
Professionalizing and Rebuilding Pediatric Forensic Pathology

OVERVIEW

Our systemic review has demonstrated the fundamental importance of forensic pathology to sound death investigation and the proper administration of criminal justice. Without a critical mass of highly trained and credentialed forensic pathologists working within a professionalized forensic pathology service, the criminal justice system will remain vulnerable to miscarriages of justice caused by flawed pathology.

For more than a decade, Dr. Charles Smith was viewed as one of Canada's leading experts in pediatric forensic pathology and the leading expert in Ontario. Yet he had little forensic expertise and his training was, as he himself described it, "woefully inadequate." He achieved the status of a leading expert in the field, in large part because there was no one who had the training, experience, and expertise to take him on. He worked all too much in isolation. This situation was prolonged because there was then, as there is now, a severe shortage of forensic pathologists in Ontario; there are even fewer forensic pathologists with the knowledge and experience to do pediatric forensic cases, or to provide the culture of peer review on which quality depends.

The most important and fundamental challenge ahead is to correct this situation by creating a truly professionalized Ontario forensic pathology service. The commentary and recommendations that follow are based on the objective of professionalizing all of forensic pathology and are not limited to pediatric forensic pathology.

I wish to stress that the focus needs to be on forensic pathology and not pediatric forensic pathology. Pediatric forensic pathology is not a recognized subspecialty. Nowhere in the world can one attend an accredited training program and receive certification in pediatric forensic pathology, and very few pathologists in the world are certified in both forensic and pediatric pathology. Although

pediatric pathologists were once considered better qualified to perform autopsies in suspicious child deaths, the consensus today is that forensic pathologists are much better trained for such cases. And, as a practical matter, the many shortcomings in the practice and organization of pediatric forensic pathology that have been demonstrated by our systemic review cannot be addressed by professionalizing pediatric forensic pathology only. Forensic pathology as a whole must be professionalized. This change is essential in order to restore public confidence and to ensure the quality of forensic pathology in pediatric cases to which the people of Ontario are entitled.

The professionalization of forensic pathology must be built on these four cornerstones:

- 1 legislative change that provides both proper recognition of the vital role forensic pathology plays in death investigation and the foundation for proper organization of a forensic pathology system;
- 2 a commitment to providing forensic pathology education, training, and certification in Canada and strengthening the relationship between service, teaching, and research;
- 3 a commitment to the recruitment and retention of qualified forensic pathologists; and
- 4 adequate, sustainable funding to grow the profession.

LEGISLATIVE RECOGNITION OF A PROFESSIONALIZED FORENSIC PATHOLOGY SERVICE

Forensic pathology in Ontario has suffered from decades of inattention. The *Coroners Act*, RSO 1990, c. C.37, provides the legal framework for death investigation in Ontario. Even though forensic pathology is the core specialized discipline in death investigation, the *Coroners Act* does not mention the role of the pathologist, let alone the forensic pathologist. The *Coroners Act* contains no concept of a forensic pathology service, makes no reference to the Chief Forensic Pathologist, and nowhere contemplates oversight of the work of forensic pathologists.

The silence of the *Coroners Act* speaks volumes. It treats this core discipline as little more than a consultancy service to the coroner. This treatment fails to accurately reflect the respective roles of coroners and forensic pathologists in the highest stakes deaths in the system: criminally suspicious deaths. The current legislative framework is inadequate.

As a result, for more than 25 years, Ontario's system of forensic pathology and pediatric forensic pathology has been little more than a patchwork of ad hoc con-

tracts, practices, and understandings inside the Office of the Chief Coroner for Ontario (OCCO); between the OCCO and the Ministry of the Solicitor General (now the Ministry of Community Safety and Correctional Services); and among these bodies and individual hospitals and pathologists performing work under coroner's warrant. Indeed, our systemic review has clearly shown that Ontario has never had a forensic pathology *system* – an organized and coherent service with a legislative and operational structure that supports and oversees an adequate pool of properly trained forensic pathologists to serve the province.

A legislated structure is essential to provide the framework within which the discipline of forensic pathology can evolve and grow to meet the requirements of modern death investigation. Legislative recognition represents an essential public expression of the importance our society must attach to this service, as we try to re-establish public confidence in it. The *Coroners Act* must be amended. The key features of the proposed amendments are set out below.

Creation of the Ontario Forensic Pathology Service

Fundamental to professionalizing forensic pathology is the creation of a formal entity, the Ontario Forensic Pathology Service (OFPS), to be responsible for all post-mortem examinations performed by pathologists under coroner's warrant. The purpose of the service is to provide forensic pathology services for coronial death investigations and oversight and quality assurance of those services. Approximately 7,000 such examinations are performed in this province each year, including approximately 400 cases initially investigated as criminally suspicious or homicide cases. Enshrining the OFPS in the *Coroners Act* as a separate and distinct service within the OCCO will reflect the fundamental importance of forensic pathology to sound death investigations and will ensure that the practice of forensic pathology is defined in a structure that fosters excellence, provides leadership, and ensures oversight.

Leadership Structure for the Ontario Forensic Pathology Service

The development of a sustained and committed leadership structure devoted to excellence is vital to the viability of the OFPS. There must be legislative recognition of the roles and responsibilities of the leaders of this service; their duties should not be defined only by a job description. The evidence I heard persuaded me that the leadership structure for forensic pathology should mirror the leadership structure for coroners. I therefore recommend legislative recognition of the following positions:

- 1 a Chief Forensic Pathologist who must be a certified forensic pathologist; and
- 2 one or more Deputy Chief Forensic Pathologists.

