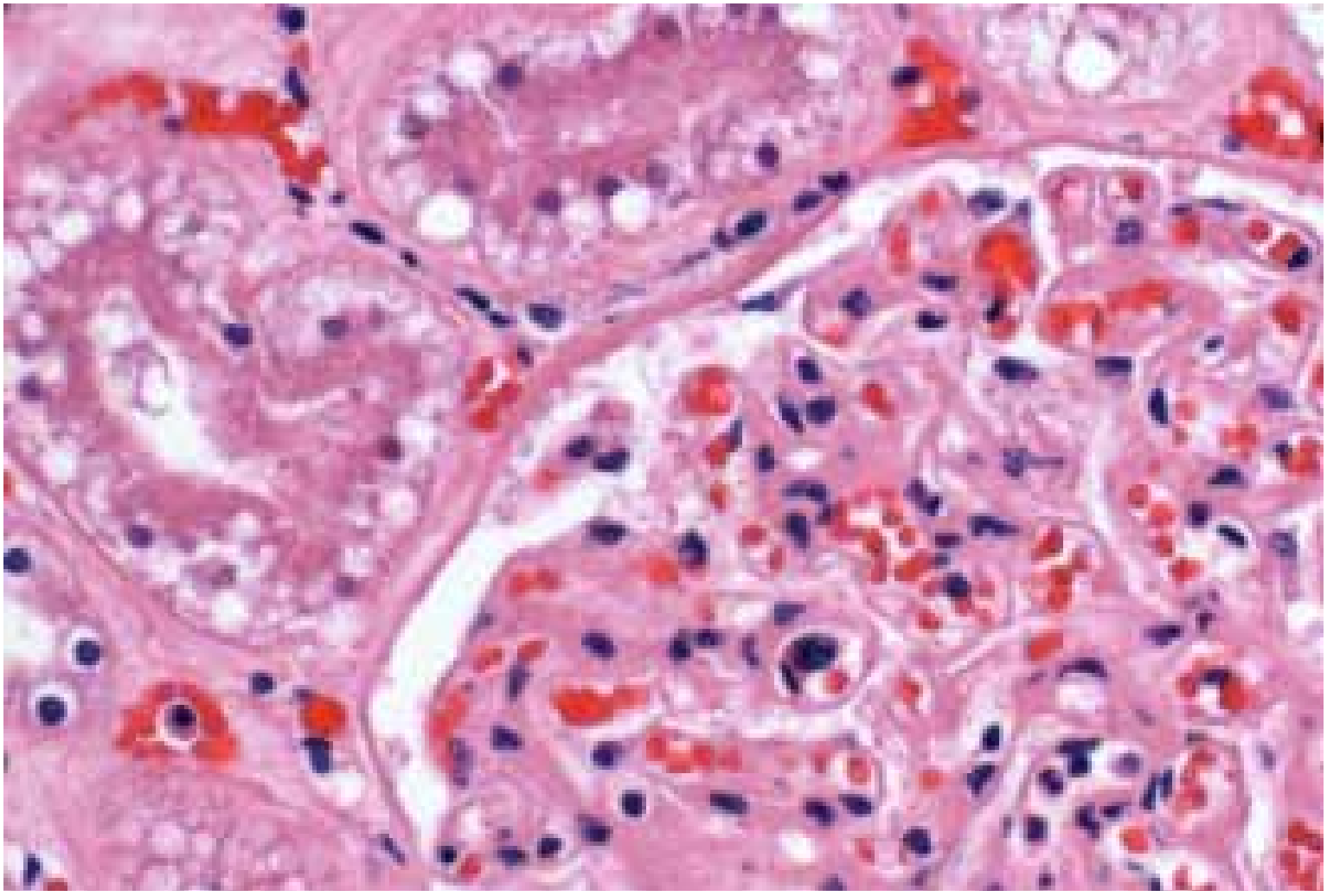
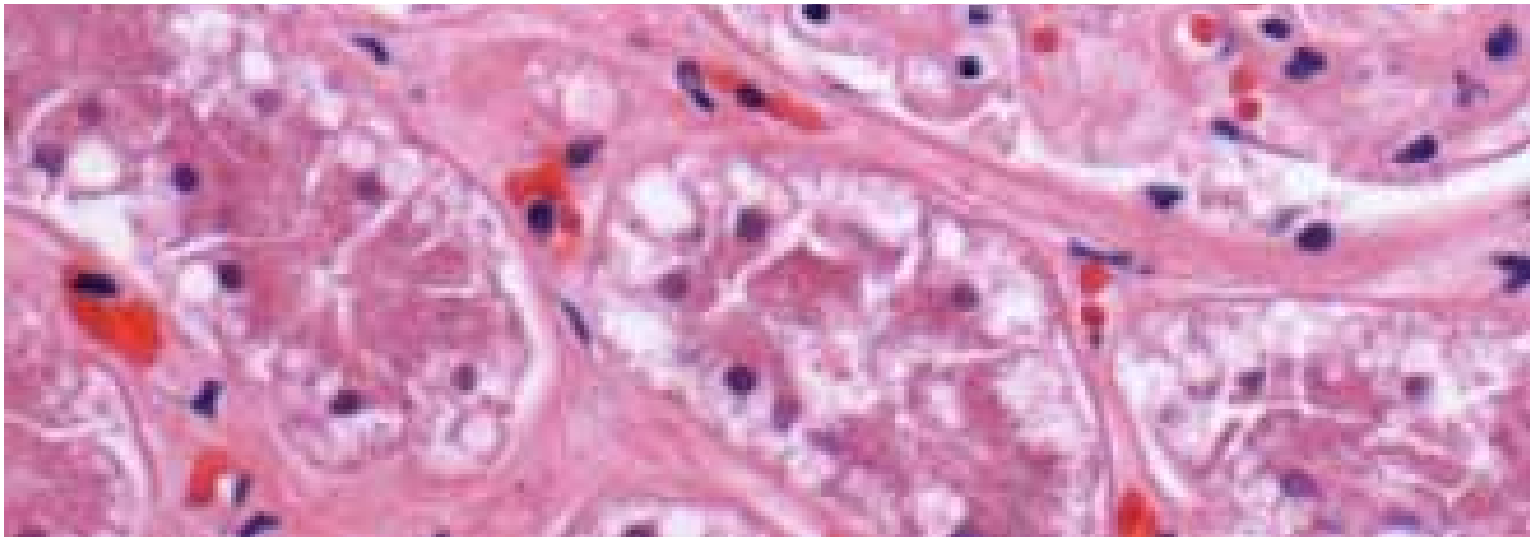


Ontario Forensic Pathology Service

Annual Report
July 27, 2011 – July 26, 2012

Ex morte scientia: From death, knowledge



Ontario

ON THE COVER

Photograph of a kidney taken through a microscope showing renal tubular steatosis in diabetic ketoacidosis. This microscopic change allows forensic pathologists to determine if diabetes mellitus contributed to a person's death. This lesion has been studied by forensic pathologists working in the Ontario Forensic Pathology Service: Dr. Sarathchandra Kodikara, Dr. Christopher Milroy, Dr. Jacqueline Parai and Dr. Michael Pollanen.

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Chief Forensic Pathologist's Report

Dr. Michael Pollanen (centre) at the 1st International Forensic Medicine Conference in Jamaica with (from left to right): Dr. Alfredo Walker, Forensic Pathologist, Eastern Ontario Regional Forensic Pathology Unit; Dr. Kathy Gruspier, Forensic Anthropologist, Ontario Forensic Pathology Service; Dr. Mandi Pedican, Forensic Pathologist Fellow, Ontario Forensic Pathology Service; Dr. Kristopher Cunningham, Medical Director, Provincial Forensic Pathology Unit; and Justice Marc Rosenberg, Ontario Court of Appeal.

We have now completed our third year as the Ontario Forensic Pathology Service (OFPS), the legislatively-defined entity that provides medicolegal autopsy services in Ontario.

Once again, we have had an exciting and remarkable year. Our achievements benefit families, stakeholders and the general public. In addition to meeting our service commitments, we have taken steps to be innovative, open and transparent in the practice of forensic pathology. Some of the activities worth highlighting include:

- We distributed postmortem DNA sampling kits to Forensic Pathology Units (FPUs) to facilitate extraction of DNA in the Molecular Autopsy Laboratory at the Provincial Forensic Pathology Unit. The extracted DNA can be used for testing in suspected cases of genetic diseases of the heart, connective tissues and blood clotting system. Results of this testing may be relevant to surviving family members.

- We notified the public about historically retained organs from autopsies conducted before June 2010 and established a toll-free line to handle inquiries. Families who contact us can ask whether an organ had been retained after an autopsy and, in cases where an organ was kept, can provide instructions on how the organ should be treated if still available. To date, we have received over 1,000 inquiries.

- Together with the Office of the Chief Coroner (OCC) and the Death Investigation Oversight Council, we co-sponsored a systemic review by KPMG of Ontario's death investigation system. We hope that this review will build on the strengths of the coroner's system by enhancing the role that forensic pathologists play in death investigation.

- We continued to deliver high calibre residency training in forensic pathology thereby building an expert and credible workforce of forensic pathologists in Ontario, Canada and internationally.

- We recruited forensic pathologists to work in the Forensic Pathology Units in Ottawa, Hamilton, Toronto and Northeastern Ontario. We are working hard to foster an environment that will allow us to retain these highly-skilled physicians.

- We provided high quality expert witness testimony at coroner's inquests and in criminal trials. Forensic pathologists continue to play a critical role in a strong and credible justice system.

As we enter our fourth year, two significant challenges confront the OFPS:

- We are working to maintain our accomplishments to date. All new organizations must be able to sustain their efforts, while continuing to grow and develop. The OFPS is committed to promoting the core competencies and best practices of forensic pathology.

- We are preparing to move the Provincial Forensic Pathology Unit and OFPS directorate (mortuary, laboratories, offices, other facilities and staff) to a new best-in-class forensic services and coroner's complex in Downsview. This move is welcome, but it will be a challenge and will require the efforts of all of our staff.

It is said that change is the only constant. We embrace this idea and will continue to advance forensic pathology in Ontario to maximally benefit families, the public and the criminal justice system.

Michael S. Pollanen
Chief Forensic Pathologist for Ontario
Director, Centre for Forensic Science and Medicine
Associate Professor, University of Toronto

About the Ontario Forensic Pathology Service

The OFPS provides forensic pathology services under the Coroners Act. The OFPS works closely with the Office of the Chief Coroner (OCC) to ensure a coordinated and collaborative approach to death investigation in the public interest. Together, the Chief Forensic Pathologist and Chief Coroner provide collaborative leadership for Ontario's death investigation system.

Pathologists are specialized medical doctors who have undertaken five years of additional training after medical school in pathology, the study of disease. Forensic pathologists have additional post-graduate training in forensic pathology, the application of medicine and science to legal issues, usually in the context of sudden death. Forensic pathology is the branch of medicine that underlies death investigation as recognized by the Royal College of Physicians and Surgeons of Canada, the National Academy of Sciences of the United States and other professional bodies.

Most deaths in Ontario are due to natural diseases and do not require medicolegal investigation. However, deaths that are sudden and unexpected require investigation by a coroner. These include deaths from accidents, suicides, homicides, and sudden deaths from previously undiagnosed diseases.

When a coroner requires an autopsy to answer questions about a death, an autopsy is ordered from the OFPS. Of the approximately 16,000 deaths investigated by coroners annually, about 5,700 undergo medicolegal autopsy performed by pathologists working under the auspices of the OFPS. These autopsies are conducted in Forensic Pathology Units and community hospitals across the province. In some of these cases, the death is considered to be "routine" (e.g., sudden natural deaths and some accidents and suicides), while "complex" cases include homicides, criminally suspicious cases and pediatric deaths.

