Ontario

Ontario Forensic Pathology Service: Annual report July 27, 2017 - March 31, 2019

10 year anniversary commemorative edition

Ontario Forensic Pathology Service
Forensic Services and Coroner's Complex
25 Morton Shulman Avenue
Toronto, Ontario M3M 0B1
Tel: 416-314-4040
Fax: 416-314-4060
Email: ofps@ontario.ca

Chief Forensic Pathologist's message

In 2019, the Ontario Forensic Pathology Service (OFPS) celebrated its tenth anniversary. It is apparent that forensic pathology in Ontario has seen more growth and development in the past ten years than ever before. In my view, the main factors that have led to this progress have been: (1) our commitment to the virtuous cycle of 'service, research and teaching' as the primary driver for forensic pathology; (2) our creation of a sustainable team of forensic pathologists and others to support medicolegal autopsies across the province; (3) our dedication to continuous systematic quality improvement and openness to oversight from external reviews; and, (4) our leadership in promoting forensic pathology/medicine in Canada and the world.

At this time, I am reflecting on some of the milestones that OFPS has achieved over the past 10 years including:

- **2008** First Residency Training in Forensic Pathology at University of Toronto and the Provincial Forensic
- Pathology Unit:
    - 40 Canadian and international fellows have been trained
- **2009** Register of Pathologists established under the *Coroners Act*
- **2010** *Coroners Act* amendments for ethical practices regarding tissue and organ retention and disposition
- **2010** Pathology Information Management System (PIMS) implemented
- **2011** OFPS Molecular Autopsy Program began
- **2013** Transition to the Forensic Services and Coroners Complex:
    - Forensic imaging (CT, MRI and X-Ray), and the Trillium Gift of Life Network tissue recovery suite
- **2014** Dr. Michael Pollanen appointed President of the International Association of Forensic Sciences (2014-2017)
- **2015** G. Raymond Chang Forensic Pathology Fellowship at the University of Toronto:
    - Funding by Chang Foundation allows pathologists from Caribbean and low-income nations to be trained at PFPU.
- **2015** Memorandum of Understanding between Department of National Defence and OFPS:
    - Formalized the relationship since the 2002 Afghanistan war that has informed the development of personal protective equipment for soldiers
- **2017** 2017 International Association of Forensic Sciences (IAFS 2017) Triennial Conference in Toronto

- **2018** Bruce McArthur serial killer forensic investigation
- **2019** Reinvestigations of Indigenous deaths in Thunder Bay

The OFPS has become a world-leading forensic pathology system. We are committed to evidence- and quality-based approaches and have embraced cutting-edge innovations such as postmortem CT imaging and DNA testing in sudden death cases. I believe that the OFPS has a bright future due in large part to our enthusiastic group of young forensic pathologists and staff who are now emerging and developing their careers. Our exciting forensic pathology journey continues, and we welcome the challenges/opportunities ahead.

Michael S. Pollanen, MD PhD FRCPath DMJ (Path) FRCPC Founder, forensic pathology
Chief Forensic Pathologist of Ontario and Deputy Chief Coroner
Professor, Department of Laboratory Medicine & Pathobiology, University of Toronto

What we do

The Ontario Forensic Pathology Service (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.

Our vision

Deliver a high-quality death investigation system for a safer and healthier Ontario.

Our mission

Support the administration of justice, prevention of premature death and be responsive to Ontario's diverse needs.

Our values

- integrity
- responsiveness
- excellence
- accountability
- diversity

The OFPS applies these core values by embracing an independent and evidence-based approach that emphasizes the importance of thinking objectively in pursuit of the truth. The OFPS is committed to service, research and teaching.

Our services

Most deaths in Ontario are due to natural causes and do not require a medico-legal 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. Here is a list of services offered by OFPS:

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.

Organ and tissue donations

In appropriate cases, forensic pathologists work with regional supervising coroners to facilitate organ and tissue donation through Trillium Gift of Life, in accordance with the wishes of the deceased and family.

Scene visits

Pathologists attend scenes to gain necessary information as part of a complete autopsy. In most cases, photographs, video recordings and other imaging techniques are used to assess the scene instead of the scene visit.

Autopsies

Pathologists conduct autopsies and observe, document and interpret findings to help determine cause of death. Autopsies are performed under authority of an Ontario Coroner's Warrant for Post Mortem Examination, a legal document that instructs a pathologist to perform the autopsy. In Ontario, coroner investigations are conducted in accordance with the provisions of the Coroners Act and all autopsies must be authorized by a coroner's warrant. The OFPS also provides autopsy services to other jurisdictions, as well as to the Department of National Defence for military personnel who die outside of Canada.

There are five steps to a medico-legal autopsy:

1. Review of case history, scene and circumstances
2. External examination, including photographic documentation
3. Internal examination by dissection, including photographic documentation
4. Ancillary tests including, imaging, histology, cardiovascular, neuropathology, anthropology and odontology consultations, toxicology, metabolic screening and DNA testing
5. Opinion and report writing

Consultations and expert opinions

Our forensic pathologists and other consultants often participate in case conferences with other death investigation partners; assist in the identification of unidentified remains and missing persons and, provide expert opinion on complicated 'cold' cases in Ontario and other jurisdictions. They also provide occasional consultation and expert opinion on injuries to living individuals to assist with investigations.

Testimony in trials and other hearings

Forensic pathologists and other consultants testify as expert witnesses at coroner's inquests, all levels of court and public inquiries.

Collaboration with coroners

Forensic pathologists serve on OCC death review committees.

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 plan

The OFPS has a joint five-year strategic plan (2015-2020) with the OCC that sets out four priorities to guide the death investigation system in Ontario:

1. **A sustainable and effectively resourced system:** Provincial complement of highly-qualified expert resources, supported by modern processes, systems, infrastructure, and technology.
2. **Effective, relevant and reliable services:** System delivers effective and efficient investigation and certification of deaths, and high-quality forensic medicine and autopsy services.
3. **Leverage data, build knowledge and provide education:** Robust data creates knowledge and drives education and innovation in death investigation and forensic medicine.
4. **Improve the health and safety of Ontarians:** Enhanced review mechanisms and stronger partnerships contribute to a safer and healthier Ontario.