As discussed in greater detail in Chapter 12, Reorganizing Pediatric Forensic Pathology, the duties and responsibilities of the Chief Forensic Pathologist must include responsibility for overseeing all the work of the OFPS. This is an onerous responsibility. The quality of forensic pathology services on which the criminal justice system depends requires thoughtful and diligent oversight.

The Role of Pathologists

There was a consensus among the expert reviewers who testified at the Inquiry that only qualified pathologists – ideally, certified forensic pathologists – should conduct post-mortem examinations in criminally suspicious cases. At present, the *Coroners Act* does not recognize any role for pathologists in death investigations. This must change. The *Coroners Act* must be amended to define pathologists and to require that all post-mortem examinations performed under coroner’s warrant are performed by pathologists.

Establishment of the Governing Council

As is discussed in detail in Chapter 13, Enhancing Oversight and Accountability, the package of recommended legislative amendments must also include a governing council to provide independent and objective governance for the OCCO as a whole and to ensure proper oversight and accountability for the provision of forensic pathology services in the future. In my view, restoration of public confidence requires the creation of this governing council.

As discussed in Chapter 9, Oversight of Pediatric Forensic Pathology; Chapter 13, Enhancing Oversight and Accountability; and Chapter 15, Best Practices, Chief Forensic Pathologist Dr. Michael Pollanen, former Chief Coroner for Ontario Dr. Barry McLellan, former Chief Coroner for Ontario Dr. Bonita Porter, and others have done a significant amount of work since 2004 to address the many concerns surrounding the quality of forensic pathology services that have been demonstrated by my review. This is a commendable start, but there remains much to do to create a professionalized forensic pathology service for Ontario. There is wide agreement that legislative change is a prerequisite to addressing the fundamental systemic shortcomings revealed at this Inquiry. Only legislative change can create a credible forensic pathology service with the institutional framework to deliver quality, provide oversight, and ensure accountability. Unless the Province of Ontario amends the *Coroners Act* and makes a sustained commitment to provide the resources needed to effect the recommended changes, much

of the good that has been done will wither away and much that is urgently required will never be accomplished. The Province of Ontario should amend the *Coroners Act* to recognize the importance of forensic pathology in death investigations and to create a professionalized forensic pathology service for Ontario.

Recommendation 1

The Province of Ontario should amend the *Coroners Act* in order to

- a) establish the Ontario Forensic Pathology Service as the provider of all forensic pathology services for the province;
- b) recognize and define the principal duties and responsibilities of the Chief Forensic Pathologist;
- c) recognize one or more Deputy Chief Forensic Pathologists;
- d) require that all post-mortem examinations performed under coroner's warrant be performed by "pathologists," a term that should be defined in the *Coroners Act*; and
- e) create a Governing Council to oversee the duties and responsibilities of the Office of the Chief Coroner for Ontario.

AN EDUCATIONAL FOUNDATION FOR A PROFESSIONALIZED FORENSIC PATHOLOGY SERVICE

Perhaps it was easy in the past to ignore and to undervalue the importance to society of forensic pathology. Although it is the public face of pathology, it is an extremely tiny discipline. Thus, while the shortage of properly trained and accredited forensic pathologists is acute, the absolute number that must be added to properly staff the discipline is not daunting, although that number is impossible to precisely fix today.

This shortage does not exist only in Ontario. It is a worldwide problem. However, in Ontario and indeed throughout Canada, the development of the profession of forensic pathology has been seriously hampered by the fact that there have been no domestic postgraduate training programs in the science. Canadian forensic pathologists have been forced to seek training and certification in other countries. This situation must be corrected if Ontario is to have properly trained forensic pathologists in sufficient numbers to sustain a truly professionalized service.

As of the fall of 2008, there are still no academic departments of forensic medicine, and no established institutes, centres, or research programs in forensic medicine at any Canadian university. Thus, most of the work of forensic pathology in Ontario has not been carried out by fully qualified, full-time forensic pathologists. Rather, it has been left in large part to anatomical pathologists who are self-taught in forensic matters, have little or no forensic training, and, at best, work only as part-time forensic pathologists. This situation has also inhibited adequate research and development of the science of forensic pathology, even as compared to other subspecialties in laboratory medicine.

Forensic pathology education and training in Canada has lagged behind many countries for far too long. As long as Canada does not offer undergraduate education, postgraduate training programs, and certification of its own forensic pathologists, most of those practising forensic pathology in Ontario, and in Canada, will continue to be largely self-taught. The evidence I heard has proven the obvious – there is greater potential for misdiagnoses and other serious mistakes when those working in forensic pathology lack formal training and institutional support. There is broad agreement that this situation is untenable.

We are not the only jurisdiction to confront the shortage of adequately trained forensic pathologists. Other jurisdictions have dealt with similar issues. Although the means employed are often quite different, these jurisdictions have uniformly emphasized the need for quality education and training. Their experiences have reinforced the conclusion that, without domestic education and training programs, recruiting excellent people into forensic pathology will remain little more than a hope.

Education, Training, and Credentialing in Other Jurisdictions

United Kingdom

Forensic medicine in the United Kingdom began to develop as a discipline at the end of the eighteenth century. King's College Medical School in London was the first university to establish a chair in forensic medicine in England and, by 1876, there were chairs of forensic medicine in medical schools across Great Britain. Both academic and non-academic professionals wrote textbooks dedicated to forensic medicine as the discipline became firmly entrenched in Great Britain's hospital medical schools. When the National Health Service (NHS) was established in 1948, a number of hospitals in the United Kingdom were granted teaching-hospital status and, among other things, provided forensic pathology services. Until the 1990s, forensic pathology continued to be taught in university

medical schools, and forensic pathology training was largely based in teaching hospitals that provided services for the NHS. Then the landscape in relation to the discipline changed dramatically.