Our Legislation

Our Vision

A seamless forensic pathology system that fully integrates public service, education and research.

Our Mission

To provide the highest quality forensic pathology service aimed at contributing to the administration of justice, preventing premature death and protecting public safety.

Our Values

The OFPS and the OCC share core values that speak to our commitment to public service:

Integrity: We remember that the pursuit of truth, honesty and impartiality are the cornerstones of our work.

Responsiveness: We embrace opportunities, change and innovation.

Excellence: We constantly strive towards best practice and best quality.

Accountability: We recognize the importance of our work and will accept responsibility for our actions.

Diversity: We respect a diverse team with different backgrounds, professional training and skills.

The OFPS encourages the practical application of these core values. This is achieved by embracing an independent and evidence-based approach that emphasizes the importance of thinking objectively in pursuit of the truth.

The Coroners Act defines the roles and responsibilities of pathologists and coroners in death investigation and enhances the quality, organization and accountability of forensic pathology services. The Coroners Act:

- defines the OFPS as the unified system under which pathologists provide forensic pathology services, including autopsies
- defines the position of the Chief Forensic Pathologist as overseer of forensic pathology services
- defines the positions of the Deputy Chief Forensic Pathologist and pathologist
- requires a registry of pathologists accredited to perform medicolegal autopsies
- requires the Chief Forensic Pathologist to communicate with the College of Physicians and Surgeons of Ontario on adverse findings related to competency and professionalism of a registered pathologist

Registered pathologists have legal authority under the Coroners Act to attend scenes and to order ancillary tests as required, pursuant to their duties.

Our Governance

The OFPS and the OCC are part of the Ministry of Community Safety and Correctional Services and are accountable to the Minister of Community Safety and Correctional Services. The Deputy Minister of Community Safety provides direction on administrative matters. The Death Investigation Oversight Council oversees the OFPS and OCC on a variety of legislatively prescribed matters.

Our Structure

Ontario Forensic Pathology Service (OFPS)

Under the Coroners Act, the Chief Forensic Pathologist administers and operates the OFPS. Specifically, the Chief Forensic Pathologist:

- supervises and directs pathologists in the provision of services
- conducts programs for the instruction of pathologists
- prepares, publishes and distributes a code of ethics; and
- maintains a register of pathologists authorized to provide services

The Deputy Chief Forensic Pathologist has all the powers and authorities of the Chief Forensic Pathologist in the event the Chief Forensic Pathologist is absent or unable to act, or if the Chief Forensic Pathologist's position becomes vacant. The Deputy Chief Forensic Pathologist also supports the Chief Forensic Pathologist in the administration, oversight and quality management of the OFPS.

The head office of the OFPS is located in downtown Toronto. The OFPS is co-located with the Provincial Forensic Pathology Unit and the Office of the Chief Coroner (OCC) to facilitate communication and collaboration. The OFPS and the OCC are supported by Operational Services led by a Director who oversees quality and information management, business planning, financial control and communications.

Provincial Forensic Pathology Unit (PFPU)

The eight forensic pathologists of the Provincial Forensic Pathology Unit (PFPU) perform approximately 1,600 to 1,800 autopsies per year. The PFPU, affiliated with the University of Toronto, is the central referral facility for many complex autopsies, including homicides, skeletal remains and suspicious infant and child deaths. The Medical Director of the PFPU reports to the Chief Forensic Pathologist.

In 2011, Dr. Kris Cunningham, Medical Director of the PFPU, became one of the first pathologists in Canada to be certified in forensic pathology through the Royal College of Physicians and Surgeons of Canada Practice Eligibility Route.

The operation of the PFPU includes professional and technical roles in addition to forensic pathologists. These include a forensic anthropologist, pathologist assistants, technologists and imaging specialists, as well as administrative and management personnel.

Forensic Pathology Units

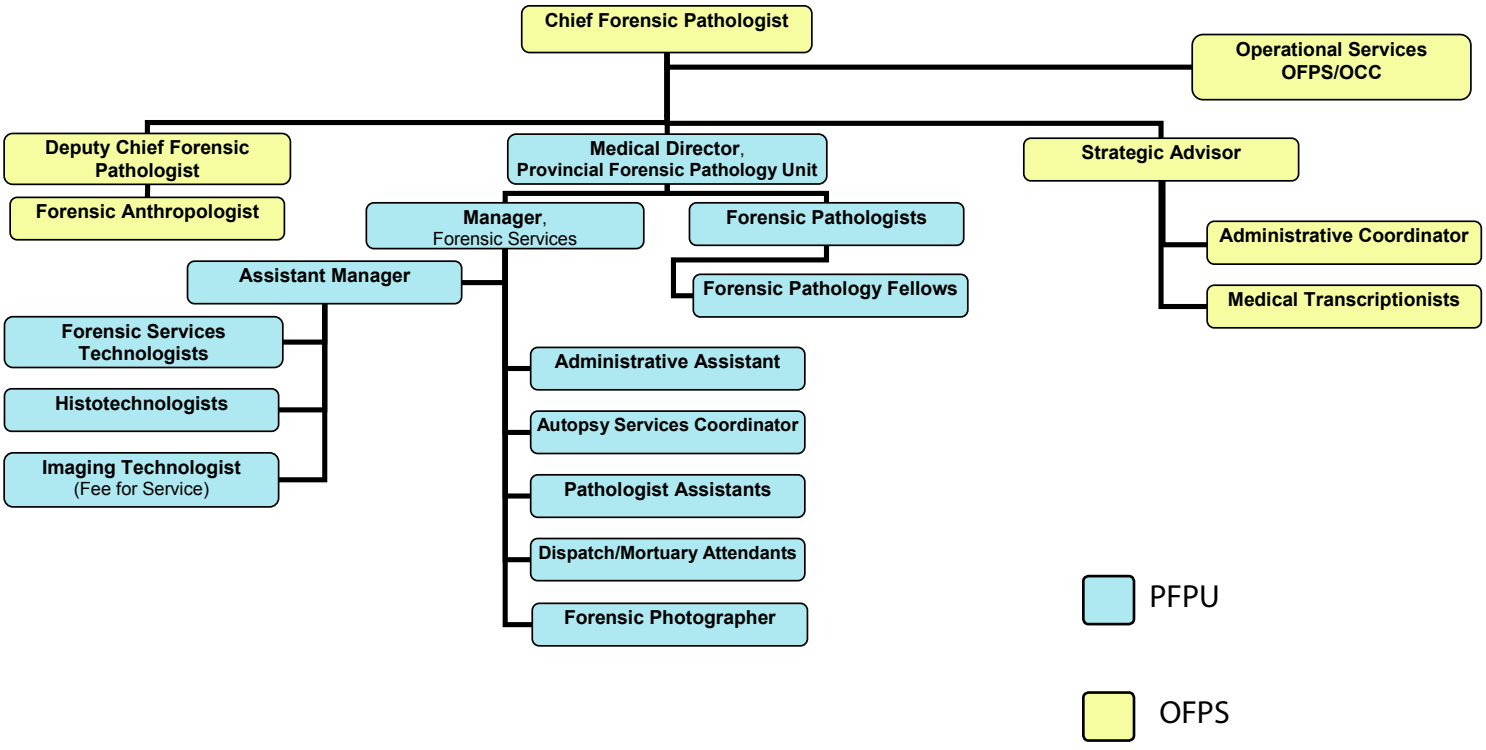
Forensic Pathology Units are located in university teaching hospitals in Hamilton, Kingston, London, Ottawa and Sudbury. These units provide expertise in forensic pathology for approximately 2,200 routine and complex autopsies annually, including homicides and pediatric cases. The Ministry of Community Safety and Correctional Services, through the OFPS, provides transfer payment funding to these units.

Most complex forensic autopsies are performed at one of the Forensic Pathology Units or at the Provincial Forensic Pathology Unit in Toronto. Some non-suspicious pediatric autopsies are performed at the Hospital for Sick Children in Toronto and the Children's Hospital of Eastern Ontario in Ottawa. Perinatal autopsies are also performed at Mount Sinai Hospital in Toronto. Occasionally, pediatric forensic cases from Northwestern Ontario are transferred to Winnipeg for autopsy by pathologists registered in Ontario.

Community Hospitals

Pathologists working in 33 community hospitals contribute to the OFPS by conducting routine medicolegal autopsies in their facilities on a fee-for-service basis.

OFPS Directorate and Provincial Forensic Pathology Unit (PFPU) Organizational Model



Our Partners and Working Relationships

Our major partners include the OCC, municipal and provincial police agencies, the Ontario Fire Marshal, the Special Investigations Unit, the Centre of Forensic Sciences, the criminal justice system and Ontario families.

The OFPS also collaborates with universities on research, education and training. Furthermore, the OFPS provides services to organizations outside of Ontario such as the Department of National Defence.

Our Services

The OFPS provides a range of services in support of the death investigation and justice systems.

1. Pre-autopsy consultations

Forensic pathologists consult with Regional Supervising Coroners to determine the appropriate location for an autopsy based on the complexity of a case and the skills of local pathologists.

Forensic pathologists work with Regional Supervising Coroners to facilitate, through the Trillium Gift of Life, organ donation in appropriate cases, in accordance with the wishes of the deceased and the deceased's family.

2. Scene visits

Pathologists may attend scenes to gain necessary information as part of a complete autopsy. In some cases, photographs, video recordings and other imaging techniques replace the scene visit.

3. Autopsies

Pathologists conduct autopsies and observe, document and interpret findings to support the determination of cause of death. There are five steps to a medicolegal autopsy:

- review of case history, scene and circumstances
- external examination, including documentation by photography
- internal examination, including documentation by photography as indicated
- ancillary tests: this may include radiology, histology, cardiovascular, neuropathology, anthropology and odontology consultations, toxicology, metabolic screening and DNA testing
- opinion and report writing

4. Forensic pathology consultations and expert opinions

Forensic pathologists participate in case conferences with other death investigation partners.

Forensic pathologists are asked for consultations and expert opinions on complicated and "cold" cases from Ontario, other provinces and other countries. These requests may come from police agencies, crown prosecutors and defence attorneys.

5. Testimony in trials and other hearings

Forensic pathologists testify as expert witnesses at coroner's inquests, at all levels of court and at public inquiries. This contribution to the justice system is of the utmost importance to the public.

6. Collaboration with coroners

Forensic pathologists serve on OCC death review committees that have quality assurance and death prevention mandates:

- Maternal and Perinatal Death Review Committee
- Geriatric and Long-Term Care Review Committee
- Patient Safety Review Committee
- Paediatric Death Review Committee
- Deaths Under 5 Committee

7. Special services

Special services are provided on request to other agencies, including international groups and non-governmental organizations. In cases of multiple fatalities, these services may include Disaster Victim Identification or human rights death investigations.

Our Activities
(July 27, 2011 – July 26, 2012)

Administration and Operation of the OFPS

Start-up plan for the OFPS

In 2009, a five year plan for the OFPS (Our Plan 2010-2015) was released with two overarching strategic goals: to modernize forensic pathology services, and to focus on quality assurance, service sustainability and innovation. The OFPS aspires to maintain a leadership role in forensic pathology and advance service provision, education and research.

Ten strategic priorities were established within the start-up plan to help meet our goals:

1. Implement the Pathologist Register
2. Implement a Pathology Information Management System
3. Develop stronger quality management processes for the OFPS
4. Rejuvenate the Forensic Pathology Units
5. Redevelop OFPS services in geographic areas that are under-served by pathologists
6. Implement new health and safety procedures across the OFPS
7. Develop contracts or other agreements with major OFPS clients
8. Renew the technical support services of the OFPS
9. Develop the molecular autopsy as a core OFPS service
10. Train future generations of Canadian forensic pathologists

Many of these priorities have been accomplished, with significant progress made in the remaining as documented in this report.

