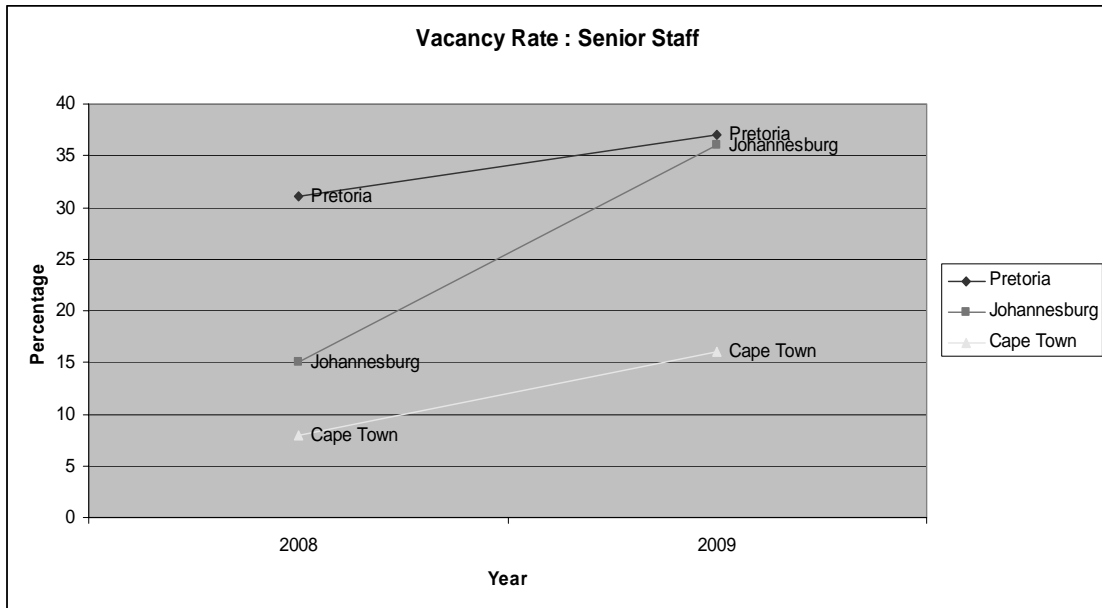
The FCLs are challenged by a high number of vacancies, especially on senior levels. The vacancy rate, plus an increase in cases received, resulted in an increased backlog. Since the release of the management report investigations into the creation of additional posts were launched and 15 additional positions for the Pretoria FCL were approved, while 14 were recommended for the Cape Town FCL in July 2009.

A newly recruited toxicology analyst requires at least two years of internal training due to the lack of formal forensic chemistry/toxicology training at local tertiary institutions.

A trend analysis summarising vacancies for senior staff relating to the Pretoria, Johannesburg and Cape Town FCLs is presented in figure 1.

Figure 1: Trend analysis summarising an increased vacancy rate for senior staff





Pretoria FCL

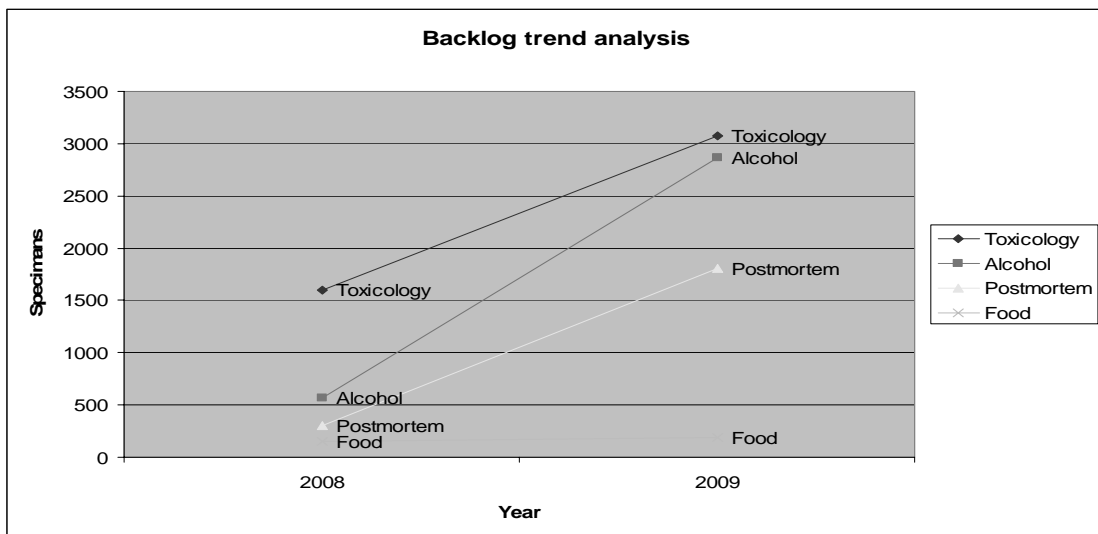
As at 31 March 2009 the Pretoria FCL had six senior staff vacancies, namely four level 8 senior forensic analysts, one level 9 principal forensic analyst and one level 10 chief forensic analyst (head of the toxicology section). This constituted a 20% vacancy rate for senior staff in relation to the total staff complement.