In 1989, the Home Office Working Party on Forensic Pathology examined the discipline in the wake of a number of miscarriages of justice that raised professional and public concern about the evidence and work of forensic scientists. It produced a report (the Wasserman Report) that has resulted in changes to the way in which forensic pathology services are delivered in the United Kingdom.

In response to the Wasserman Report, the Home Office Policy Advisory Board for Forensic Pathology (the Board) was created in 1991 to oversee the provision of forensic pathology services in England and Wales; to establish best practices for forensic pathologists; and to encourage the development of the profession through the training of practitioners and the support of academic departments and relevant research. The Board accredits the forensic pathologists it deems to be appropriately qualified and experienced to provide forensic services to Her Majesty's Coroners and the police by listing them on the Home Office Register of Accredited Forensic Pathologists. Police forces began to enter into service contracts, generally on a fee-for-service basis, with their local registered forensic pathologists.

In 2001, the Home Office revisited the state of forensic pathology in the United Kingdom and discovered that unforeseen changes had transpired over the decade, resulting in new challenges for forensic pathology. Most notably, forensic pathology had been squeezed out of the medical school curricula, in large part because of a lack of funding for service and research, and a consequential lack of interest in teaching the discipline. As a result, forensic pathology had become "peripheral to the ... core medical curriculum." This decline in academic interest coincided with the NHS hospitals' lack of interest in appointing forensic pathologists to perform what they now viewed as essentially non-NHS work – post-mortem examinations in coroner's cases.

These factors, together with the attraction of the fees available to private practitioners, have encouraged many qualified academic staff to leave universities and NHS posts to pursue careers in the private practice of forensic pathology. The results are predictable. Today, forensic pathology is rarely taught to undergraduate medical students, a situation that greatly limits exposure to the subspecialty. There are no longer any academic departments of forensic pathology in London, and training locations accredited by the Royal College of Pathologists (the medical college that oversees the education and training of specialists in all pathology disciplines in the United Kingdom) have dwindled to 10 in all of England, two in Wales, two in Scotland, and one in Northern Ireland.

The significant growth in self-employed forensic pathologists who are no longer exposed to the collegial atmosphere of academic institutions has generated a number of serious concerns. There is less consistency in practices, training, and standards in different areas of the country and among individual forensic pathologists. It has also become increasingly difficult to ensure that qualified forensic pathologists are available.

The forensic pathologists from the United Kingdom who participated in the Inquiry all expressed grave concern that the diminishing commitment to teaching forensic medicine and forensic pathology in universities and teaching hospitals has stunted the growth of the profession in a manner that risks its ability to serve the criminal justice system.

Despite the present shortage of accredited training opportunities in forensic pathology, the Royal College of Pathologists continues to promote a vigorous training program for trainees before they are eligible to write its examinations. The College offers two examination routes: one results in a career limited to forensic pathology, while the other allows for a career in histopathology as well as forensic pathology. At the end of either examination route, trainees should have acquired a broad knowledge of forensic systems and the legal aspects of clinical practice; familiarity in performing post-mortem examinations in a wide range of natural and non-natural deaths, including specialist techniques and related investigation; and an awareness of the responsibilities involved in dealing with suspicious deaths and in giving evidence in courts.

The United Kingdom provides an example of a system in some turmoil as a result, in part, of the erosion of university-based training programs and career-long affiliations between the universities and the profession. The lesson to be learned is that we must begin professionalizing the service from its roots. University-based education and fellowships are vital to the development of a high-quality forensic pathology service.

United States

In 1959, the American Board of Pathology (ABP) recognized forensic pathology as a subspecialty of pathology and began to offer a certification examination in the discipline. Qualification for the examination required two years of experience. Approximately 1,300 persons have been certified in forensic pathology in the United States through the ABP. However, the ABP does not offer subspecialty certification in pediatric forensic pathology. Even in the United States, there are only a handful of “pediatric forensic pathologists” who are trained and certified in both the pediatric and forensic pathology subspecialty areas.

In 1981, the Accreditation Council for Graduate Medical Education (ACGME)

was created to improve health care by assessing and advancing the quality of education for resident physicians. The ACGME inspects post-medical training programs within the United States and evaluates them against established standards and guidelines. It accredits the programs that meet its criteria, training goals, and objectives. In 1999, the ABP changed its qualification criteria. It now requires candidates to train through an ACGME-accredited program in forensic pathology to qualify for the subspecialty examination in forensic pathology.

As of 2007, approximately 40 forensic pathology residency programs, offering approximately 70 training positions nationwide, are accredited by the ACGME. These programs are often located within medical examiner offices that are affiliated with medical schools.

This affiliation recognizes the need to provide forensic experience to medical students and pathology residents who become candidates for recruitment into the medical examiners' offices. It is important to recognize that this system provides defined career paths for trainees in forensic pathology.

Australia

The *Coroners Act 1985* (Vic.) mandated a coordinated Coronial Service and an integrated Coronial Services Centre in Victoria, Australia, to house both the State Coroner's Office and the Victorian Institute of Forensic Pathology. Created as an independent institute of forensic medicine to address a number of difficult issues, the Victorian Institute of Forensic Medicine (VIFM), as it is now called, endorses an inclusive model based on a team approach to death investigations. Coroners in Victoria are county court judges, magistrates, or barristers and solicitors who, by their training, bring a legal component to the death investigation team. Sharing physical space with the medical professionals at the VIFM has strengthened the ties between the medical and legal aspects of forensic medicine and has reinforced the concept of teamwork in the death investigation system in Victoria.