Forensic Pathology Advisory Committee

The Forensic Pathology Advisory Committee provides advice to the Chief Forensic Pathologist regarding professional medicolegal autopsy practices. This committee includes the directors of the regional forensic pathology units, the president of the Ontario Association of Pathologists and the Chief Coroner. During the reporting period, the committee convened three times in Toronto to discuss policy issues including: autopsy report turnaround; retention of autopsy reports, notes and diagrams; external and partial autopsies; and tissue, organ and body fluid retention and disposition.

Forensic Services Advisory Committee

The Forensic Services Advisory Committee was created to strengthen the objectivity of the OFPS and to improve communication with key external stakeholders such as police, crowns and defense attorneys, who are represented on the committee. The committee provides advice to the Chief Forensic Pathologist to advance the quality and independence of medicolegal autopsies.

During the reporting period, members of the committee met twice (once via teleconference) in Toronto and ratified a new protocol for post-conviction reviews by the OFPS.

Register of Pathologists

Under the Coroners Act, only pathologists who are appropriately credentialed and registered by the OFPS may perform medicolegal autopsies. On the basis of their qualifications, registered pathologists may be approved to perform: all medicolegal autopsies including homicide and criminally suspicious cases (Category A), routine cases only (Category B), or non-suspicious pediatric cases (Category C).

As of July 26, 2012, a total of 151 registered pathologists are active, including 29 Category A pathologists permitted to conduct all types of autopsies. These 29 pathologists are recognized as having additional experience, training and/or certification in forensic pathology.

	Number of Registered Pathologists
Category A	29
Category B	115
Category C	7

The Credentialing Subcommittee of the Forensic Pathology Advisory Committee reviews applications and provides advice to the Chief Forensic Pathologist regarding acceptance to the register.

The OFPS Register is available publicly through the Ministry's website at:
http://www.mcscs.jus.gov.on.ca/english/Pathology/PathologistsRegistry/pathologists_registry.html

Performance management of registered pathologists related to quality of medicolegal autopsies is the responsibility of the Chief Forensic Pathologist. When there is an issue of professional misconduct or incompetence, the Chief Forensic Pathologist is legislatively obliged to report any registered pathologist to the College of Physicians and Surgeons of Ontario.

To ensure that it is consistent and fair, the OFPS is currently reviewing, from medical and legal perspectives, its approach to performance management of pathologists, including the threshold for reporting to the College.

Supervision and Direction of Pathologists

To promote consistent and high quality practices across Ontario and to assist registered pathologists in their work, the OFPS provides a Practice Manual and Toolkit.

The Practice Manual includes the Code of Ethics, practice guidelines for medicolegal autopsies, and explanations of the peer review system and the Register. Together, these documents provide the professional and policy foundation for the OFPS. The practice guidelines will be reviewed and updated in 2013.

The Code of Ethics was adapted from the Forensic Pathology Section of the Canadian Association of Pathologists.

The OFPS and OCC have released various memoranda addressing a range of operational and administrative matters, which augment this policy framework.

Pathology Information Management System (PIMS)

The OFPS uses the Pathology Information Management System (PIMS) to collect information about autopsies performed across Ontario. All registered forensic pathologists working in units and community hospital pathologists contribute information to the system through the postmortem examination record. This record, an electronic form used to capture high level data about autopsies, is completed and submitted to the OFPS directly after the autopsy. The collected information is used to evaluate resources and statistics about performance and quality. PIMS, in conjunction with the postmortem examination record, facilitates accountability and oversight of autopsies performed by registered pathologists.

To maximize performance, quality and service integration, the OFPS and OCC are developing an electronic case management system, called the Death Investigation System Technology. The new system will record information from death investigations beginning with coroner notification of the coroner and ending with case closure, and will unify and streamline existing documentation and administrative procedures. The new system will become operational in 2013.

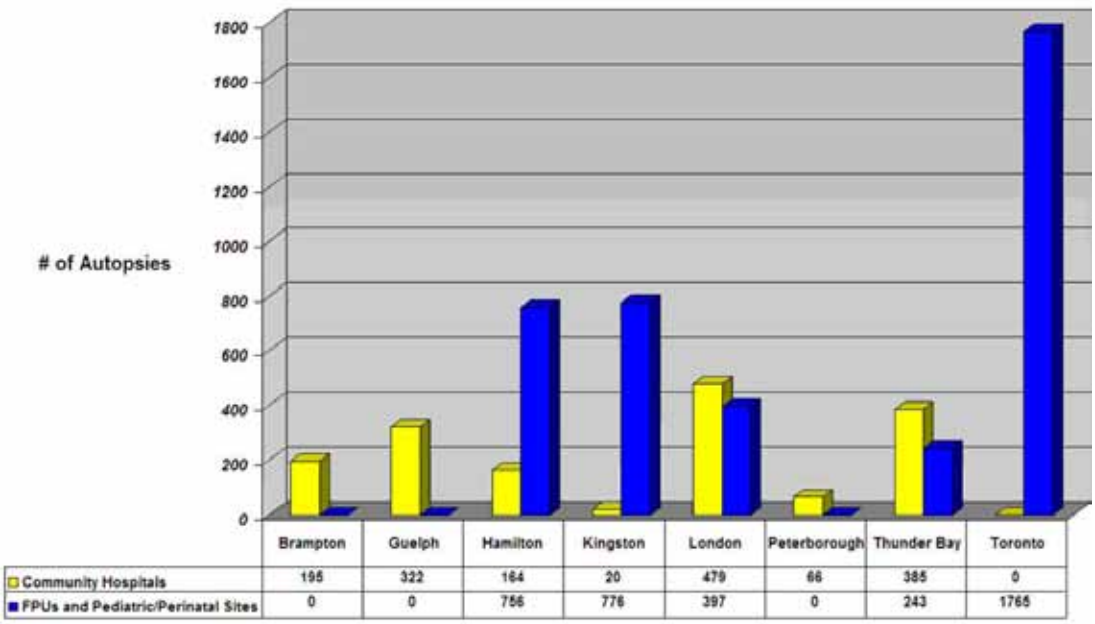
Caseload Statistics

Caseload statistics are derived from postmortem examination records submitted during the reporting period.

Each OFPS case begins with a coroner's request for an autopsy by warrant to a pathologist. Autopsies on homicides, criminally suspicious and pediatric cases, deaths involving firearms and routine (non-suspicious) autopsies are performed in Forensic Pathology Units. Some non-suspicious (medical type) autopsies of children are performed at pediatric sites. Only routine autopsies are conducted in community hospitals. Seventy-one percent (71%) of all autopsies were performed in Forensic Pathology Units and 29% in community hospitals. Of routine cases, about half were performed in community hospitals.

Chart 1 shows the distribution of autopsies captured in the system by OCC investigative regions.

Chart 1: Distribution of Autopsies by OCC Investigative Region



	Brampton	Guelph	Hamilton	Kingston	London	Peterborough	Thunder Bay	Toronto
Community Hospitals	195	322	164	20	479	66	385	0
FPUs and Pediatric/Perinatal Sites	0	0	756	776	397	0	243	1765

*A Sudbury Office was opened in fall of 2011. For the reporting period, Northeastern Ontario autopsies are counted within Thunder Bay Region.

The distribution of autopsies performed in Forensic Pathology Units and pediatric/perinatal sites is shown in Chart 2.

Chart 2: Distribution of Autopsies by Forensic Pathology Units and Pediatric/Perinatal Sites

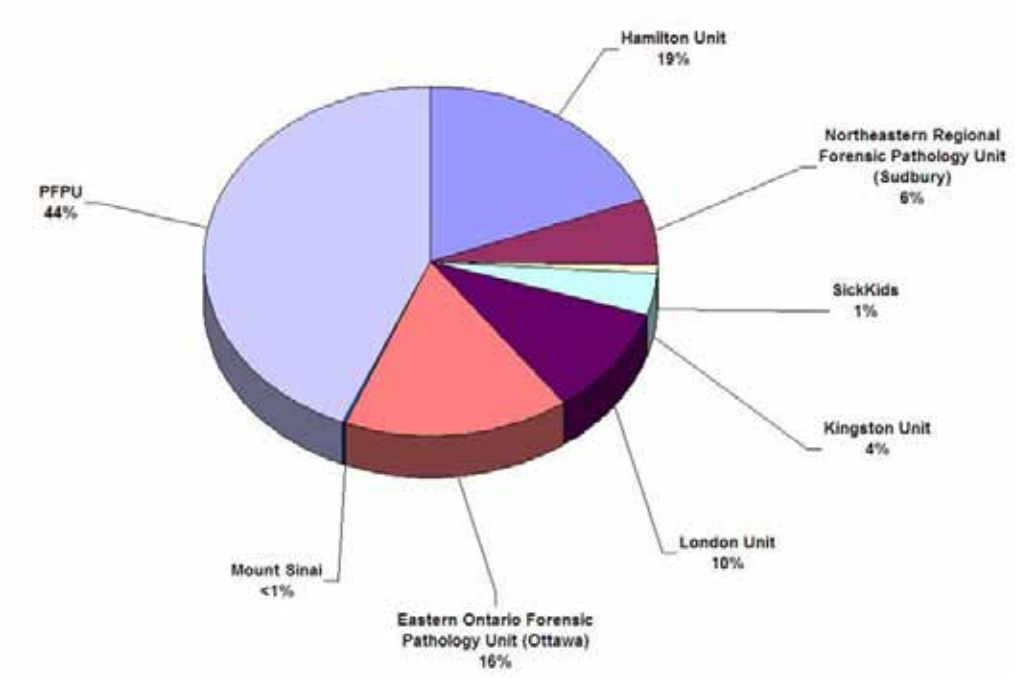
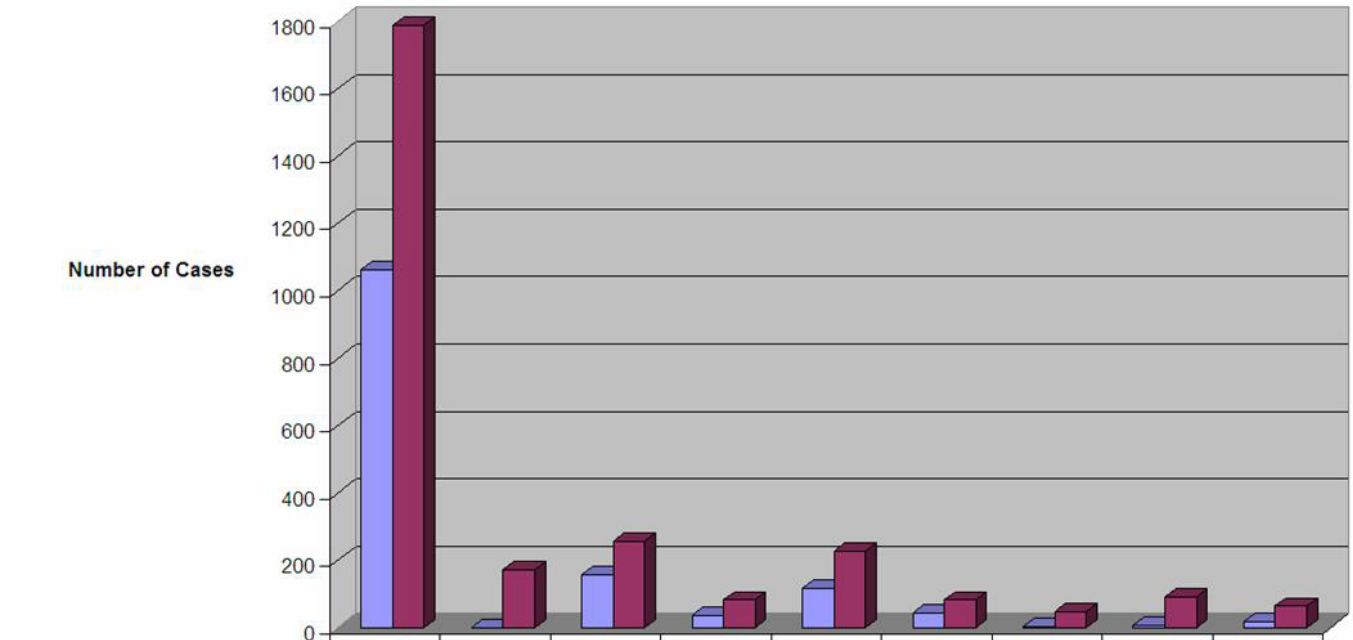


Chart 3 provides a breakdown of autopsies by case type as entered in PIMS. The category “sudden” includes non-homicidal gunshot wounds, drug overdoses and others not specified in the available categories.