Furthermore, since the retirement of the director: Forensic Pathology Services at the end of August 2008, the head of the Pretoria FCL had to perform two functions, namely that of head of the Pretoria FCL as well as acting director: Forensic Pathology Services. The level of vacancies at supervisory level has impacted on both training and efficiency since managers had to be more involved in functional work.

In terms of the backlog report, Statistics FCL Pretoria dated 5 June 2008, no analysts were dedicated to working in the blood alcohol section. The analysts from the food section (two analysts) and toxicology section (seven analysts, which was reduced to five as at 31 March 2009) were responsible for completing the samples received by the blood alcohol section in addition to their normal workload.

The medical examiners at mortuaries also generally request drug and alcohol analyses of blood samples taken from victims of unnatural deaths and motor vehicle accidents. This contributes to the increase in these backlogs.

Figure 2: Trend analysis of backlogs at the Pretoria FCL



Johannesburg FCL

The records of the Johannesburg FCL, as at 31 March 2008, indicated a 15% vacancy rate for senior staff in relation to the total staff complement. The increasing backlog of toxicology cases at the Johannesburg FCL (4 574 cases) constitutes more than three years' work.

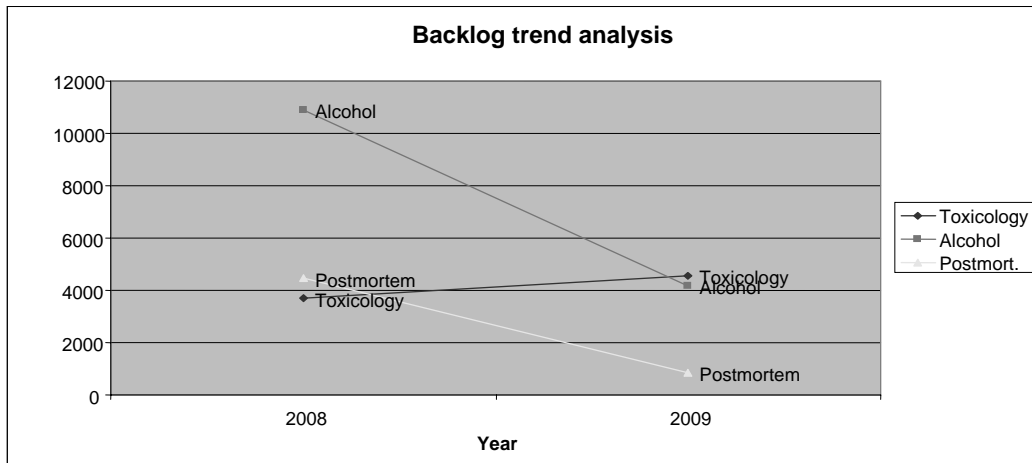
The nature of the cases and the fact that 70% to 80% of the cases are classified as "unknown"² in nature prolong the turnaround times. Management indicated that the level of experience at the Johannesburg FCL was low since the majority of the staff had approximately one year's experience.

The status of the Johannesburg FCL was updated as at 31 March 2009 and had been, in addition to the figures above, further impacted negatively by the resignation of the head of the FCL with effect from 13 March 2009, as well as a level 9 analyst. The records of the Johannesburg FCL, as at 31 March 2009, indicated a 20% vacancy rate for senior staff in relation to the total staff complement.

² "Unknown" cases refer to unfamiliar substances that were identified during the analysis of samples, therefore requiring additional time to identify these substances.