Central to the VIFM is its commitment to teaching, research, and service, premised on the statutory obligation that the director of the VIFM, who is responsible for ensuring the provision of service, also hold a chair in forensic medicine at a university. This legislated obligation has ensured the indivisibility of the three pillars of service, teaching, and research, and has provided the necessary structure to foster the professional culture.

The VIFM's commitment to the education and training of future forensic scientists is demonstrated by its affiliation with two academic institutions and its accreditation by the Royal College of Pathologists of Australasia, a body that accredits laboratories and conducts certification examinations in forensic pathology. In 1989, the VIFM formally affiliated with the University of Melbourne to

create and promote common teaching and research interests between staff at both institutions, resulting in university access to the physical premises of the institute, and teaching and research obligations within the university for VIFM staff. In 1999, the VIFM also became affiliated with Monash University as its Department of Forensic Medicine, Australasia's only university-based postgraduate program in forensic medicine. The VIFM medical staff is widely engaged in teaching forensic medicine to undergraduate and postgraduate students at both universities. Affiliation with the two universities underscores the strong academic links supporting the VIFM.

Accreditation and Certification in Forensic Pathology in Canada

The Royal College of Physicians and Surgeons of Canada (Royal College) was established in 1929 by an Act of Parliament to oversee the medical education of specialists in Canada. It accredits specialty training programs and conducts examinations for certificates of qualification, similar to the American Board of Pathology and the Accreditation Council for Graduate Medical Education in the United States, and the Royal Colleges of Pathologists in the United Kingdom and Australasia. Holders of certificates of the Royal College are recognized by provincial authorities as specialists within their chosen specialty or subspecialty. The Royal College offers certification in several specialties of pathology, including anatomical pathology and general pathology.¹

In the mid-1990s, the Royal College froze the development of any new specialties and fellowships. The timing was unfortunate for a group of pathologists who had begun to seek the Royal College's recognition of forensic pathology as a subspecialty of anatomical and general pathology. In 2001, Dr. Jean Michaud, professor and head of the Department of Pathology and Laboratory Medicine at the University of Ottawa, as well as the head of the Department of Pathology and Laboratory Medicine at the Ottawa Hospital and the Children's Hospital of Eastern Ontario, revisited this issue and presented an application for recognition.

By September 2003, Dr. Michaud and others had convinced the council of the Royal College to formally recognize forensic pathology as a subspecialty by "Certificate of Special Competence," following a candidate's certification in either anatomical or general pathology. By this time, the Royal College understood the need to recognize the subspecialty of forensic pathology, a fact demonstrated by its approval of the application for subspecialty status.

¹ Medical terms used in this Report are defined in the medical glossary at the front of this volume.

The Royal College's formal recognition of forensic pathology as a subspecialty was only a first step. Eventually, candidates for certification in the newly recognized subspecialty of forensic pathology will need to complete an "accredited" training program to qualify to write the Royal College's certification examination(s). However, no training programs have yet been approved by the Royal College, and certification examination(s) have yet to be created by the Royal College's Examination Board.

To this end, the Specialty Committee for Forensic Pathology at the Royal College (Specialty Committee) and the Royal College are presently fine-tuning the requirements for both accredited training programs and certification procedures. They envision a one-year training program for those who have already completed their five years of postgraduate training in either anatomical or general pathology, followed by examination(s) set by the Royal College.

In addition, the Royal College has initiated a "Practice Eligibility Route" that sets out how the many pathologists who are currently practising forensic pathology in Ontario can become eligible to write the Royal College's certifying examination(s). For those with certification from an international jurisdiction, the Royal College contemplates a "Practice Ready Assessment Route," where it will confer certification once certain conditions have been satisfied. The Inquiry was informed that the profession expects examinations for new trainees, and for those currently practising the profession, to be in place for September 2009.

The Specialty Committee anticipates the process of recruiting interested physicians to the subspecialty of forensic pathology to begin once accredited training programs are approved by the Royal College. Once this occurs, the accreditation process will be disseminated through the Royal College's website to postgraduate deans at medical schools across Canada. It will be incumbent on the deans to work with local forensic pathologists to create residency programs.

Despite the fact that the Royal College has not yet approved any programs for accreditation, we were advised that, on request, it will provide information and applications for accreditation to interested centres. Its Accreditation Committee will vet any submitted applications, with input from the Specialty Committee. In my view, it is important that this information be circulated to all medical schools immediately so that applications can be submitted as soon as possible to begin the process of becoming an accredited training program.

It is most important that approval by the Royal College in relation to accredited training programs and the creation of examinations leading to certification by the Royal College be expedited. The status of the subspecialty needs to change immediately. Recognition and approval by the Royal College in the form of accredited training programs and certification is a vital part of elevating the

status of forensic pathology to its proper place; this factor alone will help entice students to consider it seriously.

Recommendation 2

As expeditiously as possible, the Royal College of Physicians and Surgeons of Canada should

- a) approve the accreditation of one-year training programs in forensic pathology offered by Canadian medical schools to candidates with Royal College certification in either anatomical or general pathology;
- b) certify forensic pathologists upon successful completion of an accredited training program and a Royal College examination in the subspecialty of forensic pathology; and
- c) finalize the process by which pathologists currently practising forensic pathology in Ontario may become certified by the Royal College.

Increasing the Interest in Forensic Pathology

The offer of credentials following successful completion of an accredited training program and certification examination will encourage people to view the subspecialty of forensic pathology with renewed respect. This feature, however, is only one step toward encouraging medical students to consider forensic pathology as a viable career option. It will also be necessary to increase exposure to the subspecialty at medical schools in order to promote an interest in the discipline early in physicians' medical careers. In fact, a number of pathologists who participated in the Inquiry acknowledged the importance of encouraging students to develop an interest in forensic pathology during medical school. Recent statistics indicate that the number of students entering residency programs in pathology has increased somewhat over the last several years. There is therefore an enhanced opportunity for those practising forensic pathology in Ontario today to reach out to students already interested in pathology and persuade them to pursue forensic pathology as a rewarding career in an increasingly valued subspecialty of medicine.

