

Legislative
Assembly
of Ontario



Assemblée
législative
de l'Ontario

STANDING COMMITTEE ON PUBLIC ACCOUNTS

CENTRE OF FORENSIC SCIENCES

(Section 3.02, 2007 Annual Report of the Auditor General of Ontario)

1st Session, 39th Parliament
57 Elizabeth II

Library and Archives Canada Cataloguing in Publication Data

Ontario. Legislative Assembly. Standing Committee on Public Accounts
Centre of Forensic Sciences (Section 3.02, 2007 Annual report of the Auditor General of
Ontario) [electronic resource]

Issued also in French under title : Centre des sciences judiciaires (Rapport annuel 2007 du
vérificateur général de l'Ontario, section 3.02)

Electronic monograph in PDF format.

Mode of access: World Wide Web.

Issued also in printed form.

ISBN 978-1-4249-7112-1

1. Ontario. Centre of Forensic Sciences—Auditing. 2. Forensic pathology—Ontario.
3. Crime laboratories—Ontario. I. Title. II. Title: Centre des sciences judiciaires (Rapport
annuel 2007 du vérificateur général de l'Ontario, section 3.02)

HV8073 O56 2008

353.3'6

C2008-964019-5

Legislative
Assembly
of Ontario



Assemblée
législative
de l'Ontario

The Honourable Steve Peters, MPP
Speaker of the Legislative Assembly

Sir,

Your Standing Committee on Public Accounts has the honour to present its Report and commends it to the House.

Norman W. Sterling, MPP
Chair

Queen's Park
June 2008

STANDING COMMITTEE ON PUBLIC ACCOUNTS

MEMBERSHIP LIST

1st Session, 39th Parliament

NORMAN STERLING
Chair

JERRY J. OUELLETTE
Vice-Chair

LAURA ALBANESE

LIZ SANDALS

ERNIE HARDEMAN

MARIA VAN BOMMEL

ANDREA HORWATH

DAVID ZIMMER

PHIL MCNEELY

Katch Koch
Clerk of the Committee

Susan Viets
Research Officer

CONTENTS

PREAMBLE	1
Acknowledgements	1
1. AUDIT OBJECTIVES AND MAIN FINDINGS	1
2. COMMITTEE REQUEST FOR MINISTRY RESPONSE	2
2.1 Committee Recommendations	2
3. OVERVIEW	3
3.1 Partnerships and Technological Innovation	4
3.2 Project Leader for Auditor's Recommendations	4
3.3 Planned New Facility	4
3.4 Future Challenges	5
Impact of New Legislation	5
Expansion of Police Services	5
Inquiry into Pediatric Forensic Pathology	5
4. AUDIT OBSERVATIONS AND RECOMMENDATIONS	6
4.1 Quality Management Systems	6
4.2 Providing Service to Clients	6
4.3 Monitoring Report Turnaround Times	6
4.4 Setting Targets for Report Turnaround Times	10
4.5 Tracking Cases by Priority	13
4.6 Monitoring Causes of Delay	15
4.7 Measuring Performance	16
NOTES	21

PREAMBLE

The Standing Committee on Public Accounts held hearings on the Auditor General's 2007 audit of the Ministry of Community Safety and Correctional Services' Centre of Forensic Sciences (Centre) on February 22, 2008. The audit findings were reported in s. 3.02 of the Auditor General's *2007 Annual Report*. The Committee has endorsed the Auditor's findings and recommendations.

This report constitutes the Committee's findings and recommendations. Background information on sections of the original audit report is followed by an overview of the hearings' main findings and, as appropriate, new recommendations. *Hansard*, the verbatim record of the hearings, should be consulted for the complete proceedings.

Acknowledgements

The Committee extends its appreciation to officials from the Ministry of Community Safety and Correctional Services (Ministry) for their attendance at the hearings. The Committee also acknowledges the assistance provided during the hearings and report writing deliberations by the Office of the Auditor General, the Clerk of the Committee, and staff at the Legislative Library's Research and Information Services.

1. AUDIT OBJECTIVES AND MAIN FINDINGS

The Auditor's objective was to assess whether the Centre had adequate systems and procedures in place to:

- provide efficient, timely, and reliable services; and
- measure and report on the effectiveness of its services in supporting the administration of justice in Ontario.

The Auditor noted that the Centre has established reasonable processes for ensuring the quality of its services and the Centre's clients are generally satisfied with the calibre of its work.

The Auditor, however, noted that while the Centre has been improving the timeliness of its services, improvements in systems and procedures are required to generate turnaround times comparable to those of leading international forensic laboratories. Issues related to this include the following:

- **Turnaround Time:** two leading forensic science laboratories (in the United Kingdom and Sweden) complete case reports in about half the Centre's average turnaround time of 64 days.
- **Turnaround Time Targets:** the Centre only uses one turnaround-time target (90 days for 80% of cases) for all sections even though the work of sections is

very different, client input on targets is lacking, and labs in other jurisdictions generally set turnaround targets of 30 days or less.

- **Processing and Monitoring Urgent Cases:** there is no documented processing and turnaround monitoring of urgent cases; labs in some jurisdictions achieve 20-day turnaround rates (or less) for these cases.
- **Completion Time Standards:** the Centre lacks completion time standards for section activities; its information systems do not help in determining why case reports were delayed; and the Auditor believes that both standards and information systems could be used to identify possible bottlenecks and determine corrective action.
- **Accreditation:** the Centre has one laboratory in Toronto and one in Sault Ste. Marie. Both have American accreditation for quality assurance standards. Preparations are underway to secure international accreditation for both.

The Auditor also noted that the Centre lacks financial performance measures for service costs and does not benchmark its performance against that of other forensic science laboratories.

2. COMMITTEE REQUEST FOR MINISTRY RESPONSE

The Committee requests that the Ministry provide the Committee Clerk with a written response within 120 calendar days of the tabling of this report with the Speaker of the Legislative Assembly, unless otherwise specified in a recommendation, as is the case in recommendations 2 and 3.