The OFPS also has a supporting implementation plan to follow its start-up plan (2009-2014) that responded to the Inquiry into Pediatric Forensic Pathology and amendments to the *Coroners Act* in 2009. The OFPS has addressed all the objectives outlined in its start-up plan to provide the basis for continued growth.

The plan focuses on capacity development and sustainability and establishes measurable objectives to implement the four strategic priorities of the OFPS/OCC plan.

In total, the OFPS committed to 43 objectives, all of which have been implemented.

2017-19 highlights

- enhancing the provision of autopsies using imaging modalities
- identifying human remains that are persistently unidentified
- maintaining residency training programs in forensic pathology
- maintaining training programs for less developed countries
- maintaining educational activities for pathologist assistants, police, physicians, lawyers and other learners
- encouraging peer-reviewed publications and presentations
- impacting public health and safety through tissue donation, molecular autopsy, multiple fatality planning.

Retirement of Dr. Toby Rose

Dr. Rose was hired as a forensic pathologist in 1998 and conducted more than 5600 medicolegal autopsies before her retirement. Her career included appointments as the Medical Director of the Provincial Forensic Pathology Unit, the inaugural Deputy Chief Forensic Pathologist (DCFP) for the province, and Vice-President of Logistics & Planning for the International Association of Forensic Sciences (IAFS) conference in 2017. An associate professor in the Department of Laboratory Medicine and Pathobiology of the University of Toronto,

she helped to train a generation of anatomical pathologists and forensic pathologists. Dr. Rose retired from her position as DCFP in June 2018, but continues to work with the OFPS part-time.

The Public Inquiry into the safety and security of residents in the Long-Term Care (LTC) Homes System

In August 2017, the LTC Homes Public Inquiry was established by Order in Council following the conviction of a LTC nurse. The Honourable Justice Eileen Gillese was appointed the Commissioner. In July 2018, the Chief Forensic Pathologist, Dr. Pollanen, provided testimony in the Inquiry based on a retrospective death investigation of the victims. Dr. Pollanen also provided recommendations based on the findings on how to improve the death investigation from the OFPS' perspective, which included a protocol for medico-legal autopsies conducted in the elderly population. The Inquiry produced a number of recommendations for the OCC/OFPS, and work continues on implementation.

Office of the Independent Police Review Director (OIPRD) - Broken trust: Indigenous people and the Thunder Bay police service report

In December 2018, Gerry McNeilly, the Independent Police Review Director, provided a report on the management of several death investigations in Thunder Bay and the intersections between the Thunder Bay police service and the OFPS/Office of the Chief Coroner (OCC). The report provided a number of recommendations specific to the OFPS/OCC regarding the investigation of Indigenous deaths, communications with police and others, improved local service delivery and cultural competency. The OFPS was tasked with 5 of these recommendations. The recommendations focus on training of pathologists and their relationships with investigators, providing service to the Thunder Bay area, and modifications to autopsy services to comply with the cultural normal of the Indigenous communities. A committee will be assembled to implement these recommendations.

2017-19 results

Register of pathologists

Under the *Coroners Act*, medico-legal autopsies may be performed only by pathologists who are appropriately credentialed and registered by the OFPS. On the basis of their qualifications, registered pathologists may be approved to perform:

- all medico-legal autopsies including homicide and criminally suspicious cases (Category A)
- routine cases only (Category B)
- non-suspicious pediatric cases only (Category C)

In 2018, a total of 120 registered pathologists were active, including 41 Category A pathologists permitted to conduct all types of autopsies. These 41 pathologists are recognized as having additional experience, training and/or certification in forensic pathology.

Register Composition by Pathologist Category

Register Composition by Pathologist Category

Category	2010	2011	2012	2013	2014	2015	2016	2017	2018

Category	2010	2011	2012	2013	2014	2015	2016	2017	2018
A	24	27	29	31	31	34	39	40	41
B	142	132	115	99	97	66	65	66	70
C	5	7	7	7	7	6	7	7	9

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

Pathologists are registered for a five-year term after which their appointments are considered for renewal. The Quality Team assembles data for review by the Credentialing Subcommittee, including:

- case load, cumulative over five years and year-by-year
- turnaround time for post-mortem examination reports
- peer review history
- complaints, incident reports and critical incidents, and remediation by the chief forensic pathologist and by the College of Physicians and Surgeons of Ontario (CPSO), where applicable

The OFPS Register is available publicly through the Ministry of the Solicitor General's website.

Performance management of registered pathologists related to quality of medico-legal autopsies is the responsibility of the Chief Forensic Pathologist. When there is professional misconduct or incompetence, the Chief Forensic Pathologist is obligated by law to report the issue to the College of Physicians and Surgeons of Ontario.

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, updated in 2014.

The practice manual includes the Code of Ethics, practice guidelines for medico-legal autopsies, and explanations of the peer review system and Register. Together, these documents provide the professional and policy foundation for the OFPS.

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

Pathology Information Management System (PIMS)

The OFPS uses the Pathology Information Management System (PIMS) to collect information about autopsies performed across Ontario. All registered pathologists contribute information to the system through the Post-mortem Examination (PME) 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 record is reviewed daily by a senior forensic pathologist to ensure that autopsies are done according to guidelines. The collected information is also used to evaluate resources, as well as provide statistics about performance and quality. PIMS, in conjunction with the PME record, facilitates accountability and the oversight of autopsies by the Chief Forensic Pathologist.