The affiliations between the regional forensic pathology units and university medical schools in the province provide an excellent opportunity for practising pathologists to foster teaching relationships with medical schools as a way of promoting careers in forensic pathology. For example, the pathology departments at the Ottawa Hospital and Hamilton General Hospital have taken active roles in promoting forensic pathology to medical students and pathology residents within

their affiliated universities.² As discussed later in this chapter, it is hoped that the Provincial Forensic Pathology Unit (PFPU) will soon be affiliated with the University of Toronto and, together with the proposed Centre for Forensic Medicine and Science at the University of Toronto and the Ontario Pediatric Forensic Pathology Unit (OPFPU) at the Hospital for Sick Children (SickKids), they will provide students and residents with valuable exposure to the subspecialty, along with the opportunity to be mentored by forensic pathologists.

It is important, therefore, that practising forensic pathologists take an active role in promoting the discipline within their affiliated universities. The Chief Forensic Pathologist should work with the regional directors and their hospitals to consider how best to promote forensic pathology in Ontario medical schools and among residents in anatomical and general pathology.

Recommendation 3

The Ontario Forensic Pathology Service and the Chief Forensic Pathologist should actively encourage

- a) faculties of medicine to promote interest in forensic pathology by exposing students in the early years of their programs to forensic pathology; and
- b) forensic pathologists to work with the faculties of medicine to educate students about forensic pathology.

The Three Pillars: Service, Teaching, and Research

Encouraging pathologists at the regional units to become actively involved with medical students will enhance and ultimately strengthen connections between pathologists, universities, and teaching hospitals. This linkage will expand the parameters of a unit's focus from provision of autopsy services only to include teaching and research, and will assist in generating an interactive and collegial atmosphere. In time, the affiliation may encourage students who train in the discipline to remain with the unit if it promises an attractive and balanced career. This model of growth is premised on cementing the relationship between the three pillars of a professionalized forensic pathology practice – service, teaching, and research. The expert forensic pathologists who participated in the Inquiry strongly encouraged the development of these three pillars as the foundation of a

² The Ottawa Hospital is affiliated with the University of Ottawa, and Hamilton General Hospital is affiliated with McMaster University.

credible forensic pathology service. They have had experience working within systems that have promoted integration of these three components of the discipline and view this integration as essential to the sustainability of a professionalized forensic pathology service.

The benefits of linking teaching and research obligations to service are obvious. Teaching and research enable the science of forensic pathology to progress, and ensure that practising pathologists remain current with developments in the profession. Teaching and research complement and reinforce the practice of forensic pathology that relies on evidence, research, and careful explanation, as opposed to the mere assertion of experience, authority, and conclusions about the cause of death. These linkages also strengthen ties between practitioners and students, as well as between service delivery units and teaching hospitals. Further, education and training programs affiliated with university medical schools bring together experts from a range of other related disciplines, such as law, criminology, anthropology, and clinical medicine. Encouraging and supporting forensic pathologists to engage in teaching and research may even prevent the risk of burnout that is associated with the heavy caseloads and isolated working conditions that forensic pathologists all too often encounter. These benefits will not only revitalize and enhance the profession but will assist in recruiting qualified forensic pathologists to Ontario by promoting the long-term viability and attractiveness of a career in the discipline.

However, the evidence I heard indicates that, currently, the service obligations of Ontario's forensic pathologists are such that they have little time to become involved in teaching or research. Unless caseloads are reduced, these pathologists will not have sufficient time to participate in these endeavours. Although some practising forensic pathologists will not be interested, most will welcome the opportunity to become more involved in teaching, training, and research activities, provided they are fairly compensated.

In my view, teaching and research must become part of the agenda to grow the profession of forensic pathology. To that end, the new OFPS should work with Ontario hospitals to ensure that forensic pathologists who engage in these activities as well as service have manageable caseloads. While this linkage obviously depends on increasing the number of forensic pathologists within the OFPS, adding teaching and research to service is a vital long-term goal.

Recommendation 4

The Governing Council and the Chief Forensic Pathologist should ensure that the Ontario Forensic Pathology Service is built upon the three essential and inter-dependent pillars of service, teaching, and research.

Funding Forensic Pathology Fellowships

Dr. Pollanen has recently developed a fellowship program in forensic pathology at the PFPU in collaboration with the University of Toronto. He began to train two Canadian residents in July 2008, anticipating that accreditation for the program from the Royal College will be forthcoming during the residents' academic year. These fellowships have been funded jointly by the OCCO and the University of Toronto. Unfortunately, the agreement to fund these fellowships is a one-time-only agreement. This arrangement is not sustainable.

More fellowships like this one are needed across the province, but with adequate, sustainable funding. Such fellowships will respond to the global shortage of forensic pathologists and will enrich the pool of candidates for full-time positions within the OFPS. A number of the regional forensic pathology units are positioned to provide such fellowships. In my view, they should move aggressively to do so. This is an important aspect of growing the service.

A Centre for Forensic Medicine and Science at the University of Toronto

The PFPU located in Toronto is the only forensic pathology unit in the province that is not integrated into an academic teaching hospital environment. This busy unit is the main centre for forensic autopsies in Ontario. It would benefit greatly from affiliation with a medical school, so that it could draw on the university's teaching and research endeavours as well as its student body. The University of Toronto is the logical choice. From the university's perspective, affiliation will provide prospective forensic pathology students with direct experience in forensic cases at the unit. In addition, exposure to pediatric forensic pathology cases will be available through the OPFPU at SickKids, which is already affiliated with the University of Toronto.