Chart 3: Distribution of Autopsies by PIMS Case Type

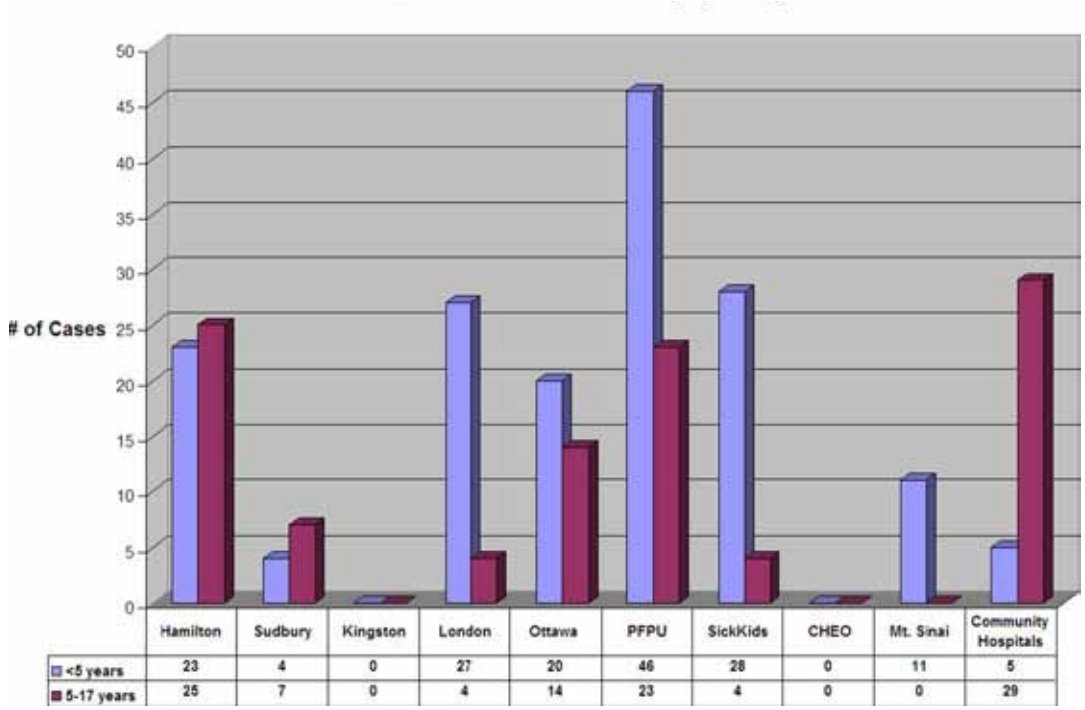


	Sudden	Suspicious/ Homicide	Collision	Fall	Hanging	Water	Fire	External	Other
Community Hospital	1064	0	157	37	118	44	4	8	18
FPUs and Pediatric/Perinatal Sites	1788	173	257	82	228	82	49	92	65

In some cases, after discussion between a forensic pathologist and a Regional Supervising Coroner, a decision is made to limit an autopsy to the external examination. There were 92 such cases performed in Forensic Pathology Units and 8 in community hospitals.

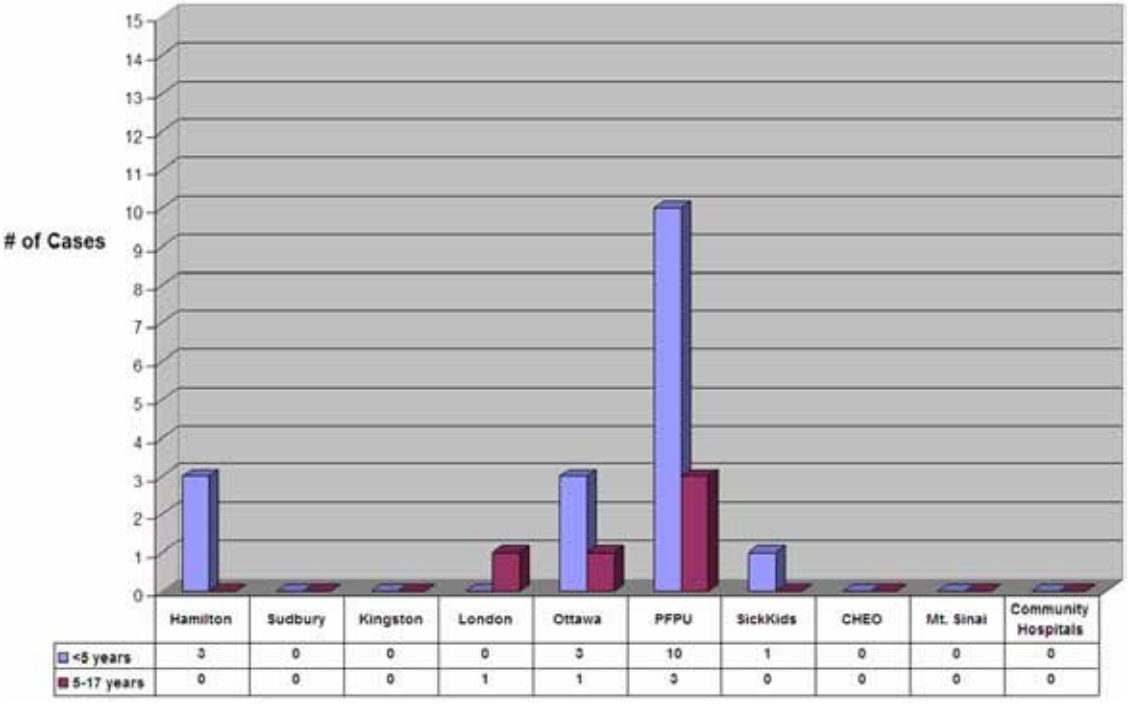
Charts 4 and 5 show the distribution of pediatric cases by age group (under age five, and between ages five to 17) for routine cases and suspicious/homicide cases.

Chart 4: Distribution of Routine Pediatric Cases by Age Group



	Hamilton	Sudbury	Kingston	London	Ottawa	PFPU	SickKids	CHEO	Mt. Sinai	Community Hospitals
<5 years	23	4	0	27	20	46	28	0	11	5
5-17 years	25	7	0	4	14	23	4	0	0	29

Chart 5: Distribution of Homicide and Suspicious Pediatric Cases by Age Group



	Hamilton	Sudbury	Kingston	London	Ottawa	PFPU	SickKids	CHEO	Mt. Sinai	Community Hospitals
<5 years	3	0	0	0	3	10	1	0	0	0
5-17 years	0	0	0	1	1	3	0	0	0	0

Quality Management

The OFPS has a robust quality assurance program comprised of the following:

- Pathologist Register
- practice guidelines including standardized reporting templates and forms
- collection of standardized case information through the postmortem examination record
- peer review of all autopsy reports on homicide, criminally suspicious, pediatric (deaths under 5) and Special Investigation Unit cases prior to report distribution
- audit of autopsy reports on routine cases
- peer review of courtroom testimony
- detection and follow-up of significant quality issues and critical incidents
- reporting of key performance indicators to clients and stakeholders

Peer Review of Autopsy Reports for Homicide, Criminally Suspicious, Pediatric and SIU Cases

242 peer reviews were performed, averaging 12.7 per forensic pathologist. The average turnaround time for peer reviews was 7.5 days.

Peer Review of Courtroom Testimony by Forensic Pathologists

On July 1, 2011, a new process was implemented for peer review of courtroom testimony (judicial, inquest, civil and tribunal). On an annual basis, each forensic pathologist who testifies submits a transcript for review by another forensic pathologist.

Courtroom testimony is now assessed for:

- accuracy and evidence-base
- professionalism and objectivity
- clear and unambiguous language
- presentation of limitations, uncertainties and alternate hypotheses

Audit of Autopsy Reports for Routine Cases

Autopsy reports on routine cases are audited for administrative and technical accuracy. Directors of Forensic Pathology Units review reports of routine cases performed in their units. Reports from community hospitals are audited by the Chief Forensic Pathologist or designate.

The administrative audit focuses on completeness and adherence to guidelines. All community hospital reports undergo administrative audit and 10% of routine autopsy reports from Forensic Pathology Units undergo this type of audit.

The technical audit focuses on the content of the report to ensure that the approach, conclusions and opinions derived from the evidence are appropriate. In general, 10% of routine reports are reviewed on this basis.

Technical audit is also done on all cases of certain types. These are:

- cases with an undetermined cause of death
- non-traumatic and non-toxicologic deaths of individuals younger than 40 years old
- all reports from pathologists performing fewer than 20 autopsies per year

Key Performance Indicators

Key performance indicators for autopsy reports such as submission compliance, completeness, turnaround time and validity are collected from the administrative and technical reviews and reported.

Table 1 shows the indicator, the target outcome and overall performance for Forensic Pathology Unit and community hospital pathologists.

Table 1: Key Performance Indicators for Autopsy Reports

Key Performance Indicators for Autopsy Reports	Target	Results	
Submisstion Compliance (PIMS)	100%	99%	
Completeness	95%	96.5%	
Consistency	95%	96.3%	
Turnaround Time (Routine)	90 days	average = 76 days	
Turnaround Time (Suspicious/Homicide)	90 days	average = 110 days	
Reports with Significant Issues	<2%	2.7%	
Critical Incidents	0	0	

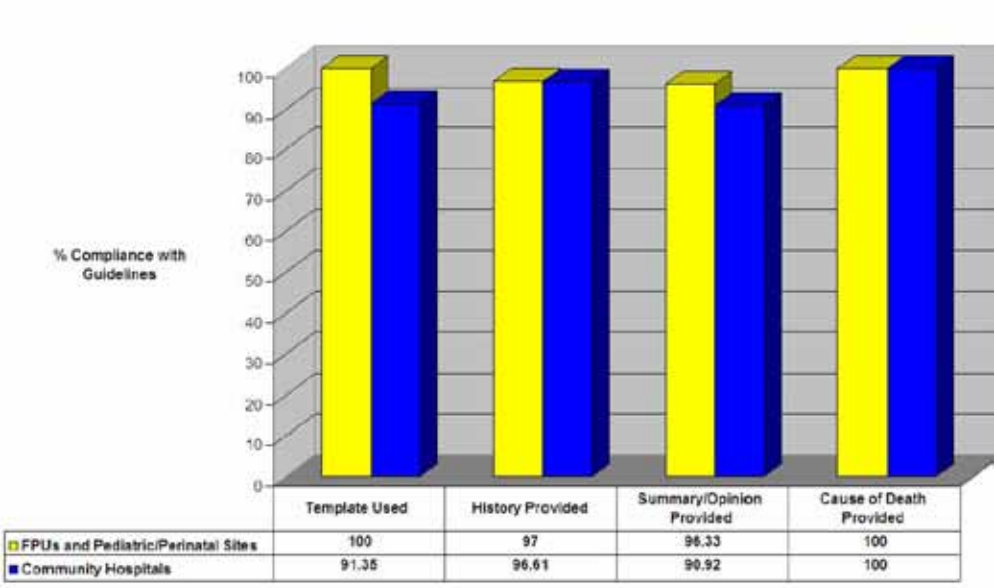
Green: good compliance
Yellow: approaching compliance
Red: poor compliance

Significant quality issues include substantial errors, omissions and other deficiencies.