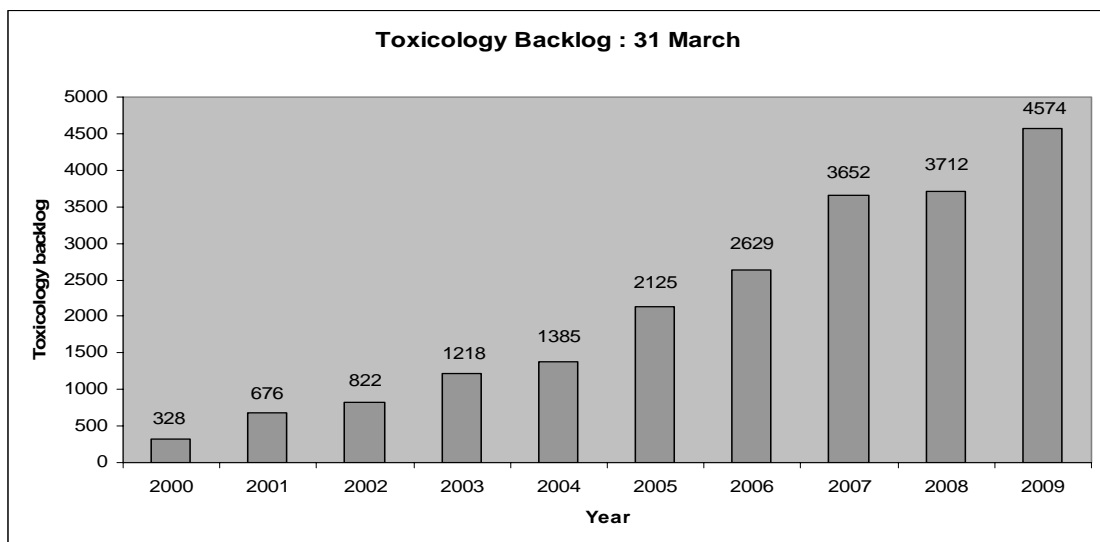
Figure 3: Trend analysis of backlogs at the Johannesburg FCL



The decrease in the alcohol backlog was attributable to an increased allocation of analysts to the blood/alcohol section and a dedicated focus on addressing the crisis.

A continuous annual increase in toxicology backlogs occurred at the Johannesburg FCL. A total of 328 cases were outstanding as in 2000, compared to the backlog of 4 574 cases in 2009, as indicated in the graph below:

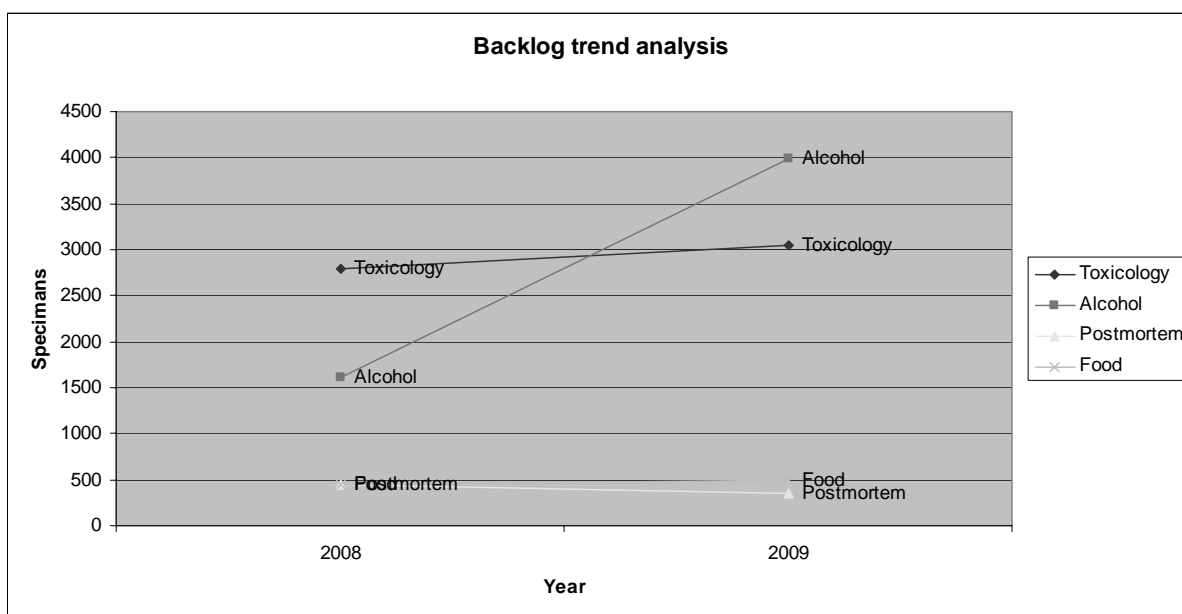
Figure 4: Statistics: Toxicology backlog at the Johannesburg FCL



Cape Town FCL

As at 31 March 2009 the Cape Town FCL had one level 8 analyst vacancy and one level 9 analyst vacancy. A total of 600 more blood alcohol samples had been received in March 2009 as compared to March 2008. This impacted negatively on service delivery as many cases could not be closed or concluded.