Dr. Pollanen and others have been working to create an extra-departmental centre through the University of Toronto, to be named the Centre for Forensic Medicine and Science (the Centre). The purpose of the Centre is to foster excellence in forensic medicine and science. The proposal envisions the Centre as the hub of five main branches of forensic science that together will collaborate to

develop a truly multidisciplinary approach to teaching and research in forensic medicine and science.

The creation of the Centre has the potential to develop evidence-based educational programs in forensic pathology. The Centre would focus on inter-professional education for undergraduate students of medicine and law, as well as on continuing professional development activities for the medical and legal communities. It would provide education in related forensic disciplines and would facilitate research into areas of controversy and debate in forensic medicine and science, among other educational endeavours.

The evidence at the Inquiry made it absolutely clear that a more interdisciplinary approach to forensic pathology is needed. Forensic pathologists know too little about the justice system or how best to participate in it, in those cases in which their input is vital. For its part, the justice system understands far too little about the science of forensic pathology. The Centre, with its capacity to draw on leading teachers and practitioners from both worlds and to encourage their interaction, could make an important contribution to addressing this challenge. In my view, it deserves the government's support.

Recommendation 5

The Province of Ontario, the Governing Council, and the Chief Forensic Pathologist should work with the University of Toronto to establish a Centre for Forensic Medicine and Science, which would

- a) educate both practitioners and students in a variety of medical disciplines related to the forensic sciences; and
- b) be affiliated directly with the Provincial Forensic Pathology Unit and the Ontario Pediatric Forensic Pathology Unit.

Educating the Medical Profession about the Criminal Justice System

Our systemic review dramatically demonstrated that forensic pathologists must learn more than pathology to practise competently. It is critical that their training include education about the justice system and, in particular, the criminal justice system. Forensic pathologists must understand the objectives of the criminal justice system, how it operates to achieve those goals, and how they can best fulfill their roles as experts. All the internationally renowned forensic pathologists who participated in the Inquiry emphasized how important it is for forensic

pathologists to understand the criminal justice system and their role within it. After all, their work is done for the justice system and is essential to it.

Universities, through both their undergraduate and graduate medical programs, perhaps jointly with faculties of law and other related disciplines, are well situated to provide education about the justice system. Forensic pathologists in training must be exposed to a course that deals with expert evidence, the justice system, and the relevant aspects of evidence law, and criminal procedure. The goal is to ensure that forensic pathologists are able to provide useful support to the justice system. Ideally, all undergraduate medical students should be introduced to forensic medicine and the law early in their medical school education, given that many of them may act as expert witnesses during their careers.

The Royal College has recently released documents detailing the specific standards of accreditation and the objectives to be met for residency programs in forensic pathology. These documents outline what is expected of a trainee on completion of an accredited training program. The Royal College's definition of forensic pathology, as set out in its "Objectives of Training in Forensic Pathology," underscores the importance of applying pathology principles and methodologies to support the forensic and judicial systems:

Forensic Pathology is a subspecialty of Anatomical Pathology and General Pathology which applies basic pathologic principles and methodologies of these two specialties to support the medicolegal and judicial systems in determining causes and manners of death, supporting the investigation of circumstances surrounding deaths, and assisting in the interpretation of postmortem findings of medical legal significance.³

I applaud the Royal College's recognition that a critical component of the forensic pathologist's job relates to the criminal justice system. Education about the justice system deserves a larger profile than it has received in the past, when it focused mainly on how to perform as an expert witness in court. The Royal College's definition of the forensic pathology subspecialty and its standards for trainees will go a long way toward cementing the importance of legal education to the profession.

In enhancing their teaching of forensic pathology at all levels, medical schools and forensic units should take advantage of interdisciplinary approaches to strengthen the importance of legal education for those studying forensic pathology.

³ Royal College of Physicians and Surgeons of Canada, "Objectives of Training in Forensic Pathology," 2008. Referenced and reproduced with permission.

Recommendation 6

All individuals and institutions that provide or oversee the education of medical students in Ontario should focus on the critical importance of the criminal justice system in medico-legal education. In particular, the Royal College of Physicians and Surgeons of Canada should ensure that any accredited fellowship programs in forensic pathology provide education in relation to expert evidence, the justice system, and the relevant aspects of evidence law and criminal procedure.

Continuing Medical Education

In 2000, the Royal College officially established a Maintenance of Certification program requiring all physicians certified by the Royal College to maintain their skills and competencies in their particular specialty or subspecialty by completing 400 credit hours over a five-year cycle, with a *minimum* of 40 credit hours to be completed per year, of continuing medical education. Credits include time spent reviewing journals, attending conferences, and working on personal learning projects. Should the Royal College agree to certify forensic pathologists, those certified will be subject to the continuing medical education requirements set out above, as a minimum requirement.

The evidence I heard has demonstrated a specific need for continuing education about the justice system and the role of the forensic pathologist within it. Pathologists practising forensic pathology in Ontario should be required to complete a certain number of continuing education hours each year on the topic, either as part of, or in addition to, the Royal College's requirements for continuing education. The particulars of this requirement should be determined by the Chief Forensic Pathologist or designate.

In this way, all pathologists conducting autopsies under coroner's warrant will receive continuing medical education in relation to both recent developments in the science of forensic pathology (for example, shaken baby syndrome) and the criminal justice system. Continuing education must be adequately resourced so that forensic pathologists can participate in programs outside Ontario or even Canada, if they are not offered locally.