2.1 Committee Recommendations

- 1. The Ministry of Community Safety and Correctional Services should report to the Committee on steps being taken by the Centre of Forensic Sciences to collect more reliable data on turnaround times for final reports and start tracking turnaround times on a section-by-section basis to help identify the key factors that cause delays for further follow-up.**
- 2. Within one year of the tabling of this report, the Ministry of Community Safety and Correctional Services should report to the Committee on any progress the Centre of Forensic Sciences has made to reduce turnaround times for final reports on a section-by-section basis and on factors that continue to contribute to delays in shortening turnaround times.**
- 3. Within six months of the tabling of this report, the Ministry of Community Safety and Correctional Services should report to the Committee on steps taken to enable its clients to help set turnaround time targets on a section-by-section basis. The Ministry is also asked to report to the Committee on potential cost savings for clients, such as**

police services, if the Centre of Forensic Sciences can improve its targets in specific areas.

4. The Ministry of Community Safety and Correctional Services should report to the Committee on steps taken by the Centre of Forensic Sciences to specifically track the turnaround time for processing urgent samples and for assessing the extent and impact of urgent cases on the Centre's turnaround time for its more routine caseload.

5. The Ministry of Community Safety and Correctional Services should report to the Committee on steps taken to track how much time scientists from the Centre of Forensic Sciences spend testifying in court.

6. The Ministry of Community Safety and Correctional Services should report to the Committee on its track record regarding the impact of evidence from test results conducted by the Centre of Forensic Sciences on the progress of investigations and on the eventual resolution of cases in court. The Ministry should also report to the Committee on the feasibility of making this information available to the public.

7. The Ministry of Community Safety and Correctional Services should report to the Committee on cost savings opportunities, including consideration of potential purchasing efficiencies associated with purchasing certain specialized pieces of equipment for one lab only, instead of purchasing the equipment for both of the Centre of Forensic Sciences' labs.

8. In view of the continued and growing demand for forensic laboratory services, the Ministry of Community Safety and Correctional Services should report on the Centre of Forensic Sciences' ability to meet its current budget while still improving turnaround times.

3. OVERVIEW

The Centre of Forensic Sciences is one of the most extensive forensic science laboratory facilities in North America.¹ It is one of three publicly operated laboratories in Canada² and operates out of two facilities – a larger laboratory in Toronto and a smaller laboratory in Sault Ste. Marie. The catchment area of the Sault Ste. Marie lab is from Sudbury northwest, which is geographically a large part of the province, with about 10% of the population.³

The Centre provides independent forensic science laboratory services to support the administration of justice and public safety programs in Ontario.⁴ A wide range of official investigators, including police officers and crown attorneys, rely on the Centre to conduct forensic testing in support of criminal and coroners' investigations throughout Ontario.⁵ The Centre's work is a critical element of the criminal justice system. Delays or errors in forensic analysis can prolong police investigations, increase their costs, affect public safety by allowing criminals to

remain free to reoffend, or result in innocent individuals being wrongly convicted.⁶

The Centre provides services in the following sections:

- biology (for example, DNA and textile fibres);
- toxicology (for example, drugs, poisons and alcohol);
- chemistry (for example, fire debris, soil, glass and paint);
- firearms (for example, weapons and ammunition);
- documents and photography (for example, handwriting and photoanalysis);
and
- electronics (for example, cellphones and audio).⁷

The Centre has been accredited by the American Society of Crime Laboratory Directors since 1993. The Centre is preparing for re-accreditation this year (the re-accreditation process occurs every 5 years), according to an international standard.⁸

In the 2006/07 fiscal year the Centre issued approximately 12,700 analytical reports. It had operating expenses totalling approximately \$25.5 million (73% of these expenses related to staffing costs). The Centre employs 238 staff.⁹ Equipment costs totalled approximately \$2 million. The Centre does not charge fees or recover costs from its clients.¹⁰

3.1 Partnerships and Technological Innovation

The Centre, in partnership with the federal government and Quebec's forensic laboratory, has worked on development and implementation of two national data banks: the National DNA Data Bank and the Canadian Integrated Ballistics Information Network, which is used to link shooting events. The Centre contributes more than one-third of the Canadian crime scene index DNA profiles to the former. It has been responsible for identifying 70% of the shooting linkages nationally through the latter.¹¹

3.2 Project Leader for Auditor's Recommendations

The Centre has appointed one of its staff members, Tony Tessarolo, as the project leader in order to facilitate the implementation of the Auditor's recommendations.¹²

3.3 Planned New Facility

The Ontario government is planning to build a new complex in the Greater Toronto Area to house the Centre of Forensic Sciences and the coroner's services.¹³ The Ministry believes that the centre will be open and operating approximately three years after final decision-making regarding how to proceed

with the site. Following receipt of drawings and plans this year, the Ministry will be able to more accurately cost the project.¹⁴ Current projections are for up to 400 staff members at the new centre. This figure is a projection for 10-year growth based on the number of people, not the number of cases.¹⁵ (It is anticipated that case load capabilities per employee will change with advances in automation.)¹⁶ The Ministry expects that the new facility will enable the Centre to better streamline processes and avoid delays.¹⁷

3.4 Future Challenges

Impact of New Legislation

New federal bills have the potential to significantly increase the workload for the Centre. For example, Bill C-13, *An Act to amend the Criminal Code, the DNA Identification Act and the National Defence Act*, and Bill C-18, *An Act to amend certain Acts in relation to DNA identification*, add 172 offences to the list of offences in the *Criminal Code* that can be investigated through the use of the DNA data bank.¹⁸

Bill C-2, the *Tackling Violent Crime Act*, was passed by the Senate on 28 February 2008. This Bill increases penalties and creates other changes in impaired driving offences, including alcohol impairment, and for the first time, drug-impaired driving in Canada. The Centre believes this legislation will have considerable impact on the demands of toxicology services, court testimony, research and development, analysis and officer training.¹⁹

Expansion of Police Services

The expansion in police forces and other elements of the criminal justice system will also have an impact on the Centre's workload. Measures to increase police numbers include the following:

- Police services in Ontario are expanding to include an additional 1,000 new municipal police officers.
- There are plans to hire 200 new Ontario Provincial Police officers.
- The federal government has announced its intention to create 2,500 new police officer positions across Canada; some of these police positions will likely be in Ontario.