A critical incident is a significant quality issue that contributes to a serious error in death investigation. All critical incidents are analyzed to determine root cause and corrective action.

Chart 6 illustrates completeness of autopsy reports in accordance with practice guidelines.

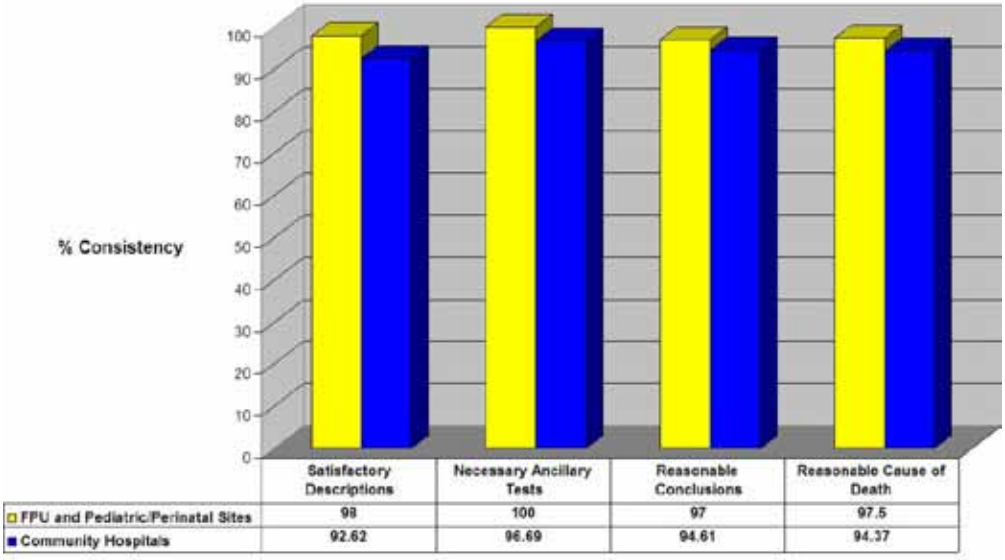
Chart 6: Completeness Measures (Administrative Audit)



	Template Used	History Provided	Summary/Opinion Provided	Cause of Death Provided
FPUs and Pediatric/Perinatal Sites	100	97	96.33	100
Community Hospitals	91.35	96.61	90.92	100

Chart 7 illustrates consistency of the content and opinion of autopsy reports as assessed by the reviewing pathologist.

Chart 7: Consistency Measures (Technical Audit)



	Satisfactory Descriptions	Necessary Ancillary Tests	Reasonable Conclusions	Reasonable Cause of Death
FPU and Pediatric/Perinatal Sites	98	100	97	97.5
Community Hospitals	92.62	96.69	94.61	94.37

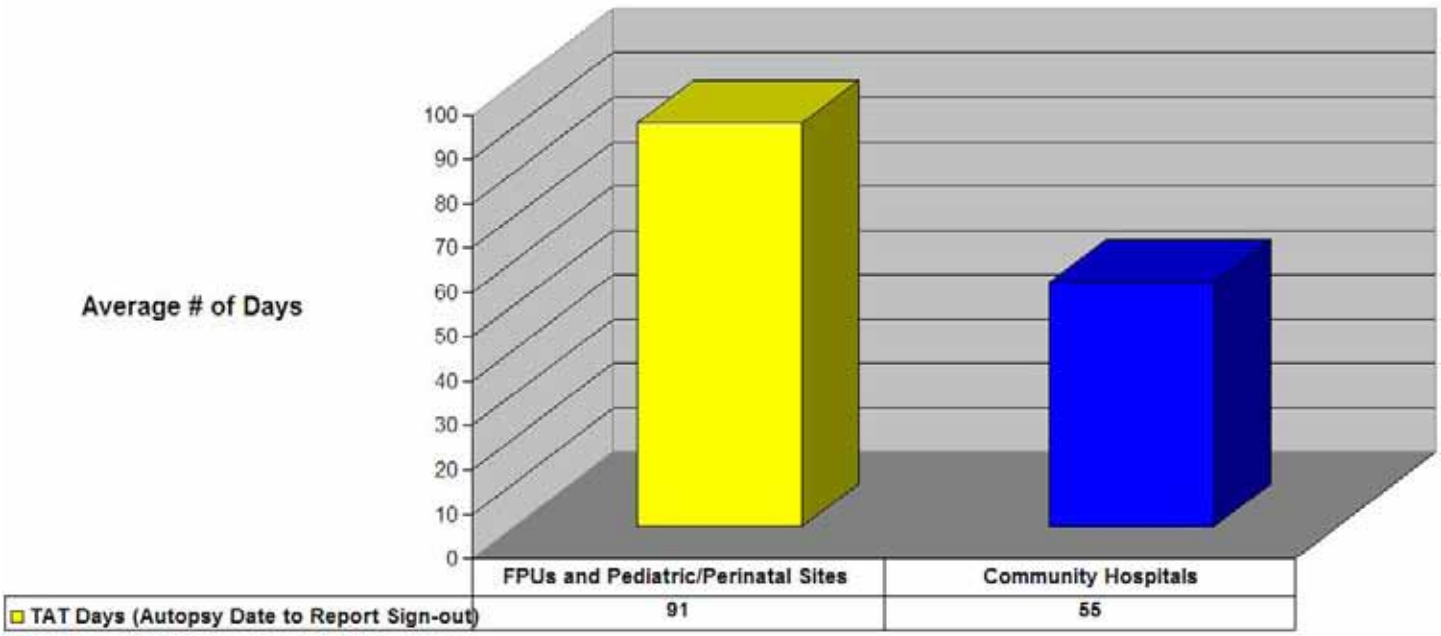
Turnaround Time

Timeliness of autopsy reports is a key performance indicator. Turnaround time is influenced by case complexity, return of ancillary test results, pathologist workload and staffing levels. The OFPS policy regarding turnaround time is:

- ninety percent (90%) of autopsy reports are to be completed within 90 days of the day of the postmortem examination
- cases involving homicides, pediatric deaths, deaths in custody and cases in which the coroner has requested that the report be prioritized (due to requests from family or other parties) are to be expedited as a matter of routine
- no more than 10 % of cases should be greater than six months old. There must be a justifiable reason (e.g., delays caused by molecular autopsy for channelopathy, etc.) for delay in those cases

Chart 8 depicts the turnaround time for community hospital pathologists and forensic pathologists in Forensic Pathology Units.

Chart 8: Turnaround Time



Significant Issues

If the reviewing forensic pathologist detects a significant issue during the technical review, feedback is provided to the case pathologist. The percentage of significant issues detected in routine case reports from Forensic Pathology Unit pathologists and community hospital pathologists was 0.9% and 3.3%, respectively.

Forensic Anthropology

Forensic anthropologists are experts in the study of skeletal remains in the medicolegal context. Forensic anthropologists make an important contribution to death investigations where the remains are skeletonized, burned, decomposed, mutilated or otherwise unrecognizable.

Forensic anthropologists act as part of the death investigation team, and as consultants to forensic pathologists. Forensic anthropology consultation was required in 134 cases during the reporting period. Forensic anthropologists also contributed to:

- missing persons investigations by building profiles of unidentified remains, and working with partners to add information to databases
- planning for multiple fatality events
- identification of found remains as non-human, including bones, by examining digital photographs or the remains themselves

One full-time forensic anthropologist works in the OFPS as well as several fee-for-service consultants. In December 2011, OFPS forensic anthropologists met to discuss standards of practice.

Other Professional Consultants

The OFPS relies on the expert contributions of other professionals, including cardiovascular pathologists, neuropathologists, forensic odontologists, radiologists and a forensic entomologist.

Histology

Histology is the preparation of microscope slides from tissues obtained at autopsies, for examination by a pathologist. The number of slides prepared for each case varies with the type of case and the pathologist's preference. Histology services are provided through laboratories at community hospitals and on-site at the Forensic Pathology Units. At the Provincial Forensic Pathology Unit, two full-time histotechnologists are employed to process approximately 1,600 tissue specimens each month.

Toxicology

Toxicological analysis of postmortem samples is performed by scientists at the Centre of Forensic Sciences. In many of their cases, pathologists rely on the results and the interpretive notes provided by the toxicologists in coming to an opinion about the cause of death.

Collaborative meetings between a toxicologist, a Regional Supervising Coroner and a forensic pathologist are held several times a week at the headquarters of OCC and OFPS to decide whether toxicology testing requested by pathologists across the province is required.

Organ Retention

Much of our understanding of human disease has come from the examination of tissues and organs of deceased persons by pathologists. Pathologists may need to retain an organ for more detailed examination to determine the cause of death and/or whether other family members are at risk.

For decades, retaining organs for testing after autopsy was standard practice, and this information was sometimes not shared with bereaved families in an attempt to spare them further grief.

Now, under Regulation 180 of the Coroners Act, families are routinely notified when an organ is retained and their wishes regarding final disposition of the organ are sought wherever possible.

To ensure transparency regarding past practices, the Chief Forensic Pathologist and Chief Coroner have reached out to those who lost a family member in Ontario before June 14, 2010, resulting in a coroner's investigation and autopsy.

In June 2012, the Chief Forensic Pathologist and Chief Coroner held a joint news conference and issued public notices in newspapers across the country inviting immediate family members and personal representatives to contact the OFPS and the OCC to find out if an organ was retained in their case. In cases where an organ was kept, affected families and personal representatives can request that the organ be sent to a funeral home for cremation or burial, at the expense of the OFPS and the OCC.

The OFPS and OCC have received many inquiries from families that resulted in investigations into possible organ retention.

Molecular Forensic Pathology

Forensic pathologists sometimes encounter cases of sudden arrhythmic death in young people with structurally normal hearts, and advances in clinical genetics have shown that certain gene mutations are associated with these arrhythmic disorders. Detection of these mutations and diagnosis of the associated arrhythmias allows for screening, diagnosis and life-saving intervention in surviving family members such as siblings or children, who may share the mutation.

In 2011, molecular autopsy laboratories were opened at the Kingston General Hospital and at the Provincial Forensic Pathology Unit in Toronto. These two labs will collaborate to diagnose genetic conditions with a goal of preventing premature deaths.

Currently, the Molecular Autopsy Laboratory in Toronto has the capability to receive tissue from appropriate cases and isolate DNA, which can then be used for genetic screening. In the future, the lab will perform in-house genetic sequencing to detect mutations that are responsible for a wide range of diseases. While the OFPS's initial focus has been on disorders of heart function, other diseases that run in families, such as blood clotting disorders, may also be diagnosed.

Health and Safety

Health and safety protocols enhance personal protection, prevent unnecessary risk and ensure that laboratory and morgue processes and facilities align with external standards of practice. These protocols are supplemented by staff training in Workplace Hazardous Materials Information System.

The OFPS surveyed Forensic Pathology Units and hospitals where medicolegal autopsies are performed using criteria published by the National Association of Medical Examiners to assess health and safety practices. Analysis of the data obtained from the survey indicated that health and safety is a high priority in all institutions, and identified areas for improvement. The results were shared with the Ontario Association of Pathologists so that institutions may initiate improvements in collaboration with their respective health and safety committees.

OFPS-Based Education

In-House Professional Development Seminars for Forensic Pathologists

Continuing education seminars for forensic pathologists throughout the province are held at the Provincial Forensic Pathology Unit in Toronto. These seminars qualify as continuing education for the Maintenance of Certification program of the Royal College of Physicians and Surgeons of Canada.