Figure 5: Trend analysis of backlogs at the Cape Town FCL



Lack of norms and standard turnaround times

The turnaround time for the analysis of samples at the three FCLs varied considerably, as a result of a lack of norms. As at May 2009 the routine blood-alcohol analysis took approximately 77, 90 and 21 days, respectively, at the Pretoria, Cape Town and Johannesburg FCLs, compared to increased figures as at 31 August 2009 of 120 days at Pretoria and Cape Town and 135 days at the Johannesburg FCL.

The turnaround time for routine toxicology cases at the Pretoria, Johannesburg and Cape Town FCLs was 60, 120 and 90 days, respectively. As at 31 August 2009, this constituted backlogs of four years at Pretoria, six years at Johannesburg and five years at Cape Town, based on calculations of average outputs and incoming cases, respectively. As a result of such long delays, cases have been withdrawn from court³.

³ One case in Brits and three cases in Johannesburg.



The turnaround time for food analysis is not included. Because of a lack of capacity only urgent sample analysis is being conducted on food.

Management comments received on 6 April 2009 indicated that extensive renovation was in progress at the Johannesburg FCL; consequently, analysis of toxicology would have to be halted for at least seven months during the 2009 calendar year. Analytical equipment would also have to be shut down for a few weeks in order to be moved, re-installed and tested before being operational again.

6.2.2 Recommendations by the AGSA

The root causes of the vacancies need to be analysed and a comprehensive human resource strategy should be formulated and implemented to address vacancies as a matter of urgency; more specifically, in the sections where current workload backlogs occur.

Benchmarking with similar service providers/economic sectors should take place to position the salary structure of analysts to attract and retain staff accordingly.

Issues other than vacancies that negatively affect the process of clearing backlogs (for example, issues of productivity and staff morale to address staff turnover) should be identified and measures linked to time frames should be implemented.

Norms for the turnaround times of the analysis of various samples should be established and implemented. These norms will form a valuable basis for performance management.

Alternative back-up plans should be implemented at the Johannesburg FCL during the renovation period referred to in additional comments⁴, to ensure that continuous and efficient service delivery takes place.

6.2.3 Comments of the accounting officer

The Johannesburg FCL now has an action plan in place to eliminate the alcohol-related backlog, since the identified root cause was poor productivity.

⁴ Management comments that were received on 6 April 2009 and incorporated into this report indicate that delays will be exacerbated, resulting in a negative effect on service delivery.

6.3 Rewarding of staff

6.3.1 Finding

Recognition of scarce skills originated during January 2003 when the Department of Public Service and Administration issued a scarce skills framework⁵ to guide departments in developing departmental policies on scarce skills. The National Scarce Skills List of March 2006 allows for different economic sectors to identify and forecast skills shortages. The work and services performed by the FCLs require an in-depth knowledge of forensic science, which was also the top priority on the National Scarce Skills List, with special emphasis on scientists working in scientific and technological areas.

Despite the above, staff at the FCLs had still not received any financial recognition as at 30 April 2009 for the skills they possess. Scarce skills recognition was given to staff of the SAPS laboratories with effect from 1 April 2005, by means of a bonus as well as an eight-notch cash recognition to staff with these specialised skills. This impacted negatively on the morale of the staff of the FCLs who did not get any similar recognition. A submission to the minister regarding this matter was approved during September 2009.

6.3.2 Recommendation by the AGSA

Circumstances that prevent analysts from being recognised for the scarce skills they possess should be identified and addressed.

6.3.3 Comments of the accounting officer

Continued efforts are made to obtain scarce skills allowances for staff. The issue of scarce skills has been accepted by the Department of Justice, who will benchmark this matter with the SAPS through the Committee on Modernisation of the Criminal Justice System.