The number of crown attorneys and judges has also increased in order to bring cases to trial faster. The Centre says that the province's recently-funded guns and gangs initiative has already impacted the Centre's workload and that it anticipates that its workload will continue to increase as more weapons are submitted for testing in the DNA, firearms and chemistry areas.²⁰

Inquiry into Pediatric Forensic Pathology

The Inquiry will be submitting its report at the end of April 2008. The Centre anticipates that it will be impacted by some recommendations in the report.²¹

4. AUDIT OBSERVATIONS AND RECOMMENDATIONS

4.1 Quality Management Systems

The Auditor noted that a comparison of best practices indicates that the Centre has systems and quality assurance procedures to monitor quality continuously and take corrective action when needed. Examples include the following:

- peer review prior to the release of reports;
- the Centre's two laboratories having American accreditation and the Centre seeking accreditation according to an international standard;
- regular quality assurance audits of the Centre's operations (team of six staff);
- annual proficiency tests for scientists and technologists; and
- feedback and monitoring of scientists' testimony, at least once a year, to ensure accuracy, objectivity, and clarity and that testimony is understandable.

The Auditor also noted that the Centre addresses identified deficiencies and complaints.

4.2 Providing Service to Clients

The Centre has little influence on the number of cases brought to it but has some control over the types of services it offers and hence

- the types of cases it will accept;
- the number of samples it is willing to accept for each case; and
- the time it takes to conduct its analyses and to issue reports.²²

The Centre has experienced significant increases in its workload over the past seven years primarily owing to increases in police resources and efforts to reduce crime during this period. The number of staff positions funded increased by 72%. The demand for different types of services has changed (mostly as a result of greater use of DNA profiling in police investigations). These changes pose challenges regarding recruitment and training of scientists and technologists given the time needed to reach required proficiency levels.²³

4.3 Monitoring Report Turnaround Times

In general, quick turnaround times for forensic science analyses are beneficial in helping to solve crimes quickly, to support investigations where an uncaught criminal may reoffend, and to eliminate suspects. Longer turnaround times may be justified in certain less urgent circumstances.

The Centre uses two measures to monitor its turnaround times:

- the average number of days from the time it receives a case to the time it issues its report; and

- the percentage of reports it completes within 90 days of receipt of a case.

Data for the past seven years illustrates the following points:

- The Centre's total caseload increased by 48%.²⁴
- The total number of reports issued increased by 70%.²⁵
- Demand for services varies from section to section; for example, the biology section experienced a 224% increase in the number of reports it issued while the documents and photoanalysis section experienced a 17% decrease.²⁶
- The Centre, which sets a target of completing 80% of reports within 90 days, improved from a 59% completion rate within this time frame in 2000/01 to 79% in 2006/07.²⁷

Despite these improvements, the Auditor noted that considerable improvement in the Centre's turnaround times was needed if it was to be comparable to the leading forensic centres around the world. The Auditor cited a chapter of the Auditor General of Canada's May 2007 report on the Forensic Laboratory Services (FLS) of the Royal Canadian Mounted Police (RCMP) which outlined the following international comparative statistics:

- The United Kingdom's Forensic Science Service appears to have had the shortest turnaround time with an average of 7 days in the 2004/05 fiscal year for a DNA crime scene request.
- Sweden's National Laboratory of Forensic Science's median turnaround time was 28 days (excluding break and enter samples, which are generally completed more quickly).
- Ontario's Centre had an average turnaround time of 96 days (excluding break and enter samples) at the time of the federal Auditor General's audit.

The Centre's reports indicate that its turnaround times have improved since this information was made available to the staff of the Auditor General of Canada: for the period January-March 2007, its average turnaround time for DNA analyses was 73 days (excluding break and enter samples).

The Ministry's most recent (2004/05) annual survey of the Centre's clients indicates that

- more than 90% of clients were satisfied or very satisfied with services received; and
- 50% of the comments cited the Centre's time required to complete a written report as an area for improvement, and specifically noted that this was an issue for the toxicology and firearms sections.

Subsequent to the survey, average toxicology turnaround time increased and average firearms turnaround time decreased.

The Auditor recommended that the Centre conduct a review of its practices and resources on an area-by-area basis, with a focus on achieving improvements in turnaround times for completing case analyses, especially for the more urgent cases.²⁸

In its initial response the Ministry said that it was aware from interactions with users of its services that it is important to shorten the turnaround time as much as is practicable. The Ministry said that the Centre is committed to continuous improvement in all areas of service delivery, including turnaround times. Progress has been made but practices and resources will be reviewed.

Committee Hearings

Quality Management Systems

The Centre says that it strives to provide a careful balance between product quality and a timely report.²⁹ The Centre began to focus extensively on quality ten years ago, following publication of the *Report of the Kaufmann Commission on Proceedings Involving Guy Paul Morin*. The Commission criticized the work of the Centre and issued numerous recommendations regarding the need for better quality and checks and balances in the system.³⁰

Those working in forensic science have increasingly focused on quality issues to help prevent wrongful convictions. Defence lawyers have become very knowledgeable in science as DNA evidence is increasingly used in court, which adds to the pressure for good quality control (also adding to costs).³¹

Providing Service to Clients

One challenge is that clients do not usually submit actual samples. They often bring in diverse objects such as beds, buses, cars or carpets and Centre staff members have to extract samples from these objects. This process can be laborious and time consuming.³²

The Centre trains investigators on submissions and also trains its own staff members to assist investigators in selecting the appropriate items for submission. One key element is for investigators to select items most likely to yield samples from the crime scene for testing and not just to collect and deposit all items from the scene at the Centre.³³ The Centre is collaborating with coroners and pathologists in a working group in an attempt to assist them in submitting more clearly defined test requests. This is particularly relevant for managing toxicology requests and for the submission of DNA samples.³⁴