Recommendation 7

All individuals and institutions that provide or oversee the provision of forensic pathology services in Ontario should focus on the critical importance of continuing medical education and, in particular,

- a) the Chief Forensic Pathologist or designate should assume primary respon-

sibility for fostering ongoing and interdisciplinary education about the role of the forensic pathologist in the justice system; and

- b) the Province of Ontario should adequately fund continuing education for forensic pathologists regarding recent developments in the science of forensic pathology and the role of the forensic pathologist in the justice system.

RECRUITMENT AND RETENTION OF FORENSIC PATHOLOGISTS

Forensic pathology has never been a popular career choice in Canada. Heavy workloads and poor remuneration have discouraged pathologists from undertaking forensic work in favour of careers in clinical pathology, which is better paying and, until very recently, was viewed as less controversial.

This historical trend has been aggravated by a number of problems specific to the discipline in Ontario. As we learned, most pathologists doing forensic work today are in the latter stages of their careers and are not being replaced by new trainees. As well, the small group of those practising forensic pathology in Ontario has been forced to spread itself more thinly than in the past, particularly given the increased number and complexity of its cases.

It is true that forensic pathology, being a human activity, cannot always achieve absolute perfection. However, it is also true that forensic pathology, like all pathology, provides a vital service to society and therefore must achieve a level of excellence. For forensic pathology, the cost of failure is that the criminal justice system may deliver unjust outcomes, with tragic consequences. For clinical pathology, the cost of failure can be equally tragic. For both forensic and clinical pathology, society must ensure that it can attract the very best people and provide the very best oversight mechanisms so that failure can be avoided.

This goal has been made more difficult to achieve because forensic pathology – indeed, all pathology – has been under severe public scrutiny for some time. For more than a year, pathologists have repeatedly been in the national headlines and their alleged errors have spawned not just this Inquiry but inquiries in Newfoundland and Labrador and New Brunswick. The media scrutiny has been intense, most of it has been negative, and it has put a significant strain on pathologists across the country. Dr. Pollanen told us that some Ontario pathologists are no longer prepared to perform post-mortem examinations under coroner’s warrant because they fear this level of scrutiny. The reality this situation presents cannot be ignored when we address the challenge of building a truly professionalized forensic pathology service in Ontario.

It is too early to know with certainty whether these events will have a lasting chilling effect on attempts to recruit and retain qualified forensic pathologists, but active steps must be taken to prevent such a result. Various measures must be taken immediately to revitalize the profession so that the province is not left with an insufficient number of qualified pathologists.

The Province of Ontario must urgently provide the resources necessary to address the acute shortage of qualified forensic pathologists. The following proposals must be implemented immediately to address the present crisis and establish a sound basis on which to professionalize forensic pathology.

As discussed earlier, a first step is to ensure adequate funding for the proper education of forensic pathologists at the undergraduate, graduate, and continuing education levels. Adequate sustainable funding for fellowships in forensic pathology at the regional forensic pathology units will allow the units to offer attractive fellowships to residents that, over time, will hopefully lead to a steady increase in forensic pathologists across the province. The forensic pathologists who participated in the Inquiry indicated that positive experiences often lead trainees to remain for their entire careers within the unit in which they were trained.

This recommendation dovetails with the importance of offering newly recruited forensic pathologists positions that embody the basic commitment to service, teaching, and research. To achieve this objective will require an infusion of additional resources to ensure that caseloads are within manageable standards.

Another important element is to provide, within the OFPS, career paths similar to those available to coroners in Ontario: fellows, junior pathologists, regional directors, deputies, and Chief Forensic Pathologist. This hierarchy allows for clearly defined roles and recognizes the importance of engaging those working within the profession in careers that can offer increasing responsibility and remuneration. It addresses the present situation, described as “relatively flat,” with no straightforward career progression or advancement offered. The present model will not encourage those exploring challenging career options to seek employment within an organization that does not offer an opportunity to grow professionally.

One very important issue in Ontario is equal compensation across the province for the pathologists performing forensic work for coronial death investigations. The salaries of hospital-based pathologists are governed by the Laboratory Medicine Funding Framework Agreement (LMFFA). This agreement between the Ontario Medical Association and the Ministry of Health and Long-Term Care provides that each hospital pathologist receives the same minimum guaranteed remuneration. Ministry of Community Safety and Correctional

Services forensic pathologists (those who work at the PFPU) are excluded from the LMFFA.

The result is that government-employed forensic pathologists at the PFPU are paid far less than hospital pathologists across the province. The differential in favour of hospital pathologists is magnified by the additional benefits hospital pathologists receive over those employed directly by the ministry, such as funds for continuing medical education and other benefits offered by the hospitals themselves. The differential has an obvious adverse effect on recruitment. Those familiar with it all agreed that this salary differential is a major obstacle to hiring forensic pathologists in full-time positions at the PFPU. It is essential that the Province of Ontario take immediate steps to ensure equal compensation for all forensic pathologists, whether on staff at a hospital or at the PFPU, by making them part of the LMFFA, or by taking steps that will achieve and maintain an equivalent result.

There are two additional points that need to be addressed by appropriate funding to ensure the professionalization of the service. The first is the need to increase, over time, the full-time-equivalent positions within the OFPS located within the regional units across the province. This concept acknowledges the change in recent years where more of the work completed pursuant to coroner's warrants has been reallocated to the regional forensic pathology units across the province, increasing their volume of cases while decreasing the volume completed in smaller community hospitals. This arrangement has benefits not only for quality of service. The increasing use of full-time-equivalent positions in the regional units, and the diminishing need for fee-for-service work that this allows, also facilitates the dedicated expertise needed for a professionalized service.