6.4 Accommodation

6.4.1 Finding

At least four requests had been made by the NDoH to the service provider (the Department of Public Works (DPW)) since February 2005 to address accommodation needs. These requests were not adequately resolved and this contributed to the

⁵ The scarce skills framework was discontinued and substituted with Resolution 1 of 2007 that also replaced Resolution 2 of 2004, which regulated remuneration and other conditions of service for the period 2004 to 2006-07.



shortcomings relating to the accommodation of the FCLs, which are not conducive to the efficient and effective execution of operations and service delivery to the whole country. Such shortcomings were identified at two of the three FCLs as indicated below:

Pretoria FCL

Despite various attempts to obtain suitable accommodation, the FCL is accommodated in an old house under the auspices of the National Heritage Foundation. This does not conform to the requirements set for an FCL in terms of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), hereafter referred to as the OHS Act.

The laboratories are filled to capacity with analytical equipment and more equipment is needed to be able to cope with the increased workload. The laboratories do not have space to accommodate the new equipment as the house may not be expanded to suit needs. According to the Pretoria FCL's strategic documentation, March 2008 was set as the target date for obtaining permission to acquire a new building. However, they were still accommodated in the old building as at 21 September 2009.

In the FCL's request for alternative accommodation of December 2005, references were made, inter alia, to the fact that the carpeting (case reception) and wooden floors (blood alcohol laboratory) were biologically hazardous when spills occurred. This also constituted a fire hazard within a laboratory environment. As at 31 August 2009 the challenges with the accommodation still existed.

Johannesburg FCL

The FCL building was erected in 1925 and does not meet the requirements set for an FCL in terms of the OHS Act, nor does it meet the FCL's needs. The planned renovations referred to in paragraph 6.4.3 of this report are also applicable.

Space utilisation at the laboratory is reaching maximum proportions, given the current indicators that the number of samples received is on the increase and bearing in mind the recruitment of new staff members and acquisition of new instrumentation. The examples indicated below reflect the shortcomings:

- **Storage space:** Samples which are in the process of being analysed are stored in refrigerators located in the corridors of the laboratory building due to the lack of adequate storage space. An industrial freezer located at the Mincing Division of the Toxicology Section does not have sufficient storage capacity for these organs and specimen samples, with the result that samples ready for analysis are kept in the household refrigerators in the corridors.

- **Back-up for refrigerators:** Not all refrigerators in the laboratory have electricity supply back-up to keep them running in case of power failure.

Picture taken on 1 April 2008 of refrigerators with specimens in the corridor of the Johannesburg FCL



The accommodation inadequacies that were noted at the Johannesburg FCL received attention after we issued our first draft report and are being attended to. These had, however, contributed to the increased backlogs that are being experienced.

6.4.2 Recommendations by the AGSA

Coordination and communication between the FCLs, NDoH and DPW and other role players should be improved to speed up the process of addressing existing accommodation needs.

The requirements set for an FCL in terms of the OHS Act, as well as provisioning for future growth of the FCL, should be considered when options are evaluated. A task team should evaluate the extent of non-compliance with the OHS Act.

6.4.3 Comments of the accounting officer

Subsequent to the AGSA raising the matter of accommodation deficiencies, the AO indicated that there was now an agreed plan to address the requirements set for the Johannesburg FCL. In this regard also refer to paragraph 6.4.1.

New accommodation is also urgently required for the Pretoria FCL and is being sought.

A new FCL for KwaZulu-Natal is envisaged in the departmental strategic plan and is supported by the Department of Justice.

6.5 Back-up power supply and UPS systems

6.5.1 Finding

Ineffective planning and coordination with the DPW contributed to the lack of adequate back-up power supply systems. This had a negative effect on the operations of the FCLs, as expensive equipment was damaged and productivity was lost. At the Pretoria FCL, for example, during a power failure over a weekend in December 2005 the generator charging the UPS ran out of diesel. The FCL was responsible for providing diesel to the generator. As a result, two expensive instruments were damaged, namely:

- the Time of Flight instrument used in the toxicology laboratory to identify and quantify drugs of abuse in suicide, unknown causes of death or murder cases
- the Inductively Coupled Plasma Spectrometer, an analytical instrument also used in the toxicology laboratory to determine the presence and levels of metals in biological material such as blood and stomach content in suicide and murder victims, or where the cause of death is unknown.

The Time of Flight instrument had been repaired since the release of the management report.

At the Johannesburg FCL, the lack of an adequate back-up power supply system resulted in closures whenever load-shedding or power failures occurred, thereby adding to the increasing backlog and cases not going to court timeously. It should be noted that the NDoH previously commented that they were aware of the problem and that it had been raised with the DPW, but that the matter had been pending since December 2004.