Monitoring Report Turnaround Times

The Ministry stressed that it is important to differentiate between targets that are set and actual turnaround times. The Ministry noted that some labs set targets that are much shorter than 90 days but in many cases the labs' actual turnaround times fail to meet the targets.³⁵ The Ministry said that the Centre's turnaround time results are roughly comparable to those of the RCMP lab and are more favourable than results in a number of U.S. labs.³⁶ FBI data indicates its labs take years to complete some work.³⁷

The Centre's director said that Ontario has not fallen behind other jurisdictions in its case report turnaround times. Some jurisdictions, such as the United Kingdom, have labs with a 30 day turnaround time, which is shorter than the Centre's. However, the UK invested \$600 million in recent years in its lab, which is a privately operated fee-for-service lab. The lab has 2,500 staff serving a population of 60 million. UK lab staff numbers are ten times greater than the Centre's; the UK lab is only serving a population that is five times greater than the Centre's. The director stated that far more jurisdictions have turnaround times that are longer than the Centre's.³⁸

The Ministry recognized the need to ensure that the Centre's turnaround times meet investigative needs and noted improvements in turnaround time since 2000-01.³⁹ The Ministry said that the Centre is committed to continuous improvement and will review its practices to expedite faster service delivery.⁴⁰

The project leader appointed to facilitate implementation of the Auditor's recommendations will be undertaking a business review of current practices in the Centre, section by section, as recommended by the Auditor, to identify mechanisms for improving turnaround times.⁴¹ A key objective of this review will be to ensure that the Centre is operating as efficiently and effectively as possible. The review will include a focus on technological innovation and automation.⁴²

Even before the Auditor's report was tabled, the Centre had initiated a process to ensure that managers apply consistent criteria for prioritizing cases across the organization. Since January 2008 the Centre has taken measures to improve turnaround time in its toxicology section. It is too early to measure the results of the improvements.⁴³

The director of the Centre will focus on staff engagement to elicit ideas for turnaround time improvement. The director said that it may be easier to engage staff, using "the external eyes of the auditor".⁴⁴ The Centre anticipates that once its review is complete it may need to take forward a business case for additional staff.⁴⁵

The Centre's workload, as noted earlier, is increasing. This is particularly the case in the areas of DNA and guns and gangs. The Centre is focusing resources on these areas. When the guns and gangs operations centre began work, the Centre added seven staff members in its firearms and biology sections.⁴⁶ Adding this type of targeted resources has enabled the Centre to improve its turnaround times.⁴⁷

However, workload pressures continue. The Centre has recently, in partnership with the RCMP, undertaken to enter information from comparisons of cartridge cases and bullets found at crime scenes into a database.⁴⁸ The Ministry also anticipates that federal legislative changes discussed earlier could add to the Centre's workload.⁴⁹

The Centre is currently considering whether or not it will accept cases stemming from these legislative changes. The increase in volume of work could negatively

impact the Centre's overall turnaround time. The Ministry said cases that flow from federal legislation could be referred to the RCMP lab. The Ministry also said that it is requesting that the federal government provide funding for these cases.⁵⁰

The Committee agreed with the comments made by the Ministry and the Centre with respect to the need for more detailed reporting of turnaround times for final reports on a section-by-section basis.

Committee Recommendations

The Committee recommends that:

- 1. The Ministry of Community Safety and Correctional Services should report to the Committee on steps being taken by the Centre of Forensic Sciences to collect more reliable data on turnaround times for final reports and start tracking turnaround times on a section-by-section basis to help identify the key factors that cause delays for further follow-up.**
- 2. Within one year of the tabling of this report, the Ministry of Community Safety and Correctional Services should report to the Committee on any progress the Centre of Forensic Sciences has made to reduce turnaround times for final reports on a section-by-section basis and on factors that continue to contribute to delays in shortening turnaround times.**

4.4 Setting Targets for Report Turnaround Times

The Centre does not

- set a target for average turnaround time, although, as noted earlier, its target for reports completed within 90 days of receipt of a case was 80%;
- set target dates for completing individual cases or record a backlog of reports pending completion; or
- set turnaround targets according to the type of investigative services it provides (e.g., biological, toxicological).

The Centre indicated that its 90-day target turnaround time was generally more reflective of the Centre's capabilities than of the service levels required by its clients.

In other jurisdictions targets for the completion of cases are usually stated as a certain number of days and are set on the basis of a desired service level. The Auditor cited examples from the Auditor General of Canada's report on the RCMP's forensic laboratory services including the following:

- Justice Archie Campbell recommended a 30-day turnaround time for DNA analysis in his 1996 inquiry into the police investigation of the Paul Bernardo case.

- The RCMP performance standard formula created in 2000 set 15- and 30-day turnaround targets. However, at the date of that report, the RCMP was not meeting these targets and its results were roughly comparable to the Centre's results.
- In Sweden the target is 20 days for all requests.

The Auditor's report provides more examples including UK turnaround times and a discussion of RCMP challenges in meeting its turnaround times.⁵¹

The Auditor noted that the Centre is not using two key resources to gather client input on turnaround times:

- The Centre's annual client survey omits questions regarding desired turnaround times.
- The Centre's advisory committee, which represents client groups, is not asked for recommendations on desired turnaround times.

The Auditor recommended that the Centre should establish processes, involving its clients, to

- set turnaround-time targets for the various types of investigative services it provides, and segregate these between urgent and non-urgent cases;
- assess actual performance against targets; and
- compare its turnaround times and methods of achieving them with those of other jurisdictions.

In its initial response the Ministry agreed to more formally assess clients' needs regarding the turnaround times desired. The Ministry acknowledged that the Centre's advisory committee is the appropriate group from which to solicit input and said that the committee would also assist in identifying the appropriate clients to be consulted. The Ministry also said that an expectation of short turnaround time for all cases may require additional resources.⁵²

Committee Hearings

Setting Targets for Report Turnaround Times

The Ministry believes it is important to strike a balance between a reasonable investment and a reasonable result that meets the needs of the justice system when discussing turnaround time targets.⁵³ The Ministry stated that there is no international standard for turnaround time and that to its knowledge the Centre's turnaround time was not causing delay in terms of time to trial or processing through the court system.⁵⁴ There were times of significant backlogs including an instance when the Centre had no staff in firearms. This may have influenced some cases but the director of the Centre said that if an officer called and provided the Centre with a court date, that date became one of the Centre's targets.⁵⁵

The semi-annual meeting of the Centre's advisory committee will take place in April 2008. Discussions will focus on turnaround times and this will be a forum for obtaining feedback and input from stakeholders on this issue. The Centre is also undertaking an additional initiative to consult with its clients on how to set realistic and reasonable turnaround times. The Centre may use a client survey that targets respondents or focus groups. This will be discussed with the advisory committee at its next meeting.⁵⁶

The Centre's director said that if a client wants products delivered immediately, the Centre does not have the resources to do so. The Centre, however, works with clients to determine and prioritize what clients need immediately versus what is required for a later court date.⁵⁷ The director cited the Holly Jones case as a good example of successful prioritization.