The following topics were covered last year:

- perinatal pathology
- how to be an expert witness
- infectious risks and autopsy practice
- genetics of sudden cardiac death

Annual Education Course for Coroners and Pathologists

This two-and-a-half day course is conducted jointly by the OCC and OFPS each autumn. This meeting qualifies as continuing education for the Maintenance of Certification program of the Royal College of Physicians and Surgeons of Canada.

Last year's course was held from November 17 to 19 and was attended by 55 registered pathologists.

A range of topics was covered including:

- drugs and alcohol
- determination of cause and manner of death
- the medicolegal autopsy
- sudden cardiac death
- unexpected deaths in children

Dr. David King, retired forensic pathologist, provided "Reflections on My Career as a Forensic Pathologist".

Centre for Forensic Science and Medicine (CFSM) at the University of Toronto

The Centre for Forensic Science and Medicine (CFSM) at the University of Toronto is dedicated to the advancement of teaching and research in the forensic disciplines at the interfaces of medicine, the law and social sciences. The CFSM aims to contribute to the development of knowledge in these fields by drawing together a diverse group of practitioners and scholars. Presently, the Chief Forensic Pathologist holds the position of Director of the CFSM.

The disciplines involved in the CFSM include law, forensic sciences, forensic pathology, forensic psychiatry and psychology, forensic anthropology, forensic odontology and forensic pediatrics. The CFSM is affiliated with the university's postgraduate residency and fellowship training program in forensic pathology, the Faculties of Medicine and Law, and the Forensic Sciences Program.

Seminar Series: Current Controversies in Forensic Science & Medicine: Toward Resolution in the 21st Century

With funding support from the Ministry, this monthly series brings national and international experts to University of Toronto to discuss controversies in forensics. The seminars are attended by academics, those working in forensic disciplines, legal professionals and law enforcement practitioners. These seminars are also broadcast live over the Internet and are available for viewing at http://www.forensics.utoronto.ca.

In the last year, the following topics were covered:

- *Stab Wounds: We See Only What We Know*
  Professor Derrick Pounder, Professor of Forensic Medicine, Centre for Forensic and Legal Medicine, University of Dundee, UK
- *Goudge, Knowledge and the Pursuit of (Un)Certainty: Inquiring into Inquiries*
  Gerald Cradock, PhD, Department of Sociology, Anthropology and Criminology, University of Windsor
- *Investigation of a Model for Stain Selection and a Robust Estimation for Area of Origin in Bloodstain Pattern Analysis*
  Mike Illes, Forensic Identification Regional Manager and Provincial Bloodstain Pattern Analyst Program Manager, Investigation Support Bureau, Forensic Identification Services, Ontario Provincial Police
- *The Future of Research and Publishing in Forensic Pathology*
  Keith Pinckard, MD, PhD, Medical Examiner, Southwestern Institute of Forensic Sciences, Associate Professor, Department of Pathology, University of Texas Southwestern Medical Center, Editor-In-Chief, Academic Forensic Pathology: The Official Publication of the National Association of Medical Examiners
- *Speaking for the Dead: Forensic Advocacy and Wrongful Convictions for Child Homicide*
  Kirsten Kramar, PhD, Associate Professor, Department of Sociology, University of Winnipeg
- *The Role of the Death Investigation System in Enhancing Patient Safety*
  Dr. Dan Cass, Regional Supervising Coroner – Central Region, Toronto West Office, Chair, Patient Safety Review Committee of the Office of the Chief Coroner
- *The Role of the Court of Appeal in Paediatric Death Cases*
  The Honourable Marc Rosenberg, Justice, Ontario Court of Appeals

In 2011, the CFSM published an Annual Report on its progress since its creation in 2008. This Report may be accessed through the CFSM's website at http://www.forensics.utoronto.ca.

In May, 2012, the CFSM hosted the first multi-disciplinary forum on forensic science in Canada. Key forensic scientists from across the country met to discuss the current state of their disciplines. A report is currently being drafted to identify themes, conclusions and recommendations, which will strengthen and advance forensic science in Canada.

Later in May, the CFSM held the First International Forensic Medicine Conference in Kingston, Jamaica. The conference explored governance and institutional building for forensic science and medicine in Jamaica, as well as forensic science and medicine interfacing with the criminal justice system.

Training New Forensic Pathologists

The OFPS, in partnership with the Forensic Pathology Residency Training Program at University of Toronto and with funding support from the Ministry of Health and Long-term Care, continues to have the only active training program in Canada leading to certification in forensic pathology by the Royal College of Physicians and Surgeons of Canada. Since 2008, nine pathologists have completed training, seven of whom are now working within the OFPS.

In July 2012, three new residents began their training in forensic pathology in the U of T program.

Angela Guenther MD FRCPC obtained her medical degree and a doctoral thesis (Dr. med.) from the University of Goettingen, Germany. She conducted research at the Universities of Dusseldorf, Calgary and Toronto and trained as a resident in Anatomical Pathology at University of Toronto, obtaining her FRCPC in 2012.

Ashwyn Rajagopalan MD FRCPC graduated from Queen's University in Kingston with a Doctor of Medicine degree in 2007. He completed his residency in Anatomical Pathology at McMaster University in May 2012, obtaining his FRCPC.

Soledad Martinez MD graduated from medical school at the University of Chile and then entered the Forensic Medicine Program. She is currently employed at the Servicio Medico Legal (National Forensic Institution for Chile) where, for the past fifteen years, she has performed over two hundred forensic autopsies per year. Soledad previously visited the Provincial Forensic Pathology Unit in 2005 and 2008. Her additional training at the Provincial Forensic Pathology Unit is part of an initiative of the OFPS and the Centre for Forensic Science and Medicine to support the international development of forensic pathology.

Recruitment of Forensic Pathologists

The capacity of the OFPS has been enhanced through the recent addition of talented new recruits:

Elena Bulakhtina, MD, D-ABP (AP/CP/FP), FRCPC was appointed a forensic pathologist at the Hamilton Forensic Pathology Unit and Assistant Professor in the Department of Pathology and Molecular Medicine at McMaster University. Elena graduated with an MD from I.M. Sechenov Moscow Medical Academy in 1997. She completed a residency in Anatomical and Clinical Pathology in 2010, and a fellowship in Forensic Pathology in 2011, both in Pittsburgh, PA. She holds diplomas from the American Board of Pathology in Anatomical and Clinical Pathology as well as Forensic Pathology. Elena is a Fellow of the Royal College of Physicians and Surgeons of Canada in Anatomical Pathology and is awaiting certification from the College in Forensic Pathology.

Jayantha Herath MD DLM MD (Forensic) FCAP FRCPC joined the Provincial Forensic Pathology Unit as a staff forensic pathologist in July 2012. Dr. Herath completed his medical studies in Bulgaria and trained in forensic medicine in his native Sri Lanka. He received training in Anatomical Pathology and Forensic Pathology at the University of Manitoba and in Perinatal/Pediatric Pathology at University of Toronto. Dr. Herath was a Medical Examiner for the Province of Manitoba and most recently a forensic pathologist and Assistant Professor of Diagnostic Services for Manitoba and University of Manitoba. Jay is awaiting certification from the Royal College of Physicians and Surgeons of Canada in Forensic Pathology.

Liza Boucher MD FRCPC joined the Provincial Forensic Pathology Unit as a staff forensic pathologist in July 2012, having completed her residency training in Forensic Pathology at the University of Toronto/ Provincial Forensic Pathology Unit program. Liza obtained her medical degree and Doctorate in Medicine at the University of Montreal in 2004, followed by three years of training in General Surgery and an Anatomic Pathology residency at Laval University. Liza is also a Fellow of the Royal College of Physicians and Surgeons of Canada in Anatomical Pathology and is awaiting certification from the College in Forensic Pathology.

Update on Forensic Pathology Units

Eastern Ontario Regional Forensic Pathology Unit (Ottawa)

The Eastern Ontario Regional Forensic Pathology Unit at the Ottawa Hospital increased its staffing from three to four forensic pathologists with the addition of Dr. Charis Kepron, previously at the Provincial Forensic Pathology Unit in Toronto. In 2011, approximately 650 medicolegal autopsies were performed by the forensic pathologists, who also provide forensic pathology services for the Territory of Nunavut.

All four forensic pathologists hold academic positions with the University of Ottawa and teach its anatomical pathology residents. They also provide training to the Canadian Police College in Ottawa as well as other police services, the Canadian judiciary, other pathologists and Ontario coroners.

Dr. Jacqueline Parai, Medical Director, and Dr. Chris Milroy are examiners for the Royal College of Physicians and Surgeons of Canada in Forensic Pathology and assess forensic pathologists for the Practice Eligibility Route of this subspecialty.

A recently qualified resident in Anatomical Pathology from the University of Ottawa commenced a Fellowship in Forensic Pathology in Dallas, Texas.

London Forensic Pathology Unit

The London Forensic Pathology Unit is based at the London Health Sciences Centre, and is affiliated with Western University. Three forensic pathologists and several other pathologists performed approximately 370 medicolegal autopsies in 2011. The forensic pathologists are committed to academic excellence, teach medical students and pathology residents, and promote research activities. Dr. Mike Shkrum, Medical Director, is the Supervisor of a Scholar's Elective Student who is researching airbag restraints. Dr. Shkrum and Dr. Elena Tugaleva are also co-supervising a Masters Degree candidate studying organ weights and measures in infants.

In 2011, Dr. Edward (Ted) Tweedie became one of the first pathologists in Canada to be certified in forensic pathology through the Royal College of Physicians and Surgeons of Canada Practice Eligibility Route.

Hamlton Forensic Pathology Unit

The Hamilton Forensic Pathology Unit at the Hamilton Health Sciences Centre is affiliated with McMaster University. It continues to focus on service provision, recruitment, education

of pathology residents and medical students, and research.

In 2011, approximately 730 medicolegal autopsies were performed for the region by three forensic pathologists and one pathologist.

The Hamilton Forensic Pathology Unit experienced several staffing changes in 2011. Dr. David King, long-time forensic pathologist and previous Medical Director, retired. In addition, Margaret Boyd, a full-time administrative assistant, retired after 30 years of service. Dr. Elena Bulakhtina joined the unit as a forensic pathologist in September 2011. An additional forensic pathologist, Dr. Kathryn Urankar from Australia, is also joining the unit.

The Royal College-accredited Residency Training Program in Forensic Pathology has not yet accepted its first candidate for training. However, the Hamilton unit trains Fellows from Sri Lanka who return to their country to practice forensic pathology.

Northeastern Regional Forensic Pathology Unit (Sudbury)

The Northeastern Regional Forensic Pathology Unit of Health Sciences North in Sudbury is affiliated with Laurentian University and the Northern Ontario School of Medicine. In 2011, about 230 medicolegal autopsies were performed by two forensic pathologists and a pathologist. Dr. Michael D'Agostino relocated in 2012 to the Sault Area Hospital in Sault Ste. Marie, where he continues to support medicolegal autopsy service provision to Northeastern Ontario.

The Northeastern unit provided key support to the death investigation related to the mall collapse in Elliot Lake in June 2012.

Kingston Forensic Pathology Unit

The Kingston Forensic Pathology Unit at Kingston General Hospital is affiliated with Queen's University. In 2011, about 120 routine medicolegal autopsies were performed by 13 pathologists. Since February 2012, routine cases that would previously have undergone autopsy in Belleville or Brockville are now directed to the Kingston unit. This increased caseload is welcome, since re-establishing the case volume has led to increased educational opportunities for pathology residents and augments the contribution of the Kingston unit to the OFPS.

An important goal of the Kingston unit is to re-institute a full forensic service through the recruitment of an experienced forensic pathologist.

The Kingston General Hospital continues to focus on molecular autopsy testing.

New Technology

The OCC and OFPS are investing in a new information management system and related technologies.