Furthermore, new instrumentation purchased for toxicology and blood alcohol analysis, providing vital evidence of possible overdoses and poisoning, had not been utilised as at May 2008. This was due to the fact that the UPS systems purchased to support the above instrumentation could not be installed due to an insufficient supply of power fed by the main electrical board.

The main risk is that specimens could be spoiled, which would have a huge negative impact on criminal procedures and could lead to claims against the department.

6.5.2 Recommendations by the AGSA

The urgency of an adequate back-up power supply system should be addressed at all three FCLs.

The importance of the operations of the FCLs and their effect on the criminal justice system should be documented and communicated to the DPW in a manner that would ensure that the needs of the FCLs are addressed efficiently and effectively.

6.5.3 Comments of the accounting officer

The heads of the Pretoria and Johannesburg FCLs sent numerous communications to the DPW to speed up the installation of adequate back-up facilities. The lack of support resulted not only in productivity losses, but also in financial losses that could have been avoided.

6.6 Challenges in the food analysis laboratory services and the attendant effect on its mandate

6.6.1 Finding

The capacity at the food analysis laboratory services did not allow for the provision of adequate food monitoring, proactive risk assessments or rapid response to food scares.

With reference to accommodation, as prescribed by set standards and the OHS Act, the food specimens, analytical laboratory and equipment laboratory should be physically separated. Due to a lack of space, however, the above could not be achieved. The following accommodation requirements were, for example, lacking:

- Walk-in cold storage room for perishable food
- Storage room for non-perishable exhibits
- Chemical and consumable store room
- Weighing room
- Carpeting (case reception) and wooden floors (blood alcohol laboratory) are biologically hazardous when spills occur.
- This also constitutes a fire hazard within a laboratory environment.

With reference to human resources, two analysts and the section head were operational at the food laboratory at Pretoria and two vacancies for analysts on management level 8 existed as at 31 March 2008. Three analysts and the section head were operational at the food laboratory in Cape Town and one vacancy for an



analyst on level 6 existed as at 31 March 2008. The Pretoria and Cape Town FCLs are responsible for the food analysis laboratory services for the whole country.

According to an internal report dated 15 January 2008⁶, various managerial risks were identified as a result of the current lack of an adequate food analysis laboratory service within the health system, as indicated below:

“Due to the lack of adequate monitoring of food in South Africa by the health authorities as a result of staff shortages, including the analysis of food samples for chemical contamination by the FCLs, the risk of the population being exposed to the detrimental effects of contaminated food may be at an unacceptable level, especially in terms of the consequences of ingesting contaminated food.

In addition to the above, the success of the government’s national food fortification programme is in jeopardy. For example, the lack of monitoring to ensure that the levels of added vitamins to maize meal used to bake bread are correct.

From an economic and social point of view, the lack of local food monitoring programmes supported by laboratory services could result in the suspension of food exports from South Africa.”

6.6.2 Recommendations by the AGSA

The accommodation deficiencies should be rectified so as to facilitate the separation of the food specimens, analytical laboratory and equipment laboratory.

The capacity constraints with regard to human resources should be addressed in order to deliver on the mandate of this unit.

6.6.3 Comments of the accounting officer

A formal assessment by a consultant is in progress. This has the remit to recommend the future requirements for all food laboratories in South Africa. Once the report has been received, a decision will be made as to relocation and/or increased space.

6.7 Adherence to legislation and security requirements

6.7.1 Finding

⁶ Position paper on the need for strengthening the food analysis laboratory services.

Section 8 of the OHS Act stipulates that every employer shall provide and maintain, as far as possible, a work environment that is safe and without risks to health. This is not always applied at the FCLs despite having been served a notice in this regard by the Department of Labour as far back as February 2002. The following indicate an environment at the Johannesburg FCL that is not governed by adequate procedures and is not always safe and risk free and of which the layout is insufficient:

- No designated controlled storage area for chemicals was available.
- No separate area for the storage of biological waste was available.
- The waste bins were left outside the laboratories in the passage for collection, as no designated area for the storage of biological and chemical waste prior to collection was available.
- Personnel were in close proximity to specimens of blood, organ tissue and eye fluids, which poses a risk of contracting tuberculosis, HIV and/or other blood-borne infectious diseases. It should be noted that these waste bins should be stored separately as per the Regulations for Hazardous Biological Agents and Regulations for Hazardous Chemical Substances (HCS) (1,2,3) promulgated by the OHS Act.