Holly Jones, a child, was sexually assaulted and murdered. The case required immediate action from the Centre in processing initial DNA samples and trace evidence samples (which indicated that the girl had been in contact with a green carpet) in order for police to be able to narrow the number of suspects from hundreds of people to two. Additional steps involved finding and processing further samples.⁵⁸ This case illustrates the Centre's ability to successfully prioritize in that there was a very high priority for early measurement, and slightly less but still high priority for subsequent measurements.⁵⁹

Sometimes the Centre is required to urgently respond to parts of a case but not necessarily the whole case. When public safety is an issue, as in some cases involving sexual predators, and police devote resources to trail or apprehend a suspect, the Centre will devote resources too. The Centre will have staff work overtime, or weekends.⁶⁰

Turnaround time represents the time that it takes the Centre to issue a full report. However, specific information can be shared with a client before the full report is issued. Investigators will submit items to the Centre's lab. Once a result is generated, if it is a sample that will impact an investigation, the Centre's scientist will contact the investigator in order to determine the need for priority and will use this as a basis for determining when to report on this element of the case. Some results can be made available very quickly even though it may take far longer to issue the final report.⁶¹ For example, a DNA test comparing a suspect's blood sample to a crime scene can be turned around in as little as 24 hours; comparing a single cartridge case to a suspect firearm can be turned around in as little as six hours.⁶²

The Centre said that there can be inefficiencies related to poor communication between the client and the Centre but that this is not common. The Centre tries to ensure that its staff members contact investigators prior to beginning work on cases, particularly if a case has been queued for some time, to ensure that the client still requires the work. Sometimes staff members do not make the initial call, begin work on the case, and only learn that the work is not required later.⁶³ The Centre said its staff members should be responsible for calling the

investigators, and not vice versa, as investigators on a case often change and replacements may not know whether a sample submitted earlier is required.⁶⁴ The Centre said that it is developing secure web-based tools to facilitate communication with the police but that generally direct contact is what is most helpful.⁶⁵

Committee Recommendation

The Committee recommends that:

- 3. Within six months of the tabling of this report, the Ministry of Community Safety and Correctional Services should report to the Committee on steps taken to enable its clients to help set turnaround time targets on a section-by-section basis. The Ministry is also asked to report to the Committee on potential cost savings for clients, such as police services, if the Centre of Forensic Sciences can improve its targets in specific areas.**

4.5 Tracking Cases by Priority

The Centre's staff does not set estimated completion dates for cases received. Staff members work according to the order in which submissions are received. Submitters receive a "Client Information Sheet" with recent turnaround time information for each section (biology, toxicology, etc.). Priority will be given to some cases (to meet court deadlines, etc.). Submissions are recorded in the Centre's Laboratory Information Management System (LIMS). Section management uses LIMS data to monitor case age, which is a criterion in prioritization and workload decisions.

Urgent cases can be expedited. DNA tests, for example, can be completed quickly, as discussed earlier. However, the acceptance of urgent cases is kept to a minimum.

The Centre has not established systems to monitor its turnaround times according to the priority assigned. The priority of cases as assigned by each section is not recorded in LIMS. (The Centre does track turnaround time by crime – homicide, sexual assault, etc.) No statistics are available on the number of urgent cases assigned or on the turnaround times for urgent requests.

The Auditor recommended that the Centre ensure that its information systems capture information on urgent cases that allows the monitoring and assessment of the following issues: each investigative section's success in responding to urgent cases; the impact of urgent cases on each investigative section's workload; and turnaround times achieved.

In its initial response the Ministry said that the preferred order for dealing with all casework is that each case be processed in order of receipt but that in reality some cases need to be moved forward in the queue. The Centre has mechanisms to deal

with urgent situations and agrees that it would be useful to capture information to allow it to identify and monitor response to urgent cases.⁶⁶

Committee Hearings

Centre staff members said that they feel they respond well to urgent cases but that the Centre is unable to prove this because it does not collect the relevant data.⁶⁷ The Ministry said it believes that the Centre's performance regarding turnaround time in urgent cases has been and continues to be very responsive and cited the Auditor's comment that clients interviewed were satisfied with the service provided, especially in major cases. However, there is no formal mechanism in place for tracking and monitoring urgent cases.⁶⁸

The Ministry acknowledges the value in collecting this information and expects it to reflect positively on the lab's performance in cases where timeliness is most critical.⁶⁹ The Ministry anticipates that the following factors will facilitate intervention in case processing when it makes sense to intervene and will improve the Centre's overall performance:

- more granularity in measurement, section by section;
- the ability to track the impact of urgent cases on the queuing of routine examinations; and
- more statistical data that indicates how the Centre is performing.⁷⁰

The Centre has initiated an evaluation of LIMS to determine how this data can be captured.⁷¹ The Centre believes it will, with little effort, be able to use software to extract information relevant to the points listed above from the system.⁷²

LIMS captures critical information regarding the chain of custody of all evidence received by the lab. It also gathers information related to progress made in all cases examined.⁷³ Each item that the Centre receives is assigned both a bar code and a unique identifier. The items are then sent to the sections and they are placed in various types of storage.⁷⁴ As a piece of evidence moves along the forensics chain from being received, assessed, analyzed, reviewed and reported upon, the system tracks its progress. The application of resources to deal with urgent cases has an inevitable impact on the timeliness of other cases that are queued for routine examination, and the Centre will begin to measure this impact.⁷⁵

Committee Recommendation

The Committee recommends that:

- 4. The Ministry of Community Safety and Correctional Services should report to the Committee on steps taken by the Centre of Forensic Sciences to specifically track the turnaround time for processing urgent samples and for assessing the extent and impact of urgent cases on the Centre's turnaround time for its more routine caseload.**

4.6 Monitoring Causes of Delay

Regular analysis of case-processing could potentially identify where and how frequently delays are occurring as well as the extent and cause of delays. The Auditor noted, based on interviews with Centre staff, that delays are caused by

- insufficient or inexperienced staff;
- equipment breakdown;
- procedural errors that require tests to be repeated; and
- high workload volumes.