Provincial Coroner Dispatch

The OCC and OFPS have successfully implemented a province-wide coroner dispatch service. Provincial dispatch is now the single point of contact to notify any coroner in Ontario of a death that may require investigation.

The computer-aided, centralized dispatch service, located at the headquarters of the OCC and OFPS, ensures that the right coroner is assigned to investigate a death while creating a digital record that captures case information in real time.

Death Investigation System Technology

New Death Investigation System Technology will combine and significantly enhance the present Coroners Information and Pathology Information Management Systems. The new system will improve public safety through its ability to centrally track data that spans the entire death investigation. In addition, it will facilitate quality assurance, financial resource management and strategic planning.

The first version will be delivered in the fall of 2012, with province-wide training and rollout scheduled to commence in early 2013.

Collaboration with the Victorian Institute of Forensic Medicine (VIFM) in Australia

The Victorian Institute of Forensic Medicine (VIFM) in Melbourne, Australia, operates under the auspices of the Department of Justice and as the Department of Forensic Medicine at Monash University. The VIFM provides forensic medical and scientific services to the Australian justice system and works with international organizations, including the International Committee of the Red Cross, the World Health Organisation and agencies of the United Nations.

The OFPS, the Provincial Forensic Pathology Unit and the VIFM collaborate in teaching, quality assurance and exchange of best practices. The first inter-continental teaching rounds were held by videoconference in February 2012 with a case presentation and discussion. In the summer of 2012, a senior forensic pathologist from the VIFM visited the Provincial Forensic Pathology Unit on a mini sabbatical. Some autopsy reports written by the Chief Forensic Pathologist for Ontario are peer reviewed by VIFM forensic pathologists.

Forensic Services and Coroner's Complex

The Forensic Services and Coroner's Complex is the future headquarters of the OFPS. Located at Keele Street and Wilson Avenue in Downsview, Ontario, the new complex is expected to be ready for occupancy in 2013.

This facility will be state-of-the-art and the largest of its kind in the world, bringing together the OFPS, the OCC and the Centre of Forensic Sciences.

Systemic Review of Ontario's Death Investigation System

In January 2012, the OFPS, OCC, and the Death Investigation Oversight Council co-sponsored an external systemic review to examine whether Ontario's death investigation system does the best possible job of serving the public interest. That includes serving families, improving public safety, preventing deaths, and providing expert analysis and testimony to the justice system. KPMG was awarded the contract for the review following a competitive bidding process.

The review process involved:

- gathering and considering input from a wide range of stakeholders and subject matter experts
- a comprehensive jurisdictional review
- further review of selected preferred models to identify their effectiveness, value-for-money, sustainability and the financial, human resource and policy implications of implementing them

The themes of KPMG's final report are:

- expanding the role of forensic pathologists in the death investigation system
- strengthening the role of DIOC
- enhancing the inquest process

Decisions on implementing recommendations will be made after careful and thoughtful consideration, and only after receiving input from key stakeholders.

International Assistance

Ontario has a history of providing leadership and support to international Disaster Victim Identification missions. These missions are assembled following natural or human-caused disasters where help is needed in identifying victims. The OFPS has participated internationally with Interpol, the International Committee of the Red Cross, the Federal Bureau of Investigation and other experts from the forensic community.

Some nations do not have a robust system of forensic medicine, which can help to uphold human rights and justice. Dr. Michael Pollanen, in his roles as the Chief Forensic Pathologist and the Program Director of the Centre for Forensic Science and Medicine, has worked to build forensic medicine capacity and support human rights investigations in such areas as the Middle East, South Asia, Africa and the Caribbean. Some of this work has involved United Nations agencies.

Professional Activities and Outreach

Registered pathologists in the OFPS enrich the practice of forensic science and medicine by participating in provincial, national and international professional organizations such as the Ontario Association of Pathologists, Canadian Association of Pathologists, National Association of Medical Examiners, American Academy of Forensic Sciences and the International Association of Forensic Sciences.

OFPS forensic pathologists participate in activities of the Royal College of Physicians and Surgeons of Canada that focus on the promotion and accreditation of forensic pathology in Canada.

This past year, OFPS forensic pathologists lectured and delivered courses in Canada, the USA, Portugal, Turkey, the Caribbean, Chile, China, Hong Kong and Malaysia. Their audiences included forensic pathologists and scientists, other medical practitioners, the judiciary, lawyers, police, National Defence, advocacy groups and others.

The Provincial Forensic Pathology Unit in Toronto hosted visiting experts in forensic pathology and forensic medicine for observership and exchange of ideas from Australia, the United Kingdom and Turkey. In addition, a delegation of Vietnamese judges and prosecutors visited and met with the Chief Forensic Pathologist.

OFPS pathologists serve as members of editorial boards of international peer-reviewed forensic journals, and act as reviewers for other specialist journals.

Scholarly Activities

Teaching

Most forensic pathologists and forensic consultants hold academic appointments at their respective universities. They have teaching responsibilities for undergraduate and graduate forensic science students, medical students, dentists, medical artists, law students, and pathology and forensic pathology residents.

Forensic pathologists also participate in the development of other educational tools. In conjunction with the Anatomy Department of McMaster University and the Northern School of Medicine, Dr. John Fernandes created an educational video entitled "Autopsy", which is now available in Bluetooth and on disc in high definition.

Research

Forensic pathologists contribute to and support research aimed at understanding causes of sudden death and improving public safety.

Dr. Mike Shkrum performs research into injuries resulting from motor vehicle crashes:

- Director and Principal Investigator, Motor Vehicle Safety (MOVES) Research Team, Western University (funded by Transport Canada 2010-2013)
- Co-Principal Investigator with Dr. A. Howard, Fatal Child Injuries in Real World Crashes. Network Centres of Excellence, Automobile of the 21st Century (AUTO21)

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Goals for Next Year

The OFPS plans to:

- implement any directions arising from KPMG's review of Ontario's death investigation system
- move to the new state-of-the-art facility
- review and update the OFPS Practice Manual for medicolegal autopsies, including the Register protocol
- continue to embrace technology and innovation to improve service delivery

Our People

Spotlight on Quality Management

Robert MacVicar became the Manager, Quality Assurance and Information Management for the OFPS and OCC in 2012. He previously held the positions of Project and Services Manager for the OFPS and OCC, Assistant Section Head of the Physical Sciences Section at the Centre of Forensic Sciences (CFS), and Forensic Scientist at the CFS. Prior to joining the Ontario Public Service in 2001, he worked as a Research Scientist in the private sector. Robert currently leads the development and implementation of the Death Investigation System Technology. Robert holds a B.Sc. and a M.Sc. from the University of Toronto and is a Certified Technical Assessor for ASCLD/LAB and the Standards Council of Canada.

Bonita Anders has a B.Sc. from the University of Toronto and certification in Forensic Death Investigation from the University of Florida. Bonita began as a pathologist's assistant at the Provincial Forensic Pathology Unit in 2001. In 2009, she took on the newly created role of Quality Analyst for the OFPS, contributing to the development of the Pathologist Register, Pathology Information Management System and audit processes for routine and complex autopsies. In 2012, Bonita became Quality Management Lead for the OFPS and OCC to further develop the institutional framework for quality management and continuous improvement.

Amanda Antenucci obtained her B.Sc. (Honours) from the University of Toronto, specializing in Forensic Sciences. Amanda joined the Provincial Forensic Pathology Unit in 2006 as a Forensic Services Technologist, before becoming the Quality Analyst in 2010. Amanda contributed to the Provincial Organ Retention Audit, and has a lead role in administering the Pathology Information Management System, and other OFPS quality assurance processes.

Lisa Perri joined the Ontario Public Service in 1986. She currently holds the position of Coding Analyst for the OCC and OFPS. Lisa supports quality audits and processes for the OFPS and OCC and contributes to the system of quality service for the Regional Supervising Coroners' offices.

OFPS Directorate

Michael POLLANEN	Chief Forensic Pathologist
Toby ROSE	Deputy Chief Forensic Pathologist
Effie WALDIE	Strategic Advisor
Liz IVES	Organ Retention Lead
Natasha DESJARDINS	Administrative Coordinator
Rose PERRI	Medical Transcriptionist
Lori BRADSHAW	Medical Transcriptionist
Cathy ARABANIAN	Medical Transcriptionist
Judith DE SOUZA	Medical Transcriptionist

Operational Services

Melanie FRASER	Director of Operations
Robert MacVICAR	Manager of Quality and Information Management
Susan McCANN	Manager of Business Services
Cheryl MAHYR	Issues Manager
Kathy MCKAGUE	Manager, Business Planning & Controllership
Jennifer KERR	Stakeholder and Publications Manager
Jeffrey ARNOLD	FSCC Project Manager
Andrew STEPHEN	Manager, Coroners Information System
Amber DRAKE	Family Liaison Coordinator
Bonita ANDERS	Quality Management Lead
Amanda ANTENUCCI	Quality Analyst
Anna TORRIANO	Financial Officer
Lisa PERRI	Coding Analyst
Nasim KASSAM	Office Services Coordinator
Vicki STAMML	Administrative Services Coordinator
Jessie DOBSON	Records Retention Project Coordinator

Toronto PFPU

Kris CUNNINGHAM	Medical Director and Forensic Pathologist
Noel MCAULIFFE	Forensic Pathologist
Jeff TANGUAY	Forensic Pathologist (Fellowship at University Health Network)
Michael PICKUP	Forensic Pathologist
Jayantha HERATH	Forensic Pathologist
Liza BOUCHER	Forensic Pathologist
Ashwyn RAJAGOPALAN	Forensic Pathology Fellow
Soledad MARTINEZ	Forensic Pathology Fellow
Angela GUENTHER	Forensic Pathology Fellow
Cathy DOEHLER	Manager, Forensic Services
David CLUTTERBUCK	Assistant Manager, Forensic Services
Kathy GRUSPIER	Forensic Anthropologist
Renee KOSALKA	Forensic Anthropologist
Greg OLSON	Forensic Anthropologist
Bob WOOD	Forensic Odontologist
Murray PEARSON	Forensic Odontologist
Sherah VANLAERHOVEN	Forensic Entomologist
Miguel ARIAS	Autopsy Services Coordinator
Maureen CURRIE	Pathologist Assistant
Jessie COTTON	Pathologist Assistant
Shelby DEAN	Pathologist Assistant
Peter LEWIS	Pathologist Assistant
Taylor GARDNER	Pathologist Assistant
Terry IRVINE	Pathologist Assistant
Solange MALHOTRA	Pathologist Assistant
Tiffany MONK	Pathologist Assistant
Yolanda NERKOWSKI	Pathologist Assistant

Stephanie SANTANGELO	Pathologist Assistant
Irina SHIPILOVA	Pathologist Assistant
David LARRAGUIBEL	Forensic Photography Technologist
Patrick KIM	Forensic Services Technologist
Michelle VAUGHN	Forensic Services Technologist
Amber GALLANT	Forensic Services Technologist
Cherry PUN	Forensic Services Technologist
Neil ROSEN	Forensic Services Technologist
Elisabeth HAJNAL	Imaging Technologist
Christiane GUILLEMETTE	Histotechnologist
Amanda (Amy) FONG	Histotechnologist
Rita AYACHE	Administrative Assistant
Renato TANEL	Dispatcher/Morgue Attendant
Jason CAMPITELLI	Dispatcher/Morgue Attendant
Debra WELLS	Dispatcher/Morgue Attendant
Tanya HATTON	Dispatcher/Morgue Attendant
Margaret PICHECA	Dispatcher/Morgue Attendant
David TODD	Dispatcher/Morgue Attendant
Stephanie SKIRROW	Dispatcher/Morgue Attendant
Noelle KELLY	Dispatcher/Morgue Attendant
Lesley-Anne WESTBY	Dispatcher/Morgue Attendant
Dan FRANEY	Dispatcher/Morgue Attendant