Caseload statistics

Caseload statistics are derived from Post-mortem 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 by appropriately qualified forensic pathologists. Some non-suspicious (medical type) autopsies of children are performed at pediatric sites. Routine autopsies are conducted in community hospitals. Approximately 84 percent of all autopsies were performed in Forensic Pathology Units (FPUs) and pediatric sites, and 16 percent in community hospitals in 2017-18. Chart 1 shows the distribution of autopsies captured in the system by FPUs and Community Hospitals from 2017-18.

Chart 1: Distribution of autopsies by FPUs and community hospitals, 2017-18

- PFPU: 3224 (41.35%)
- Hamilton RFPU: 1276 (16.37%)
- Community Hospitals: 1241 (15.92%)
- London RFPU: 528 (6.77%
- Ottawa RFPU: 786 (10.08%)
- Sudbury RFPU: 380 (4.87%)
- Kingston RFPU: 244 (3.13%)
- Sault area RFPU: 118 (1.51%)

About 85 percent of all autopsies were performed in Forensic Pathology Units and pediatric sites, and 15 percent in community hospitals in 2018-19. Chart 2 shows the distribution of autopsies captured by the system by FPUs and Community Hospitals from 2018-2019

Chart 2: Distribution of autopsies by FPUs and community hospitals, 2018-19

- PFPU: 3741 (43.56%)
- Hamilton RFPU: 1386 (16.14%)
- Community Hospitals: 1244 (14.48%)
- London RFPU: 569 (6.62%)
- Ottawa RFPU: 764 (8.90%)
- Sudbury RFPU: 403 (4.69%)
- Kingston RFPU: 355 (4.13%)
- Sault area RFPU: 127 (1.48%)

Chart 3 shows the distribution of autopsies captured by the system for each year by Forensic Pathology Units (FPUs) and community hospitals.

Chart 3: Distribution of autopsies by year - Total/FPUs/community hospitals

- 2010/11: 5360/3534/1826
- 2011/12: 5568/3937/1631
- 2012/13: 5963/4417/1546
- 2013/14: 5728/4529/1199
- 2014/15: 6105/4990/1115
- 2015/16: 6419/5312/1107
- 2016/17: 7279/6206/1073
- 2017/18: 7797/6556/1241
- 2018/19: 8589/7345/1244

Pediatric autopsies (for children five years of age or under) are often complex, requiring additional ancillary testing and/or consultation with other medical specialists. Pediatric autopsies of a criminally suspicious nature are all performed in Forensic Pathology Units.

In 2017-2018, there were a total of 182 pediatric cases completed across the province where children were less than five years of age (Chart 4). In 2018-2019, there were a total of 197 pediatric cases completed for the same reporting age (Chart 5).

Chart 4: Pediatric cases under five years old by locations, 2017-18

- PFPU: 59
- Community Hospitals: 38
- Hamilton RFPU: 35
- Ottawa RFPU: 20
- London RFPU: 20
- Sudbury RFPU: 8
- Sault Area RFPU: 2

Chart 5: Pediatric cases under five years old by locations, 2018-19

- PFPU: 60
- Community Hospitals: 50
- London RFPU: 39
- Hamilton RFPU: 24
- Ottawa RFPU: 18
- Sudbury RFPU: 4
- Sault Area RFPU: 2

Charts 6 & 7 provide a breakdown of autopsies by case type for 2017-19. The category ‘sudden’ includes non-homicidal gunshot wounds, drug overdoses and other cases not specified in the captured categories.

Chart 6: Distribution of autopsies by case type, 2017-18

- Sudden: 65.42%
- Collision: 7.72%
- Hanging: 6.98%
- External: 4.94%
- Decomposed: 4.57%
- Homicide: 2.77%
- Water: 2.66%
- Fall: 2.03%
- Other: 1.73%
- Suspicious: 1.12%
- Fire: 1.00%

Chart 7: Distribution of autopsies by case type, 2018-19

- Sudden: 67.22%
- Hanging: 8.56%
- Collision: 6.93%
- Decomposed: 4.94%

- Homicide: 2.80%
- Water: 2.66%
- Fall: 2.47%
- External: 1.92%
- Other: 1.78%
- Suspicious: 1.20%
- Fire: 0.96%

In some cases, the decision is made to limit an autopsy to an external examination where sufficient information can be obtained from a limited examination. There were 346 such cases performed in Forensic Pathology Units and 39 in community hospitals in 2017/18; and there were 161 such cases performed in Forensic Pathology Units and four in community hospitals in 2018/19.

Forensic pathologists at the Provincial Forensic Pathology Unit (PFPU) rely on imaging technology (i.e. Computed Tomography (CT) Scans) to inform their decisions about targeted examinations. In 2017-2018, 60 percent of cases were targeted examinations (Chart 8) and in 2018-2019, 48 percent were targeted (Chart 9).

Chart 8: Distribution of autopsies by autopsy type in PFPU, 2017-18

- Full: 60.3%
- Targeted: 25.1%
- External: 14.6%

Chart 9: Distribution of autopsies by autopsy type in PFPU, 2018-19

- Full: 48.7%
- Targeted: 36.0%
- External: 15.3%

Quality management

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

- Pathologist Register
- practice guidelines, including standardized reporting templates, forms and standard operating procedures
- consultation in difficult or challenging cases
- collection of standardized case information through the Post-mortem Examination Record
- peer review of all autopsy reports on homicide, criminally suspicious and Special Investigations Unit (SIU) [1] cases, and complex pediatric cases (deaths under five years of age) 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
- tracking of complaints to ensure timely resolution and corrective action
- continuing medical education in forensic pathology to
    - maintain specialist competence as required by the Royal College of Physicians and Surgeons of Canada
    - address performance concerns

Peer review of autopsy reports for homicide, criminally suspicious, pediatric and SIU cases

There were 342 autopsy reports peer reviewed in 2017/18 and 360 in 2018/19. On average, about 11 reviews were completed by each reviewing forensic pathologist per year. The average turnaround time for peer review was 7.1 days in 2017/18 and 7.6 days in 2018/19. The standard OFPS turnaround time for peer review is 10 working days.