Because there is no formal reporting on the types of incidents listed above, the Auditor sampled cases with varying turnaround times to learn more about delays.

The Auditor found that LIMS data could not account for case processing delays in selected case examples from the homicide, firearms, and electronics sections. However, in some instances, follow-up interviews with section staff members resulted in explanations for the delays. The Auditor noted that sections have no time standards for each key activity in their processes. This is another factor making it difficult, in some instances, to account for case-processing delays.

The Auditor recommended that the Centre should ensure that its information systems record the reasons for any significant delays in each case it investigates. The Centre should also set standards for processes used by each investigative section and monitor variances between expected and actual times. Additionally, the Centre should conduct regular evaluations where delays in completing cases appear high to identify the reasons and determine what steps can be taken to mitigate the likelihood of the same delays arising in the future.

In its initial response the Ministry said that delays in case-reporting can result from a variety of operational factors, such as staffing, technical concerns or workload volumes. The Ministry agreed that an appropriate mechanism to develop reliable data on the reasons for delays in reporting would provide valuable management information and will work towards its development.⁷⁶

Committee Hearings

The Ministry said that the Centre is acutely aware of the impact that delays have on investigations. Delays can be caused by a number of factors such as equipment breakdown, staffing issues, turnover, recruitment, and training.⁷⁷ Late sample receipt can also be an issue. For example, if the Centre has a 61 day turnaround but an additional item arrives for analysis on day 60, this can cause a delay.⁷⁸ The Ministry said that it looked forward to the implementation of the Auditor's recommendation regarding the monitoring of delays, which it said would greatly assist in determining the most effective mechanism for addressing the delays.⁷⁹

The Committee questioned whether allocating staff members to investigate issues associated with delays would detract from the performance of the lab. The

Ministry said that it is committed to making this investment. The Ministry said that it needs to be able to measure what the Centre does and to report on its results as part of the process of accountability and is prepared to invest the resources required to do this.⁸⁰

4.7 Measuring Performance

The Centre is required to report on the percentage of submissions completed in 90 days or less and the percentage of client-survey respondents indicating that they are satisfied or very satisfied with the Centre's services. Performance for both indicators has gradually improved since 2000/01.

The Auditor believes that the cost-effectiveness of operations should also be measured and that the Centre's performance in key areas should be compared with that of forensic science laboratories in other jurisdictions.

The Auditor noted:

- The Centre had conducted no formal analysis or monitoring of staff costs compared to the relative workload of each section. Tracking the amount of time spent by staff in key non-report-generating activities (testifying in court, etc.) could help with resource allocation decisions.
- Performance benchmarking against forensic science laboratories in other jurisdictions could help the Centre determine whether its financial and operational performance is comparable to similar sized organizations and help identify best practices that may be applicable to Ontario.

The Auditor noted that many clients were unaware that they could obtain quarterly "Client Information Sheets" with section turnaround time information. The Auditor believes the Centre should consider making its clients aware of the availability of these quarterly reports, perhaps by including a question on improving the availability of quarterly reports in the Centre's annual survey.

The Auditor recommended that the Centre establish measures to monitor the cost-effectiveness of its operations. The Centre should benchmark its performance against that of other forensic science laboratories. Additionally, the Centre should investigate whether its quarterly reports on average turnaround times are reaching those clients who would best benefit from them and consider distributing these reports directly to them.

In its initial response the Ministry said that, as noted by the Auditor, funding for the provision of forensic science services has been significantly higher than the rate of inflation. This has been the case in order to meet increasing demands for the Centre's services and to invest the additional resources in the quality management system required for acting on the recommendations of the *Report of the Kauffman Commission on Proceedings Involving Guy Paul Morin*. The Centre will explore mechanisms to monitor the cost-effectiveness of its operations.

The Ministry said the Centre routinely consults with other laboratories in order to remain informed of their activities and best practices. Benchmarking the Centre's services and turnaround times will require discussions with other laboratories to determine the comparisons that are possible for similar activities. The Centre will explore opportunities in connection with this. The Centre will consult its clients to identify appropriate representatives to receive the quarterly report and will explore other mechanisms, such as electronic solutions, for delivery.⁸¹

Committee Hearings

Client Information Sheets

When clients submit their evidence to the Centre they are given both a receipt for the evidence and a client information sheet that outlines the average turnaround time for each of the Centre's forensic disciplines. As a direct result of the Auditor's recommendations these client information sheets have been reformatted and are now prominently placed in the information package. The purpose of this is to ensure that clients have a realistic expectation regarding turnaround times.⁸²

Time Spent Testifying in Court

The Ministry said that the Centre liaises closely with crown prosecutors to ensure that forensic scientists' time in court is scheduled with the greatest degree of efficiency possible. The scientists' participation is critical to the administration of justice. The Ministry said that in many cases the appearance of the scientist at trial will cause the suspect to enter a guilty plea as soon as the suspect sees the scientist there. However, time spent in court does take away time from conducting tests on samples and other work relevant for processing cases.⁸³ Efficiency in scheduling requires co-operation from counsel; the Centre faces some challenges in connection with higher-volume case areas such as drinking and driving and in more complex cases when witnesses may be questioned at length.⁸⁴ The Ministry felt that it would be useful to track the effect of court delays, adjournments and other issues.⁸⁵