Hamilton FPU

John FERNANDES	Medical Director and Forensic Pathologist
Chitra RAO	Forensic Pathologist
Elena BULAKHTINA	Forensic Pathologist
Vidhya NAIR	Cardiovascular Pathologist
John PROVIAS	Neuropathologist
Boleslaw LACH	Neuropathologist
Tracy ROGERS	Forensic Anthropologist
Ross BARLOW	Forensic Odontologist
Danny POGODA	Forensic Odontologist
Murray PEARSON	Forensic Odontologist
John THOMPSON	Forensic Odontologist

London FPU

Michael SHKRUM	Medical Director and Forensic Pathologist
Edward (Ted) TWEEDIE	Forensic Pathologist
Elena TUGALEVA	Forensic Pathologist
Bertha GARCIA	Pathologist
Nancy CHAN	Pathologist
Manal GABRIL	Pathologist
Bret WEHRLI	Pathologist
Aaron HAIG	Pathologist
Jose GOMEZ-LEMUS	Pathologist
Christopher ARMSTRONG	Pathologist
Christopher HOWLETT	Pathologist
Jeremy PARFITT	Pathologist
Keith KWAN	Pathologist
David RAMSAY	Neuropathologist
Robert HAMMOND	Neuropathologist
Lee-Cyn ANG	Neuropathologist
Mike SPENCE	Forensic Anthropologist
Stanley KOGON	Forensic Odontologist
Mark DARLING	Forensic Odontologist
Thomas MARA	Forensic Odontologist

Eastern Ontario FPU

Jacqueline PARAI	Medical Director and Forensic Pathologist
Christopher MILROY	Forensic Pathologist
Alfredo WALKER	Forensic Pathologist
Charis KEPRON	Forensic Pathologist
John VEINOT	Cardiac Pathologist
John WOULFE	Neuropathologist
David CAMELLATO	Forensic Odontologist

Ottawa Childrens Hospital of Eastern Ontario

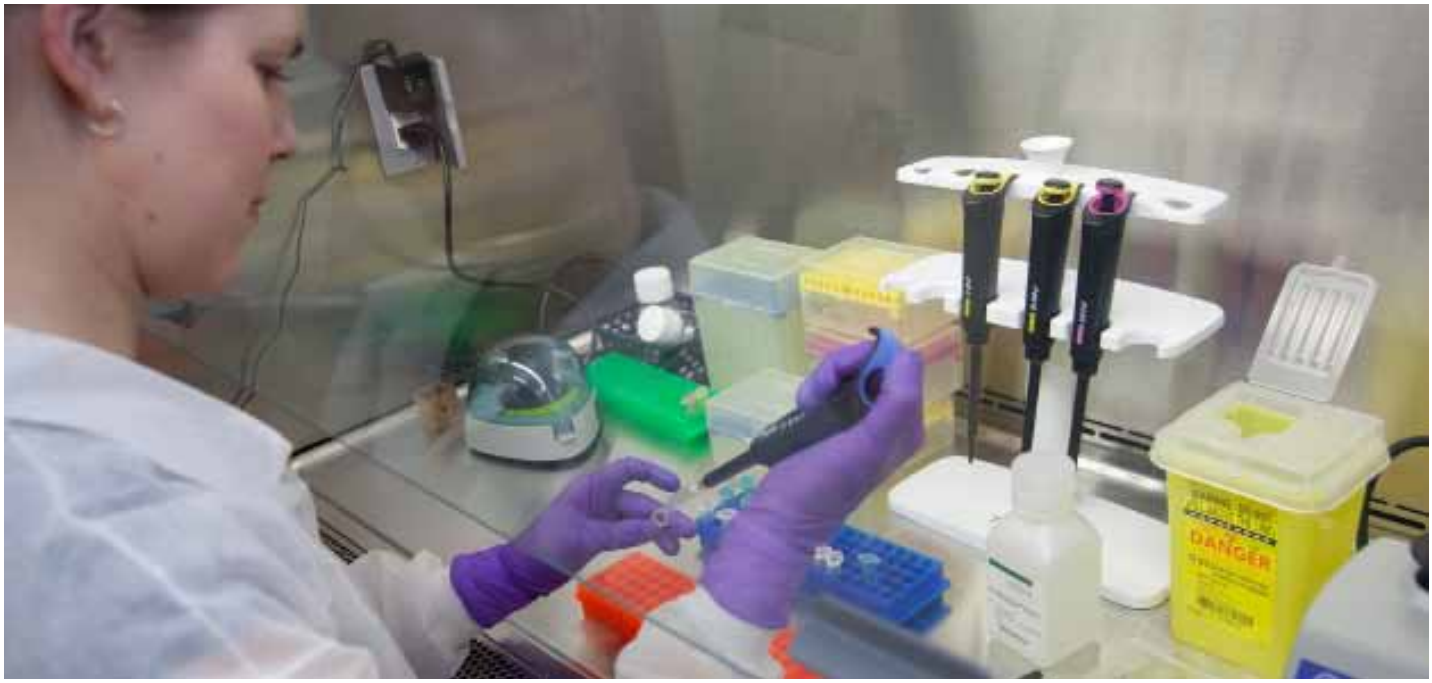
Jean MICHAUD	Neuropathologist
David GRYNSPAN	Pediatric Pathologist
Joseph DE NANASSY	Pediatric Pathologist

Kingston FPU

Victor TRON	Head of Pathology & Molecular Medicine, Pathologist
John ROSSITER	Medical Director and Neuropathologist
Marosh MANDUCH	Pathologist
Patricia FARMER	Pathologist
Paul MANLEY	Pathologist
David HURLBUT	Pathologist
Jerry CHEN	Pathologist
Christopher DAVIDSON	Pathologist
Tim CHILDS	Pathologist
Alexander BOAG	Pathologist
Iain YOUNG	Pathologist
David LEBRUN	Pathologist
Sandip SENGUPTA	Pathologist
Suzie ABU-ABED	Pathologist
David BERMAN	Pathologist

Sick Kids

Glenn TAYLOR	Head of Pathology, Pathologist
David CHIASSON	Medical Director and Forensic Pathologist
Gregory WILSON	Pathologist
William HALLIDAY	Neuropathologist
Cynthia HAWKINS	Neuropathologist



Northeastern Regional FPU

Martin QUEEN	Forensic Pathologist
Michael D'AGOSTINO	Forensic Pathologist (Moved to Sault Area Hospital in 2012)
Silvia GAYTAN-GRAHAM	Neuropathologist
Scott FAIRGRIEVE	Forensic Anthropologist
Scott KEENAN	Forensic Odontologist

Mount Sinai

Patrick SHANNON	Perinatal Pathologist
Sarah KEATING	Perinatal Pathologist

Community Pathologists	Location
Chhaya ACHARYA	Bluewater Health - Mitton Site
Zohreh AFSHAR-GHOTLI	Thunder Bay Regional Health Sciences Centre
Kunniparampil ALEXANDER	Brampton Civic Hospital
Nihad ALI-RIDHA	Mackenzie Richmond Hill Hospital
Pat ALLEVATO	Windsor Regional Hospital Metropolitan Campus
Ahmed ARWINI	Thunder Bay Regional Health Sciences Centre
Saadeldin AWAD	Chatham-Kent Health Alliance
Reza BEHJATI	Orillia Soldier's Memorial Hospital
Pravin BHAVSAR	St. Mary's General Hospital
Jagdish BUTANY	Toronto General Hospital
Konrad KUNG YEUNG	Joseph Brant Memorial Hospital
Satish CHAWLA	St. Catharines General
Nilam CLERK	Mackenzie Richmond Hill Hospital
Brian CUMMINGS	Grand River Hospital Kitchener-Waterloo Centre
Ardit DELIALLISI	Grey Bruce Health Services
Franco DENARDI	St. Catharines General
Dimitrios DIVARIS	Grand River Hospital Kitchener-Waterloo Centre
John DOUCET	Mackenzie Richmond Hill Hospital
Peter ENGBERS	Woodstock General Hospital
Nicholas ESCOTT	Thunder Bay Regional Health Sciences Centre
Ziba FADAVI	Orillia Soldier's Memorial Hospital
James FARMER	Hotel Dieu Hospital
Tim FELTIS	Credit Valley Hospital
Hudson GIANG	Ross Memorial Hospital
Ram GIDWANI	Bluewater Health - Mitton Site
Ann GUZOWSKI	St. Catharines General
Omar HAKIM	Windsor Regional Hospital Metropolitan Campus
Julien HART	Joseph Brant Memorial Hospital
Angela HAWORTH	Joseph Brant Memorial Hospital
Michael HELDE	Hotel Dieu-Grace Hospital

Eric HO	Ross Memorial Hospital
Allan HUNT	Rouge Valley Health System Centenary Site
Said ISMAIL	William Osler Health Centre
Prashant JANI	Thunder Bay Regional Health Sciences Centre
Chaozhe (Bell) JIANG	Joseph Brant Memorial Hospital
Sangeeta JOSHI	St. Catharines General
Suhas JOSHI	St. Catharines General
Shiv KAPUR	Royal Victoria Regional Health Centre
Olayiwola KASSIM	West Parry Sound Health Centre
Syed KAZIMI	Royal Victoria Regional Health Centre
Meagan KENNEDY	Thunder Bay Regional Health Sciences Centre
Scott KERRIGAN	North Bay Regional Health Centre
Dimitri KOUTSOGIANNIS	St. Catharines General
Annie KURIAN	Bluewater Health - Mitton Site
John LENTZ	Mackenzie Richmond Hill Hospital
Navid LIAGHATI NASSERI	Bluewater Health - Mitton Site
Charles LITTMAN	University of Manitoba
Dong LIU	Woodstock General Hospital
Rosemary LUBYNSKI	Bluewater Health - Mitton Site
Kelly MACDONALD	Lake of the Woods District Hospital
Kerry MACDONALD	Lake of the Woods District Hospital
Karen MACNEILL	Royal Victoria Regional Health Centre
Zbigniew MANOWSKI	The Trillium Health Centre - Mississauga Site
Anil MISIR	McMaster University - Medical Centre

Bassem MOUSSA	Chatham-Kent Health Alliance
Paul MOZAROWSKI	Sault Area Hospital
Ken NEWELL	Grey Bruce Health Services
Kathleen O'HARA	Sault Area Hospital
Gemma PASTOLERO	William Osler Health Care Centre - Etobicoke Campus
John PENSWICK	Muskoka Algonquin Health Care
Susan PHILLIPS	University of Manitoba
Russell PRICE	Royal Victoria Regional Health Centre
Paul RA	Windsor Regional Hospital Metropolitan Campus
Roland RIECKENBERG	Orillia Soldier's Memorial Hospital
Ian SALATHIEL	Royal Victoria Regional Health Centre
Michelle SAPP	William Osler Health Centre
Barry SAWKA	Grand River Hospital Kitchener-Waterloo Centre
Jose SEGURA	Welland County General Hospital
Sajid SHUKOOR	Hotel Dieu-Grace Hospital
Pamela SMITH	Windsor Regional Hospital Metropolitan Campus
Mark SOARES	The Trillium Health Centre - Mississauga Site
Alexander STEELE	North Bay Regional Health Centre
Abdul SYED	Royal Victoria Regional Health Centre
Joseph WASIELEWSKI	Thunder Bay Regional Health Sciences Centre
Syed Fasahat WASTY	St Thomas-Elgin General Hospital
David WELBOURNE	Thunder Bay Regional Health Sciences Centre
Grazyna ZEBROWSKA	St. Catharines General
Zuoyu ZHENG	St. Catharines General

CONTACT

Ontario Forensic Pathology Service (OFPS)
26 Grenville Street, 2nd Floor
Toronto, Ontario, Canada, M7A 2G9

Tel: (416) 314-4040
Fax: (416) 314-4060
Email: ofps@ontario.ca