Peer review of courtroom testimony by forensic pathologists

Forensic pathologists who testify submit one transcript of courtroom testimony each year for review by another forensic pathologist. Courtroom testimony is assessed for:

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

No problems have been identified in courtroom testimony reviewed to date.

Audit of autopsy reports for routine cases

Autopsy reports for routine cases are audited for administrative and technical accuracy by directors of Forensic Pathology 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 percent 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 reasonable.

A technical audit is done for all reports that fall into the following categories:

- cases with an undetermined cause of death
- non-traumatic and non-toxicologic deaths of individuals younger than 40 years old
- 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.

Tables 1 and 2 show the indicator, target outcome and overall performance for Forensic Pathology Unit and community hospital pathologists from 2017-2019.

Table 1: Key Performance Indicators for autopsy reports, 2017-18

Table 1

Key Performance Indicators for autopsy reports	Target	Results

Key Performance Indicators for autopsy reports	Target	Results
Submission Compliance (PME Record)	100%	84.4% - approaching compliance
Completeness	95%	99.9% - good compliance
Consistency	95%	99.2% - good compliance
Turnaround Time	90 days	Average = 111 days - approaching compliance
Reports with significant issues (Forensic Pathology Units)	less than 2%	0% - good compliance
Reports with significant issues (community hospitals)	less than 2%	0.7% (11 amended reports requested out of 1556 audits) - approaching compliance
Critical Incidents	0	0 - good compliance

Table 2: Key Performance Indicators for autopsy reports, 2018-19

Table 2

Key Performance Indicators for autopsy reports	Target	Results
Submission Compliance (PME Record)	100%	84.5% - approaching compliance
Completeness	95%	100% - good compliance
Consistency	95%	98.2% - good compliance
Turnaround Time	90 days	Average = 116 days - approaching compliance
Reports with Significant Issues (Forensic Pathology Units)	less than 2%	0% - good compliance
Reports with Significant Issues (community hospitals)	less than 2%	2.8% (43 amended reports requested out of 1552 audits) - approaching compliance
Critical Incidents	0	0 - good compliance

Turnaround time may be influenced by case complexity and availability of ancillary testing

Pathologists in community hospitals are expected to follow the best practices set out in the practice manual. Pathologists are provided feedback from routine audits with the goal of improving report quality. Note: Community hospitals may use their own institution's report templates if they include the required template fields.

Charts 10 and 11 illustrate consistency of the content and opinion of autopsy reports as assessed by the reviewing pathologist during the period, as shown by a technical audit.

Chart 10: Consistency Measures as Shown by Technical Audit, 2017-18

- Appropriate Ancillary Testing: Hospitals 99.6%; RFPUs 100%
- COD Reasonable: Hospitals 97.7%; RFPUs 100%
- Free of Language Errors: Hospitals 99.8%; RFPUs 100%
- Independently Reviewable: Hospitals 100%; RFPUs 100%
- Opinions are Reasonable: Hospitals 98.5%; RFPUs 100%

- Satisfactory Descriptions: Hospitals 99.6%; RFPUs 100%

Chart 11: Consistency measures as shown by technical audit, 2018-19

- Appropriate Ancillary Testing: Hospitals 99.6%; RFPUs 100%
- COD Reasonable: Hospitals 93.3%; RFPUs 100%
- Free of Language Errors: Hospitals 99.6%; RFPUs 100%
- Independently Reviewable: Hospitals 99.8%; RFPUs 100%
- Opinions are Reasonable: Hospitals 98.2%; RFPUs 100%
- Satisfactory Descriptions: Hospitals 99.0%; RFPUs 100%

Significant issues

Significant issues include substantial errors, omissions and other deficiencies.

A critical incident is a significant issue that contributes to a serious error in a death investigation. All critical incidents are analyzed to determine root cause and corrective action. There were no critical incidents for the reporting period.

If the reviewing forensic pathologist detects a significant issue during the technical review, feedback is provided to the case pathologist. For the given reporting period, there were significant issues detected in routine case reports from Forensic Pathology Units or community hospitals.

The purpose of quality assurance is to improve the quality of autopsies and reports. When a significant issue is detected, the reviewing pathologist contacts the original pathologist directly to discuss and recommend changes to the report. Continual improvement of autopsy practice and report writing is supported with:

- continuing education events such as the annual education course for coroners and pathologists and special workshops on autopsy practice
- resources such as the 2014 practice manual for pathologists and toolkit, including synoptic reports, annotated autopsy report templates, and Chief Forensic Pathologist's guidance with case examples

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:

- 90 percent of autopsy reports are to be completed within 90 days of the day of the post-mortem examination
- cases involving homicides, pediatric deaths, deaths in custody and those 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 percent of cases should be greater than six months old without a justifiable reason for delay (e.g., delays caused by molecular autopsy for channelopathy)

Chart 12 depicts the turnaround time for community hospital pathologists and forensic pathologists in forensic pathology units for over the last nine years. The longer turnaround time for forensic pathologists may be explained by the more complex nature of the autopsies performed.

Chart 12: Turnaround time, 2010-19

Average turnaround time by location and years:

- 2010-11: Hospitals 85; FPUs 165
- 2011-12: Hospitals 55; FPUs 91
- 2012-13: Hospitals 66; FPUs 121
- 2013-14: Hospitals 75; FPUs 121
- 2014-15: Hospitals 67; FPUs 99
- 2015-16: Hospitals 72; FPUs 101
- 2016-17: Hospitals 75; FPUs 115
- 2017-18: Hospitals 100; FPUs 112
- 2018-19: Hospitals 117; FPUs 100

Clinical forensic medicine

At present, qualified expert opinions and testimony by forensic specialists are usually available only in cases of violent death. However, cases of serious assault with a surviving victim can often benefit from the review and interpretation of injuries by a forensic expert, and the expert's opinion can be useful to the criminal justice system. Forensic pathologists consult by reviewing medical records and digital photographs.