Benchmarking

The Centre is currently involved in a benchmarking project called Foresight. (The RCMP is also participating in the project.) This is a business-guided evaluation of forensic science laboratories across North America which is supported by the U.S. National Institute of Justice. The intent of the project is to standardize definitions for measurements or metrics to evaluate work processes. Financial information will be linked to work tasks and functions.⁸⁶ If successful, the exercise would ultimately allow participants to assess and compare service delivery.⁸⁷

Participating laboratories have agreed on a series of common measurements that include staffing, finance, casework performance (including turnaround times), and non-case work activities such as training. Funding for the project is for one year. The Centre anticipates that funding will be extended.⁸⁸ The business and economics department at West Virginia University is analyzing data from the project. The department will report back on its capability to provide meaningful benchmarking information.⁸⁹

The project may not yield many comparators. Benchmarking is complex because it is difficult to make direct comparisons between the labs. U.S. labs have very different systems and responsibilities from those of the Centre. For example, in the U.S. system there are different levels of labs (county, state and city) and in most cases the labs are very small. Some of the labs deal with drug cases; the Centre does not. These and other differences make meaningful comparisons difficult.⁹⁰

In 2000 the Centre tried to benchmark itself, its results and its productivity against three publicly operated labs and two fee-for-service labs. This project was unsuccessful because of significant variation in the way in which data was collected and because of variability in the metrics. These variations meant that there was no opportunity for direct comparisons between the labs.⁹¹

Market Checks and Fee-for-service Model

The Committee raised the issue of market checks on the Centre's work. The Centre director said that there is no market check in that clients do not receive a bill but that clients understand the submission process and are sensitive to the issue of backlogs at the Centre.⁹²

One key element is training clients on procedures for sample submissions.⁹³ The Centre, for example, trains identification officers. These are crime scene officers who collect evidence. They are taught what the Centre can test.⁹⁴ To promote efficiencies, the Centre saves portions of some samples, for example blood samples, for testing in future years instead of conducting all the tests immediately.

The Committee also raised the issue of a fee-for-service model. The Centre's director said that this issue was examined in the 1990s by Justice Campbell, in connection with the Paul Bernardo case, and as part of the Centre's own lab review. The conclusion that Justice Campbell drew was that it would not be appropriate for police to be deciding the priorities of their cases based on cost. This would be a deterrent. It would be unfair for people to have their cases viewed according to how much the police had in their budget for a particular kind of testing.⁹⁵

Lab Specialization

The Centre's director commented on the issue of potential efficiencies in connection with shifting from a model of full-service labs to specialization in the Centre's two labs. The director said that he would be better able to assess this in three or four years, following results of an RCMP initiative. The RCMP is currently testing specialization in its six labs across Canada. The director said that police do not like this model. The Centre's Toronto lab does carry out some specialized work related to engineering, soil work and questioned documents, but for the most part the Sault Ste. Marie lab and the Toronto lab carry out comparable work.⁹⁶

Equipment

The Centre currently spends between \$1.5 – 2 million a year on major equipment. The Centre has been asked to develop capital plans that would involve changing the cycle of refreshing instruments. The Centre has not yet made estimates related to this. Currently the Centre keeps instruments in service for as long as possible, rather than for a fixed term. For example, the Centre has an X-ray diffractometer that still works and is used even though it is 16 years old.⁹⁷

The Ministry has made significant investments in technology for the Centre and said some equipment was “phenomenally expensive”.⁹⁸ The Ministry said the Centre’s equipment may not be cutting edge but that it believes that the Centre is staying current in terms of technology. Certain standards must be maintained in order to meet ISO standards for accreditation and to renew accreditation.⁹⁹

The Centre relies heavily on automation for volume analysis work. Examples of volume analysis include chemistry for arson and toxicology. Instrument automation is just now beginning to be available in biology for DNA work. Although a good deal of the Centre’s work is “hands-on, dirty work”, automation is important in the areas listed above.¹⁰⁰

The Centre said that it looks for ways to obtain equipment other than through the Ontario government. The Centre has a significant partnership with the RCMP and obtains some equipment that is fully paid for and supported by the RCMP. The Centre has also obtained equipment through the efforts of staff members. One staff member initiative last year resulted in the Centre acquiring a leading-edge piece of equipment for the toxicology section. The Centre’s director believes that the Centre has a lot of good equipment.¹⁰¹

The Centre says that it tries to use the best technology for court purposes. The court will accept the introduction of new technology provided that the Centre has carried out all the necessary validations, which is part of the Centre’s quality assurance system. Whenever the Centre introduces a new technique it has to validate it and express its strengths and limitations in court.¹⁰²

Budget Cuts

The Centre’s budget was reduced by \$638,000 from about \$25.5 million in 2006/07 to about \$24.9 million in 2007/08. The Ministry said that the Centre is considering a number of measures in order to deal with the budget cut. These include assessing alternate ways of training staff in the first year, postponing equipment purchases from this year to next, and engaging in “vacancy management” though not for urgent cases.¹⁰³

Committee Recommendations

The Committee recommends that:

- 5. The Ministry of Community Safety and Correctional Services should report to the Committee on steps taken to track how much time scientists from the Centre of Forensic Sciences spend testifying in court.**

- 6. The Ministry of Community Safety and Correctional Services should report to the Committee on its track record regarding the impact of evidence from test results conducted by the Centre of Forensic Sciences on the progress of investigations and on the eventual resolution of cases in court. The Ministry should also report to the Committee on the feasibility of making this information available to the public.**

- 7. The Ministry of Community Safety and Correctional Services should report to the Committee on cost savings opportunities, including consideration of potential purchasing efficiencies associated with purchasing certain specialized pieces of equipment for one lab only, instead of purchasing the equipment for both of the Centre of Forensic Sciences' labs.**

- 8. In view of the continued and growing demand for forensic laboratory services, the Ministry of Community Safety and Correctional Services should report on the Centre of Forensic Sciences' ability to meet its current budget while still improving turnaround times.**