Picture taken on 1 April 2008 of waste containers in the corridors of the Johannesburg FCL. This poses a health risk.



No access control was applied at any of the laboratories, as doors were mostly kept open, with the additional risk of tampering with samples.

6.7.2 Recommendation by the AGSA

Health and safety needs should be prioritised in order to comply fully with health and safety legislation.

6.7.3 Comments of the accounting officer

Health and safety matters are continually being assessed and improved, and more urgent efforts to improve occupational safety will be implemented. There was an independent assessment of the needs of the Johannesburg FCL.

Space is acknowledged to be a problem, but this in itself is not a cause of unsafe working conditions. Much has been done to improve the current accommodation and plans are in place to increase the available space.

6.8 Collection of reports

6.8.1 Finding

The absence of clear guidelines by the SAPS contributed to the failure of various police stations to collect reports from the FCLs timeously. Some police stations in the Mpumalanga Province refused to collect their reports, which further delayed the finalisation of cases, some of which related to serious crimes. Due to the sensitive nature of these reports, private couriers may not be utilised. According to a report compiled by the management of the Johannesburg FCL in 2008, approximately 1 735 reports of cases analysed had not been collected since 1996.

6.8.2 Recommendations by the AGSA

The police reports that have not been collected in time should be identified and followed up with SAPS management.

The SAPS should be requested to issue a National Instruction or Directive to guide the process of timely collection of reports.

6.8.3 Comments of the accounting officer

This matter had been taken up formally with SAPS. As per SAPS circular, dated 22 May 2008, they had embarked on implementing measures in all provinces to improve delivery and collection of reports. This was further enhanced by the preparation of a joint protocol between the Department of Justice, SAPS and NDoH.

The situation with Mpumalanga has been resolved.

6.9 Quality of samples

6.9.1 Finding

A number of samples received by the FCLs for analysis were rejected by the laboratories as the SAPS did not meet the set criteria when samples were collected

and stored, resulting in cases not ending up in court and therefore negatively affecting the criminal justice system⁷. Samples should be received in polystyrene containers, sealed with string and a metal seal. Most of the cases were rejected as their seals had been tampered with and they could consequently not be analysed. This might contribute to persons suspected of rape and murder not being charged in courts due to lack of acceptable evidence. This also poses a risk of possible fraudulent activities in the SAPS.

A total of 908 samples (4,64%) out of a gross total of 19 539 received during 2007 by the Pretoria FCL were rejected because the set criteria were not adhered to.

The chart below reflects that 27% of the samples received at the Pretoria FCL that were rejected, came from KwaZulu-Natal.

Figure 7: Rejected samples at the Pretoria FCL⁸, according to provinces, for the period 1 January 2007 to 31 December 2007

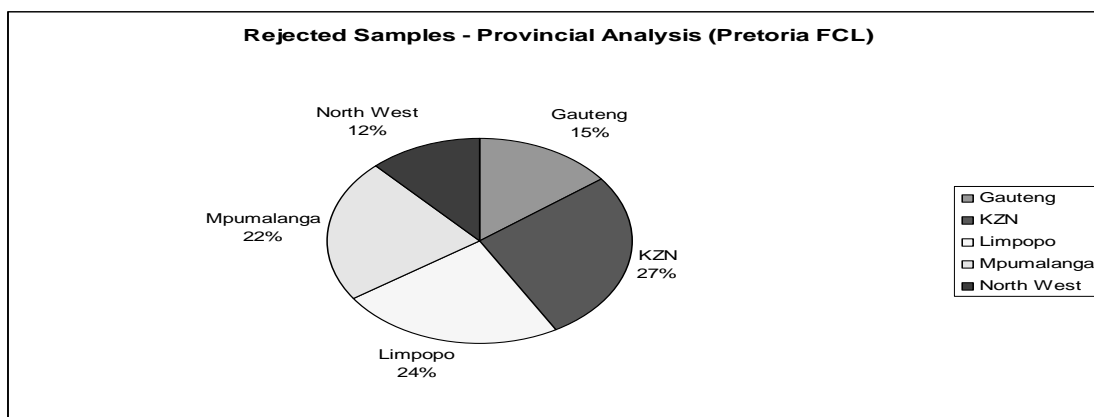


Table 1: The following examples of rejected samples were extracted from data provided by the NDoH.