It is also critical that sufficient funding be provided to ensure that the facilities where forensic pathology is practised reflect the level of excellence expected of the OFPS and are equipped with state-of-the-art equipment to assist the forensic pathologists in their work. This factor is important – particularly if the regional units are to perform an increasing percentage of the forensic work across the province, including the most difficult cases. It is also a vital part of making forensic pathology an attractive career choice at a time when it, like all pathology, has been negatively affected by adverse publicity.

Creation of a New Facility

Dr. Stephen Cordner, director of the Victorian Institute of Forensic Medicine in Australia, toured 26 Grenville Street in downtown Toronto, which houses the PFPU. Dr. Cordner emphasized the importance of working within a contemporary

facility that can support the technical complexities of conducting post-mortem examinations. He described the present premises of the PFPU as cramped and outdated. In its present state, it is a significant obstacle to the professionalization of forensic pathology in Ontario.

The Inquiry learned about the Ontario government's proposal to create a large state-of-the-art forensic sciences complex. It is anticipated that this complex will be built outside the Toronto city core and will house the Centre of Forensic Sciences; the PFPU with an expanded catchment area, including Brampton and Guelph; inquest courts; and the administrative offices of the OCCO. It will be physically much larger than the present facility, with industry-leading equipment and services along with the ability to engage in telepathology communications across the province. The creation of this facility represents a major commitment to the modernization and professionalization of death investigations in Ontario.

I urge the Province of Ontario, the Centre of Forensic Sciences, and the Office of the Chief Coroner for Ontario to move forward as quickly as possible to develop this facility.

Recommendation 8

The Province of Ontario should provide the resources necessary to address the acute shortage of forensic pathologists in Ontario. In particular, the Province of Ontario should

- a) provide adequate and sustainable funding for fellowships in forensic pathology in each of the regional forensic pathology units across the province;
- b) fund full-time positions within the profession that will support the three pillars of service, teaching, and research, including but not limited to, Deputy Chief Forensic Pathologist(s), director positions at the regional forensic pathology units, and staff forensic pathologist positions;
- c) provide sufficient resourcing to ensure that forensic pathologists' caseloads do not exceed recommended standards;
- d) include Ontario Forensic Pathology Service pathologists in the Laboratory Medicine Funding Framework Agreement, to ensure that all pathologists are compensated fairly, whether they work on staff at a hospital or at the Provincial Forensic Pathology Unit, or take steps that will achieve and maintain an equivalent result;
- e) increase the number of full-time-equivalent positions in Ontario's regional forensic pathology units;

- f) ensure that each unit where post-mortem examinations are performed pursuant to coroner's warrant is fully equipped, up to date, and properly resourced; and
- g) fund the construction of a new, modern facility to house the Office of the Chief Coroner for Ontario and related forensic sciences.

Immediate Steps

There is an immediate need to enhance the expertise in forensic pathology in Ontario. In addition to the proposals I have already made, immediate measures are also required. The public needs to have faith in those performing forensic pathology services in the most difficult cases. One way to move more quickly to attain this goal as the subspecialty continues to grow is through the creation of a Registry of forensic pathologists, comprised of different categories with specific requirements of expertise. Competent and qualified pathologists will be appointed to the Registry. As a result, the Chief Forensic Pathologist will have a mechanism by which the public can be assured that the forensic pathologist best qualified for a specific case will perform that post-mortem examination. Details of the Registry are discussed in Chapter 13, Enhancing Oversight and Accountability.

The objective is the creation of a forensic pathology service in Ontario that is an internationally renowned service, with forensic pathologists trained and certified in Canada through excellent accredited training programs. Obviously, this transformation will not occur immediately. To assist in addressing the issue of maintaining a pool of qualified forensic pathologists in the immediate future, aggressive efforts need to be made to recruit appropriately credentialed forensic pathologists offshore.

Recommendation 9

The Ontario Forensic Pathology Service should immediately recruit appropriately credentialed forensic pathologists offshore to address the shortage in the province.

Recommendation 10

The Province of Ontario should provide sufficient resources to permit the recruitment of appropriately credentialed forensic pathologists from other countries.

ADEQUATE AND SUSTAINABLE FUNDING

Our systemic review has highlighted the many ways in which forensic pathology has been undervalued for decades. Not surprisingly, it has also been underfunded – again, for decades. Inadequate resources continue to undermine the laudable efforts of the new leadership of the OCCO to fix the many problems identified by our systemic review. This cannot continue. Unless the Province of Ontario acts quickly to implement a significantly increased and sustainable funding model for forensic pathology, these problems cannot be fixed – and the system cannot be rebuilt, as it must be. Resources are essential to professionalize and grow forensic pathology in Ontario and thereby avoid miscarriages of justice.

Many of my proposals related to the qualifications and practices of forensic pathologists, including the practice of quality assurance, depend on there being an adequate number of forensic pathologists. There is a global shortage of forensic pathologists. Ontario lags behind many jurisdictions in part because it has been impossible for pathologists to receive education, training, and ultimately certification in Ontario. It is essential that adequate resources be provided for the training, recruitment, retention, and continuing education of forensic pathologists in Ontario. Ontario's forensic pathologists should be encouraged to engage in teaching and research, in addition to the provision of services in death investigations. They should also be able to practise in appropriate facilities. These changes, which I describe in this chapter, and others that I address in the chapters that follow, can be made only if funding is adequate and sustained over the long term.

I urge the Province of Ontario to allocate the necessary resources that will permit the changes I have discussed so far, and those that I discuss subsequently, to succeed.

Recommendation 11

The Province of Ontario should commit to providing funding sufficient to sustain the changes required to restore public confidence in pediatric forensic pathology.