NOTES

- ¹ Ontario, Legislative Assembly, Standing Committee on Public Accounts, *Hansard: Official Report of Debates*, 39th Parliament, 1st Session (22 February 2008): p. P-37.
- ² *Ibid.*, p. P-40.
- ³ *Ibid.*, p. P-50.
- ⁴ *Ibid.*, p. P-37.
- ⁵ *Ibid.*
- ⁶ Ontario, Office of the Provincial Auditor, *2007 Annual Report* (Toronto: The Office, 2007), p. 58.
- ⁷ Standing Committee on Public Accounts, *Official Report of Debates*, p. P-37.
- ⁸ *Ibid.*, pp. P-37-38.
- ⁹ *Ibid.*, p. P-51.
- ¹⁰ Office of the Auditor General, *2007 Annual Report*, pp. 58-59.
- ¹¹ Standing Committee on Public Accounts, *Official Report of Debates*, p. P-38.
- ¹² *Ibid.*
- ¹³ Ontario, Ministry of Community Safety and Correctional Services, *McGuinty Government Invests in State-of-the-Art Forensic Services Complex*, 5 October 2006. Internet site at http://ogov.newswire.ca/ontario/GPOE/2006/10/05/c5343.html?lmatch=&lang=_e.html, accessed 21 May 2008.
- ¹⁴ Standing Committee on Public Accounts, *Official Report of Debates*, p. P-51.
- ¹⁵ *Ibid.*
- ¹⁶ *Ibid.*, p. P-52.
- ¹⁷ *Ibid.*, p. P-39.
- ¹⁸ *Ibid.*, p. P-40.
- ¹⁹ *Ibid.*
- ²⁰ *Ibid.*, pp. P-40 and P-45.
- ²¹ *Ibid.*, p. P-40.
- ²² Office of the Auditor General, *2007 Annual Report* p. 62.
- ²³ *Ibid.*
- ²⁴ *Ibid.*, p. 63.
- ²⁵ *Ibid.*
- ²⁶ *Ibid.*, p. 64.
- ²⁷ *Ibid.*
- ²⁸ *Ibid.*
- ²⁹ Standing Committee on Public Accounts, *Official Report of Debates*, p. P-39.
- ³⁰ *Ibid.*, p. P-40.
- ³¹ *Ibid.*, p. P-41.
- ³² *Ibid.*, p. P-46.
- ³³ *Ibid.*, p. P-48.
- ³⁴ *Ibid.*
- ³⁵ *Ibid.*, p. P-38.
- ³⁶ *Ibid.*, p. P-40.
- ³⁷ *Ibid.*, p. P-49.
- ³⁸ *Ibid.*, p. P-46.
- ³⁹ *Ibid.*, p. P-38.
- ⁴⁰ *Ibid.*
- ⁴¹ *Ibid.*, p. P-39.
- ⁴² *Ibid.*, p. P-44.
- ⁴³ *Ibid.*, p. P-38.
- ⁴⁴ *Ibid.*, p. P-45.
- ⁴⁵ *Ibid.*, p. P-44.
- ⁴⁶ *Ibid.*, p. P-45.
- ⁴⁷ *Ibid.*, p. P-41.
- ⁴⁸ *Ibid.*, p. P-45.
- ⁴⁹ *Ibid.*, p. P-44.

- ⁵⁰ Ibid., p. P-52.
- ⁵¹ Office of the Auditor General, *2007 Annual Report*, p. 65.
- ⁵² Ibid., pp. 65-66.
- ⁵³ Standing Committee on Public Accounts, *Official Report of Debates*, p. P-46.
- ⁵⁴ Ibid., p. P-49.
- ⁵⁵ Ibid.
- ⁵⁶ Ibid., p. P-39.
- ⁵⁷ Ibid., p. P-41.
- ⁵⁸ Ibid., pp. P-38 and P-47.
- ⁵⁹ Ibid., p. P-48.
- ⁶⁰ Ibid., p. P-41.
- ⁶¹ Ibid., pp. P-46-47.
- ⁶² Ibid., p. P-47.
- ⁶³ Ibid., p. P-48.
- ⁶⁴ Ibid., p. P-52.
- ⁶⁵ Ibid., pp. P-52-53.
- ⁶⁶ Office of the Auditor General, *2007 Annual Report*, pp. 66-67.
- ⁶⁷ Standing Committee on Public Accounts, *Official Report of Debates*, pp. P-39, P-41 and P-45.
- ⁶⁸ Ibid., p. P-39.
- ⁶⁹ Ibid.
- ⁷⁰ Ibid., p. P-45.
- ⁷¹ Ibid., p. P-39.
- ⁷² Ibid., p. P-45.
- ⁷³ Ibid., p. P-39.
- ⁷⁴ Ibid., p. P-46.
- ⁷⁵ Ibid., p. P-39.
- ⁷⁶ Office of the Auditor General, *2007 Annual Report*, pp. 67-68.
- ⁷⁷ Standing Committee on Public Accounts, *Official Report of Debates* p. P-39.
- ⁷⁸ Ibid., p. P-48.
- ⁷⁹ Ibid., p. P-39.
- ⁸⁰ Ibid., p. P-44.
- ⁸¹ Office of the Auditor General, *2007 Annual Report*, pp. 68-70.
- ⁸² Standing Committee on Public Accounts, *Official Report of Debates* p. P-39.
- ⁸³ Ibid., p. P-43.
- ⁸⁴ Ibid.
- ⁸⁵ Ibid.
- ⁸⁶ Ibid., p. P-39.
- ⁸⁷ Ibid.
- ⁸⁸ Ibid., p. P-44.
- ⁸⁹ Ibid., p. P-39.
- ⁹⁰ Ibid., p. P-41.
- ⁹¹ Ibid., p. P-40.
- ⁹² Ibid., p. P-48.
- ⁹³ Ibid.
- ⁹⁴ Ibid., p. P-42.
- ⁹⁵ Ibid., p. P-50.
- ⁹⁶ Ibid., p. P-53.
- ⁹⁷ Ibid., p. P-52.
- ⁹⁸ Ibid., p. P-49.
- ⁹⁹ Ibid.
- ¹⁰⁰ Ibid., p. P-46.
- ¹⁰¹ Ibid., p. P-49.
- ¹⁰² Ibid., p. P-42.
- ¹⁰³ Ibid., p. P-52.