Forensic anthropology

Forensic anthropologists are experts in the study of skeletal remains in the medico-legal 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. They are the experts at determining whether found bones are human or non-human by examining digital photographs or the remains themselves. They help to plan for multiple fatality events and manage identification when they occur. They are also the experts who determine whether found remains are of recent forensic interest or are archaeological or historical in nature.

One full-time forensic anthropologist works in the OFPS along with several fee-for-service consultants.

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 by laboratories at community hospitals and Forensic Pathology Units located in hospitals. At the PFPU, two full-time Histotechnologists are employed to process more than 2,900 tissue specimens each month in 2017/18 and over 3,400 in 2018/19.

Toxicology

Toxicological analysis of post-mortem samples are performed by scientists at the Centre of Forensic Sciences (CFS). In many cases, pathologists rely on the results and interpretive notes provided by toxicologists in coming to an opinion about the cause of death.

During the reporting period, toxicological analysis was requested in approximately 9,985 death investigations. The average time to issue a toxicology report by the CFS was 56.7 days. In cases where toxicology was required, 77.3 percent of the autopsy reports were issued within 90 days of receiving the toxicology reports.

Molecular autopsy/cardiovascular pathology

Many natural disease processes are now recognized to have a genetic underpinning. For a number of these conditions, characterization of the genetic mutations involved is becoming the standard of care in hospitals for living patients and is part of the movement towards targeted therapy and personalized medicine. The first significant manifestation of such a disease may be sudden and unexpected death, which may be first recognized and diagnosed following the autopsy. Thus, particularly for young people, the identification of a genetic contribution to sudden death can have huge implications for the surviving family members as well as the health care system.

A large proportion of cases where genetic disease may have contributed to death involve the heart and blood vessels. The OFPS provides high-quality cardiovascular pathology services to investigate sudden cardiac and vascular deaths in Ontario and occasionally by request from across Canada. In cases that may have an underlying genetic predisposition, DNA banking and genetic testing will also be performed (the molecular autopsy). With the results of the post-mortem examination and clinical investigation, DNA analysis can help define the underlying disease that caused death, facilitate screening in surviving family members and sometimes contribute prognostic information for affected relatives.

High-quality pathological diagnoses are essential. Through the OCC, we communicate with families to give them information about a potential genetic condition and their options for care in subspecialty hospital clinics. Next of Kin Clinics have also set up between the PFPU and the OCC to improve communication with family members. Families meet with coroners, forensic pathologists and the Family Liaison Coordinator at the Forensic Services and Coroner's Complex (FSCC) in person, via video or teleconferencing to review the findings of a death investigation and answer questions.

It is also being increasingly accepted that unrecognized genetic disease may play a role in deaths following interactions with correctional officers or police, or in the course of a criminal act. In these circumstances, a molecular autopsy can help provide answers in these challenging death investigations and contribute to coroner's inquests and the criminal justice system.

Child injury interpretation committee

In 2017, the OFPS formed a new committee to provide enhanced peer review of criminally suspicious pediatric deaths. Membership includes forensic pathologists from across Ontario, particularly those with special interest in pediatric deaths, as well as pediatricians from the SickKids SCAN (Suspected Child Abuse and Neglect) team, neuropathologists, cardiovascular pathologists, and forensic pathologists from other provinces. The peer review takes place before the autopsy report is released to provide a broad spectrum of specialist opinions for each case to ensure the quality of these challenging death investigations.

During the reporting period, 15 cases were peer reviewed by this committee.

Forensic imaging

Forensic Pathologists at the PFPU incorporate advanced post-mortem imaging findings (computed tomography (CT) and magnetic resonance imaging (MRI)) into their case management decisions. Incorporation of these non-invasive techniques into forensic pathology practice has resulted in increased numbers of external and targeted examinations leading to efficiencies and benefits to families.

Senior residents from the University of Toronto's Diagnostic Radiology Residency Program spend one month at the PFPU where they are integrated into daily service work. During a rotation preparing them for practice, radiology residents learn about lethal injury and disease as well as changes in the body after death. They report post-mortem CT and MRI scans, and are able to see pathologic lesions in the autopsy room in a way that is not possible in the clinical setting.

Tissue recovery for donation

The OFPS and OCC are committed to facilitating and increasing the availability of tissue for transplantation through the Trillium Gift of Life Network (TGLN). The FSCC houses a dedicated Tissue Recovery Suite that is used exclusively for obtaining donor tissues including corneas, heart valves, skin and bones. After consent by the family, tissues are recovered by trained staff from TGLN as well as the OCC and OFPS.

For the reporting period, there have been 166 tissue recoveries. These include bones, skin, eyes and heart valves.

OFPS-based education

Annual education course for coroners and pathologists

This two-and-a-half-day course is offered 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.

The 2017 course was held from November 15-17 and was attended by 27 registered pathologists.

The topics covered included:

- death scene management
- wellness and mindfulness
- Perinatal and Maternal Death Review Committee, maternal deaths and placental pathology
- opioid deaths
- cardiomyopathies
- elder abuse and dementia
- bodies from fire

The 2018 course was held from November 7-9 and was attended by 26 registered pathologists.

The topics covered included:

- opioid deaths
- violent deaths
- elderly death investigations and long-term care

Department of Laboratory Medicine and Pathobiology, University of Toronto

The Department of Laboratory Medicine and Pathobiology (LMP) at the University of Toronto has a goal to advance teaching and research in forensic medicine. Many of the forensic pathologists working in the OFPS are faculty for the University's continuing educational programs.