Province	Police station	Number of samples received for 2007	Number of samples rejected in 2007	%
Gauteng North	Rietgat	55	17	30,9
Gauteng North	Temba	54	17	31,4

⁷ The criteria contained in the Administrative Procedures PBA-1-04-2 Receiving of BA Samples, include 10 steps that should be followed when samples are delivered to an FCL.

⁸ Samples from the Western Cape, Eastern Cape and Northern Cape were sent to the Cape Town FCL. The Johannesburg FCL also received samples for organ toxicology and alcohol analysis from Gauteng South and the Free State.



KwaZulu-Natal	Durban	258	36	13,9
Limpopo	Seshego	59	25	42,3
Limpopo	Polokwane	145	19	13,1
Mpumalanga	KwaMhlanga	123	25	20,3

The Seshego police station with a 42,3% rejection had the highest number of rejected samples for 2007.

6.9.2 Recommendations by the AGSA

The importance of meeting the criteria set for the sealing and handling of samples for analysis should be communicated to the appropriate levels within the SAPS.

The SAPS should be requested to determine the reasons for the high number of rejected samples received from certain police stations and to take action to ensure that this tendency stops.

A process of efficient and effective communication between the FCLs and other role players should be implemented to ensure that criminal investigations are not affected negatively.

6.9.3 Comments of the accounting officer

Some doctors who take blood from drunken drivers have a poor record of properly sealing and documenting the specimens. Improvement in the training of medical officers is a priority of the National Forensic Pathology Committee.

The situation is also in the process of being improved from the SAPS's side by means of on-the-job training.

Additional comments

The laboratories are awaiting the finalisation of the NDoH FCL Protocol as a guideline for all relevant stakeholders regarding sampling, sample storage and sample transport. The protocol is under review by the Department of Justice in order to see if it does not contradict any existing regulations or legislation. Any irregularities (unsealed samples and tampered seals) are reported to the SAPS Detective Service.

The SAPS issued instructions, dated 22 May 2008, to all heads and training institutions at the SAPS with regard to the methods and procedures to be instituted in relation to the effective utilisation and handling of samples.

6.10 Laboratory information management system

6.10.1 Finding

Analytical support to forensic pathologists and other clients in cases involving toxic substances could not be provided in an efficient and effective manner at the Johannesburg FCL, as the toxicology section was not linked with the laboratory information management system to ensure accessible, timely and accurate information. This resulted in insufficient information being available to address the queries of clients on the position of, and progress made with, the analysis of toxicology cases.

Approximately 20 queries are received daily from clients regarding the position of, and progress made with, the analysis of toxicology cases. Since progress reports cannot be obtained from a computerised system, all queries are followed up manually, which is a time-consuming and counter-productive process as it takes on average three hours to trace a specific case. Most of the queries therefore cannot be addressed in a timely and effective manner. Cognisance should be taken of the fact that the Johannesburg Toxicology Laboratory had a backlog of as many as 3,5 years or 4 160 samples, as indicated in paragraph 6.2 of this report. These requests for information therefore impact negatively on timely service delivery by the FCLs.

6.10.2 Recommendations by the AGSA

Information needs of the FCL should be identified and the effects of the current shortcomings in service delivery should be taken into consideration when strategic and operational plans are compiled.

The current shortcomings with respect to accessible, timely and accurate management information at the Johannesburg FCL should be addressed as a matter of urgency.

6.10.3 Comments of the accounting officer

Progress with the linking of the laboratory information management system to the blood alcohol analysers was completed by a previous information technology specialist, an analyst at the Johannesburg FCL, who resigned. Since then the progress of the computerised system in the FCLs has been coordinated on a voluntary basis by a junior member of staff in the Cape Town FCL.

7. APPRECIATION

The assistance rendered by the staff of the National Department of Health during the audit is sincerely appreciated.

Pretoria

20 November 2009



AUDITOR - GENERAL
SOUTH AFRICA

Auditing to build public confidence

APPENDIX A

ABBREVIATIONS

AGSA	Auditor-General of South Africa
AO	Accounting officer
DPW	Department of Public Works
FCLs	Forensic Chemistry Laboratories
HIV/Aids	Human immunodeficiency virus/Acquired immune deficiency syndrome
IT	Information technology
NDoH	National Department of Health
NHLS	National Health Laboratory Services
OHS	Occupational Health and Safety
SANAS	South African National Accreditation System
SAPS	South African Police Service
UPS	Uninterrupted power supply