Continuing education events

LMP hosts continuing education events that bring national and international experts to University of Toronto to discuss topics in forensics. The courses are attended by academics, those working in forensic disciplines, other medical and legal professionals, and law enforcement practitioners. Since the last annual report, the following courses were offered:

Dr. Frederick Jaffe Memorial Lectureship

A special lecture series was created in memory of Dr. Frederick Jaffe, one of the first forensic pathologists in Canada. Dr. Jaffe authored a textbook, *Guide to Pathological Evidence*, which was used for many years by attorneys and judges. He was also the first director of a province-wide forensic medical service.

The lecture in October 2018 was given by the Chief Specialist: Forensic Pathology Service (Pretoria), Professor Gert Saayman where he described the unusual and novel medical cases from South Africa.

Training Canadian forensic pathologists

The PFPU, 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, has the first training program in Canada leading to certification in forensic pathology by the Royal College of Physicians and Surgeons of Canada. Since 2008, 17 pathologists have completed training, 14 of whom are now working within the OFPS. The PFPU has improved the RCPSC-accredited residency program and has implemented Competency by Design (CBD). The Hamilton Forensic Pathology Unit also trains forensic pathology residents in partnership with McMaster University.

In 2018, one new resident began training in forensic pathology in the University of Toronto program:

Tyler Hickey MD, PhD received his BSc.H degree from the University of Guelph, his PhD from the University of British Columbia (UBC) and then completed his MD and Anatomical Pathology Residency at UBC also. In 2019, Dr. Hickey successfully completed the RCPSC-accredited Forensic Pathology training program administered through the PFPU and the University of Toronto.

One resident began training in forensic pathology in the McMaster University program:

Jennifer M. Dmetrichuk MBChB PhD received her Bachelor of Medicine and Bachelor of Surgery from the University of Aberdeen, Scotland, and her PhD in Biological Sciences (Neurobiology and Physiology) at Brock University. She has been a General Pathology resident at McMaster University's Department of Pathology and Molecular Medicine.

Clinical fellows in forensic medicine

We are committed to developing global forensic medicine and have outreach activities and training collaborations with Jamaica, the Middle East, Sri Lanka, Chile and soon, Zambia. Since 2007, 11 international fellows have trained in forensic pathology at the PFPU. Since 2016, clinical fellows are eligible to write the Royal College of Physician and Surgeons of Canada examination in Forensic Pathology, through the Subspecialty Examination Affiliate Program.

In 2018, one clinical fellow from Sri Lanka trained at the PFPU:

Arasaratnam Elangovan MD, DLM received his Doctor of Medicine at Tver State Medical Academy in Russia. He also completed a Diploma in Legal Medicine and Doctorate of Forensic Medicine at the Postgraduate University of Colombo. Arasaratnam will be a Clinical Fellow at PFPU.

Some trainees benefit from the **G. Raymond Chang Forensic Pathology Fellowship** through the University of Toronto's Department of Laboratory Medicine and Pathobiology. This is the first fund in the world that enables young physicians from the developing world to train and ultimately strengthen forensic capacity in their own countries. This fellowship provides financial support to trainees whose countries may not be able to fund a year of training in Canada, particularly those from the West Indies.

In keeping with the Chang Foundation's philanthropic vision, the partnership was enhanced in 2017 through the addition of a **Catalyst Fund** to broaden the strategy to focus on critical infrastructure development in Jamaica, training of West Indian non-physician learners, and extension to other global areas in need.

In 2018, two international Chang Foundation fellows trained at the PFPU:

Ransford Fearon MBBS, MSc; MD Pathology received his Bachelor of Medicine Bachelor of Surgery degree at the University of the West Indies (UWI), Mona. He then received a MSc Forensic Science from UWI and was awarded a Doctor of Medicine in Pathology at UWI, Mona.

Mucheleng'anga (Adam) Luchenga BSc HB, MBChB, MMed Anatomical Pathology received his Bachelor of Science in Human Biology and then a Bachelor of Medicine and Bachelor of Surgery, as well as a Master of Medicine Anatomical Pathology from the University of Zambia. He has also worked as a Consultant Histopathologist at the University Teaching Hospital and as Forensic Pathologist in Zambia.

The Raymond Chang Foundation

The Raymond Chang Foundation is named for the late Toronto-based businessman and philanthropist who had a passion for adult education and was dedicated to improving opportunities where it was most needed. Born in Jamaica, Mr. Chang was a proud and active member of the Caribbean-Canadian community. He was appointed to the Order of Jamaica in 2011 and as an officer of the Order of Canada in 2014.

Raymond Chang understood the relevance of forensic pathology as a truth-seeking tool for justice. The fellowship is a legacy that lives on through the dedication of his children, Andrew Chang and Brigette Chang-Addorisio. Their generosity and shared vision have ensured a sustainable fellowship training program at the University of Toronto.

Recruitment of forensic pathologists

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

Christopher (Toper) G. Ball MBBS MScEng FRCPC received his Bachelor of Medicine and Bachelor of Surgery from the University of Wollongong in Australia in 2011. He completed training in Anatomical Pathology at the

University of Ottawa in 2017 and training in Forensic Pathology at the Provincial Forensic Pathology Unit (PFPU) in 2018. He then joined the PFPU as a Forensic Pathologist in July 2018. Before entering medicine, he enjoyed his career, in both industry and academia, in Mechanical Engineering.

Liza Boucher MD is a Forensic Pathologist at the Provincial Forensic Pathology Unit since November 2018, after working at the Laboratoire de sciences judiciaires et de médecine légale in Montreal (LSJML) for just over five years. Liza received her Doctor of Medicine from the University of Montreal in 2004, followed by three years of training in General Surgery and an Anatomical Pathology residency at Laval University. She completed her residency training in Forensic Pathology at the University of Toronto/Provincial Forensic Pathology Unit program in June 2012. Liza is also a Fellow of the Royal College of Physicians and Surgeons of Canada in Anatomical and Forensic Pathology.

Forensic Pathology Units

Sault Ste. Marie Forensic Pathology Unit

The Sault Ste. Marie Forensic Pathology Unit is led by Medical Director, Dr. Michael D'Agostino. Approximately 120 autopsies were performed per year.

The unit teaches students from medical schools around the province, pathologist assistant students from Western University on an elective rotation, as well as police and Centre of Forensic Sciences staff.

The unit provides regional forensic service with two pathologists, two pathologists' assistants and administrative staff to support their work.

Eastern Ontario Regional Forensic Pathology Unit (Ottawa)

When the Ontario Forensic Pathology Service was established in 2009 the Eastern Ontario Regional Forensic Pathology Unit had two full-time forensic pathologists (Drs. Milroy and Parai). It is now staffed by four full time forensic pathologists, Dr. Milroy the Medical Director and Drs. Kepron, Parai and Walker. In addition, Dr. Hamilton works in both the Unit and in pediatric and adult neuropathology and is qualified in neuropathology as well as Forensic Pathology. The workload has increased from under 600 cases annually to more than 770 medic legal autopsies per year. As well as covering Eastern Ontario, the Unit also provides a service for Nunavut.

As well as providing autopsy services, all the hold academic positions at the University of Ottawa and teach on the Anatomical Pathology Residency Training Program. In addition, teaching is provided for the Canadian Police College. Dr. Parai chairs the Canadian Association of Pathologists forensic pathology section and, along with Dr. Milroy, has organized the forensic pathology seminars at the annual meeting. Dr. Walker provides teaching at the University of West Indies and all members of the unit have been active at the American Academy of Forensic Sciences and the National Association of Medical Examiners.

Drs. Parai, Milroy and Kepron serve on the specialty committee of the Royal College of Physicians of Canada with Dr. Parai serving as Chair and Dr. Kepron as Chair Elect. Dr. Milroy serves as Chair of the Royal College panel of examiners in forensic pathology with Drs. Parai, and Kepron also being examiners. Dr. Hamilton also acts as an examiner in neuropathology.

All members of the unit have been active in publishing multiple academic papers and chapters as well as acting as referees for multiple journals over the last decade. Dr. Milroy currently edits the journal Academic Forensic Pathology.

Hamilton Forensic Pathology Unit

At the time of reporting, the Hamilton Forensic Pathology Unit at the Hamilton Health Sciences Centre is affiliated with McMaster University and performs on average over 1,300 autopsies during the reporting period. Forensic pathologists hold academic appointments and teach forensic pathology residents (PGY6), anatomical and general pathology, medical students and undergraduates.

Kingston Forensic Pathology Unit

The Kingston Regional Forensic Pathology Unit is based at Kingston General Hospital in the Department of Pathology and Molecular Medicine and is affiliated with Queen's University. Dr. Tanguay is a forensic pathologist and has been the Medical Director since May 2018. There are 16 Category B pathologists also performing autopsies. The unit performed about 300 medico-legal autopsies on average for last two years and participates in the education of anatomical pathology residents and medical students. In 2019, Dr. Tanguay became a member of the Royal College of Physicians and Surgeons of Canada Examiners Committee in Forensic Pathology.

London Forensic Pathology Unit

As the Provincial Forensic Pathology Unit is reaching its 10th year anniversary, the Regional Forensic Pathology Unit in London is reflecting on its 20th year milestone after consolidating autopsy services at the University Campus of London Health Sciences Centre back in 2000.

Over the years, the unit has been very successful in establishing and expanding its provision of high-quality forensic death investigation service to the Southwest Region of the province. Recent caseload demands continue to grow, as is the case throughout the province, partly attributable to the steady and persistent increase in opioid-related deaths. The unit performs over 550 medico-legal autopsies per year in 2017-18 and 2018-19.

The addition of Dr. Rebekah Jacques in 2019, joining the other three forensic pathologists Dr. Michael Shkrum, Dr. Elena Tugaleva, and Dr. Edward Tweedie, has helped to meet this challenge. In addition to postmortem examinations, all have other varied professional interests and activities. Dr. Tweedie has succeeded Dr. Shkrum as Unit Director and is also involved with the Royal College Forensic Examination Board and cardiovascular pathology subspecialty work. Dr. Shkrum is a graduate student advisor and researches in the field of motor vehicle safety. Dr. Jacques' extensive teaching interests include running an undergraduate forensic sciences course, and she also continues with death investigation bioethics research after completing a master's degree. Dr. Tugaleva is director of our unique Pathologists' Assistant Master's Degree training program which has been very successful in training many PAs who now work in forensic pathology units throughout the country.

Northeastern Regional Forensic Pathology Unit (Sudbury)

The Northeastern Regional Forensic Pathology Unit (NERFPU) of Health Sciences North in Sudbury is affiliated with Laurentian University and the Northern Ontario School of Medicine (NOSM) and performs about 400 medico-legal autopsies each year for Sudbury and the greater North Bay region.

In 2018, Dr. Kona Williams joined the regional unit as a Forensic Pathologist and Laboratory Medical Director. As such, there are two full-time forensic pathologists and three pathologist's assistants who manage the cases.

In addition, the Unit teaches NOSM medical students and each student is required to observe an autopsy as part of their graduation requirement.

International assistance and capacity development

Ontario has a proud history of providing leadership and support to international Disaster Victim Identification missions. These humanitarian missions are assembled following natural or human-caused disasters where help is needed to identify 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 to support human rights and justice. Dr. Pollanen has worked to build forensic medicine capacity and support human rights investigations in areas such as the Middle East, South Asia, Africa and the Caribbean. Some of this work has involved United Nations agencies and the International Criminal Court, as well as the International Committee of the Red Cross.

In 2017-2019, the PFPU hosted numerous domestic and international guests and observers:

- Susan Karki
- Maryanne Zhu
- Dr. Babarinde Akintude Ojo, Nigeria
- Dinesh Fernando, Sri Lanka
- Raymond Khan, Saskatchewan
- Dr. Nnamdi S. Ozor, Nigeria
- Dr. Yosuke Usumoto, Japan
- Dr. Arther Naseemuddin, New Brunswick
- Dr. Eva Montanari, Italy
- Dr. Sophia M. Green, Jamaica
- Dennecia George, Trinidad and Tobago
- Pooneh Salkhordeh, Toronto

The PFPU has a Memorandum of Understanding with the Institute for Forensic Science and Legal Medicine (IFSLM), Ministry of National Security, Jamaica to support professional development in forensics. Professional and technical staff of the PFPU have visited Jamaica to instruct forensic pathologists, pathologist assistants, administrators and others from IFSLM to promote best practices in forensic medicine. In 2018, with support from the Chang Foundation, two groups of pathologist assistants and a forensic pathologist travelled to Jamaica to teach morgue assistants the steps in a medico-legal autopsy. The groups were provided with lectures and hands-on learning experiences.

From 2017-2019, Dr. Pollanen travelled to Uganda to examine living patients suffering from Nodding Syndrome, a little-understood, endemic neurologic disorder of young people in East Africa. This visit inspired a research initiative into the pathological basis of this disease, funded by the Chang Foundation. This is an exciting development that demonstrates the application of forensic science to global health problems and some of the work has been published in the peer review literature.

In January 2019, Dr. Pollanen travelled to Ouagadougou, Burkina Faso to assist the Royal Canadian Mounted Police (RCMP) with a case of a Canadian after kidnapping.

Professional activities and outreach

Registered pathologists and forensic consultants 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, Canadian

Society of Forensic Sciences, American Academy of Forensic Sciences, the JAFS and other organizations. In 2017, the OFPS hosted the 21st triennial JAFS Conference.

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 and anatomical pathology in Canada.

OFPS pathologists lectured and delivered courses to audiences that included forensic pathologists and scientists, medical practitioners, the judiciary, lawyers, police, advocacy groups and others.

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 teach undergraduate and graduate forensic science students, medical students, pathologist assistant and physician assistant students, dentists, nurses, medical artists, law students, medical imaging residents, and pathology and forensic pathology residents. Forensic Pathology Units also host many medical students and pathology residents from Canadian universities and elsewhere.

The PFPU participates in the University of Toronto's Department of Laboratory Medicine and Pathobiology's digital library by providing digital histological images of forensic interest for the educational purposes of pathology residents.

Forensic pathologists also act as visiting faculty to foreign universities.

The PFPU partners with the "LAWS" initiative of the Toronto District School Board, the University of Toronto Faculty of Law and Osgoode Hall Law School to offer an educational program for Grade 11 students to understand forensic pathology, its intersection with the law, and the different career options available in the field. Case-based sessions, for more than 100 students each, are offered at the Forensic Services and Coroner's Complex. The students are exposed to a wide range of forensic specialties involved in a case.

Research

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

Committees

Forensic Pathology Advisory Committee

The Forensic Pathology Advisory Committee provides advice to the Chief Forensic Pathologist regarding professional medico-legal autopsy practices. This committee includes the directors of the Forensic Pathology Units and the President (or delegate) of the Ontario Association of Pathologists.

Forensic Services Advisory Committee

The committee was created to strengthen the objectivity of the OFPS and improve communication with key external stakeholders such as police, Crowns and defense attorneys are represented on the committee, which meets as required to provide advice to the Chief Forensic Pathologist on topics that advance the quality and independence of medico-legal autopsies.

Appendix A: *The Coroners Act*

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 medico-legal autopsies
- requires the chief forensic pathologist to communicate with the College of Physicians and Surgeons of Ontario on any adverse findings related to competency and professionalism of a registered pathologist

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

Appendix B: Governance

The OFPS and the OCC are part of the Ministry of the Solicitor General and are accountable to the Minister of the Solicitor General. The Deputy Solicitor General, Community Safety provides direction on administrative matters.

The Death Investigation Oversight Council (DIOC) ensures that death investigation services are effective and accountable. As an independent advisory agency, DIOC provides oversight of the OFPS and OCC, administers a public complaints process, and provides advice and recommendations to the chief coroner and chief forensic pathologist.

Appendix C: 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
- maintains a register of pathologists authorized to provide services

The deputy chief forensic pathologists have 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 pathologists also support the chief forensic pathologist in the administration, oversight and quality management of the OFPS.

Provincial Forensic Pathology Unit

The forensic pathologists of the PFPU perform approximately 3,500 autopsies per year, mainly from the Greater Toronto Area. The PFPU is affiliated with the University of Toronto and is the central referral facility for many complex autopsies from across the province, including homicides, skeletal remains and suspicious infant and child deaths. The medical director of the PFPU reports to the chief forensic pathologist.

The operation of the PFPU includes professional and technical roles in addition to forensic pathologists. These include forensic anthropologists, 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, Sault Ste. Marie and Sudbury. These units provide expertise in forensic pathology for approximately 3,500 routine and complex autopsies annually, including homicides and pediatric cases. The Ministry of the Solicitor General, through the OFPS, provides funding to these units.

Complex forensic autopsies are performed by qualified forensic pathologists, most of whom work at a Forensic Pathology Unit or at the PFPU 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 17 community hospitals support the work of the OFPS by conducting routine medico-legal autopsies in their facilities on a fee-for-service basis.

Appendix D: Partners and working relationships

Our major partners are the OCC, municipal and provincial police agencies, the Office of the Fire Marshal and Emergency Management, the Special Investigations Unit, the Centre of Forensic Sciences and the criminal justice system.

The OFPS also collaborates with universities on research, education and training. Furthermore, the OFPS provides services to organizations outside Ontario such as Canada's Department of National Defence and the Royal Canadian Mounted Police.

Footnotes

- [1] ^ The Special Investigations Unit civilian oversight agency responsible for investigating circumstances involving police that have resulted in a death, serious injury, or allegations of sexual assault of a civilian in Ontario.