Inquiry into Pediatric Forensic Pathology in Ontario

REPORT

Volume 1 Executive Summary

Volume 2 Systemic Review

Volume 3 Policy and Recommendations

Volume 4 Inquiry Process

The Honourable Stephen T. Goudge
Commissioner

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INQUIRY INTO PEDIATRIC FORENSIC PATHOLOGY IN ONTARIO

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September 30, 2008

The Honourable Chris Bentley
Attorney General of Ontario
Ministry of the Attorney General
McMurtry-Scott Building
720 Bay Street, 11th Floor
Toronto, ON M5G 2K1

Re: Inquiry into Pediatric Forensic Pathology in Ontario

Dear Mr. Attorney:

With this letter I am delivering the Report of the Inquiry into Pediatric Forensic Pathology in Ontario. I hope the Report will provide the foundation on which to rebuild public confidence in pediatric forensic pathology in Ontario and its future use in the criminal justice system. It has been a privilege to serve as the Commissioner.

Yours very truly,

Stephen Goudge
Commissioner

STG/mm

Inquiry into Pediatric Forensic Pathology in Ontario

The Report consists of four volumes: 1 (Executive Summary), 2 (Systemic Review), 3 (Policy and Recommendations), and 4 (Inquiry Process). The table of contents in each volume is complete for that volume and abbreviated for the other three volumes.

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Volume 2: Systemic Review

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Acknowledgments

The successful discharge of the mandate given to this Inquiry some 17 months ago has required the intensive and focused efforts of a number of people of extraordinary ability. I owe an enormous debt of gratitude to them all.

I begin, first and foremost, with Commission counsel, led by Linda Rothstein as lead counsel and Mark Sandler as special counsel, criminal law. On being appointed, one of my first objectives was to get their help. They have been simply superb. They were ably assisted by my two assistant counsel, Robert Centa and Jennifer McAleer, both of whom deserve their reputations as rising stars in the profession. These four performed their duties as Commission counsel with great skill and professionalism, and, most important, with the balance that is essential for this role in a public inquiry.

I was also assisted by a team of lawyers: Ava Arbuck, Tina Lie, Jill Presser, Jonathan Shime, Robyn Trask, Sara Westreich, and Maryth Yachnin. Heather Hogan and Debra Newell, now on their way to becoming lawyers, ably discharged the task of overseeing the collection and distribution of documents and managing our database. This team is as talented and dedicated a group as I have ever had the privilege of being associated with.

Our administrative team deserves equal thanks. With his great experience with other public inquiries, David Henderson performed skilfully as our chief administrative officer. Carole Brosseau ably served as our manager of finance and operations, capably assisted by Tiana Pollari. Clita Saldanha, Sandra Leal, and Marlene Mock provided excellent administrative support to the Inquiry lawyers and to me. Chris Riley, our registrar, used the Inquiry's electronic database so effortlessly that we were able to conduct a largely paperless process.

I was very fortunate to get Professor Kent Roach of the Faculty of Law at the University of Toronto to be the Inquiry's research director. In addition, I am

grateful to Professor Roach and his colleague, Professor Lorne Sossin, for their wise policy counsel throughout the course of the Inquiry.

Peter Rehak, who has significant experience in public inquiries, did a marvellous job as our media relations officer. He also designed and maintained the Inquiry's website.

I am also grateful to our three editors, Rosemary Shipton, Mary McDougall Maude, and Dan Liebman. Their skill and tact made the editorial process almost painless.

Beyond our own team, I am also indebted to Dr. Stephen Cordner and Dr. David Ranson of the world-renowned Victorian Institute of Forensic Medicine in Melbourne, Australia. They provided us with general scientific advice throughout the course of the Inquiry that was invaluable.

My colleague, Associate Chief Justice of Ontario Dennis O'Connor, has run two very successful public inquiries. He provided us with wise guidance on many occasions. It was a great comfort to be able to turn to him for advice.

I also owe thanks to counsel for the parties at the Inquiry. Without their skill, cooperation, and courtesy, we would not have been able to proceed as efficiently.

Finally, I owe my family and especially my spouse, Reva Devins, a huge debt of gratitude for their patience, understanding, and support over these last 17 months.

Stephen Goudge

Abbreviations and Acronyms

AAFS	American Academy of Forensic Sciences
ABP	American Board of Pathology
ACGME	Accreditation Council for Graduate Medical Education
AFG	Affected Families Group
AIDWYC	Association in Defence of the Wrongly Convicted
ALST/NAN	Aboriginal Legal Services of Toronto and Nishnawbe Aski Nation Coalition
CAS	children's aid society
CCRC	Criminal Cases Review Commission
CCRG	Criminal Convictions Review Group
CFS	Centre of Forensic Sciences
CFSA	*Child and Family Services Act*
CHEO	Children's Hospital of Eastern Ontario
CIS	coroner's investigation statement
CLA	Criminal Lawyers' Association
CLD	Criminal Law Division
CPSO	College of Physicians and Surgeons of Ontario
CT	computerized tomography
DCI–Canada	Defence for Children International – Canada
DMJ	diploma in medical jurisprudence
DPP	Director of Public Prosecutions
FBI	Federal Bureau of Investigation
FPAC	Forensic Pathology Advisory Committee
FSAC	Forensic Services Advisory Committee
HPARB	Health Professions Appeal and Review Board
HPPC	*Health Professions Procedural Code*
IDG	Interdepartmental Group

LAO	Legal Aid Ontario
LMFFA	Laboratory Medicine Funding Framework Agreement
MCSCS	Ministry of Community Safety and Correctional Services
NAHI	non-accidental head injury
NAME	National Association of Medical Examiners
NAPS	Nishnawbe Aski Police Service
NHS	National Health Service
OACAS	Ontario Association of Children's Aid Societies
OCAA	Ontario Crown Attorneys' Association
OCCO	Office of the Chief Coroner for Ontario
OFPS	Ontario Forensic Pathology Service
OPFPU	Ontario Pediatric Forensic Pathology Unit
OPP	Ontario Provincial Police
PDRC	Paediatric Death Review Committee
PFP	pediatric forensic pathology
PFPU	Provincial Forensic Pathology Unit
SBS	shaken baby syndrome
SCAN	Suspected Child Abuse and Neglect (Program)
SickKids	Hospital for Sick Children
SIDS	sudden infant death syndrome
SUDI	sudden unexpected death in infancy
SUDS	sudden unexplained death syndrome
TPS	Toronto Police Service
VIFM	Victorian Institute of Forensic Medicine

Glossary of Medical Terms

abrasion superficial damage to the skin, generally not deeper than the epidermis (the outermost layer of the skin)

acute of recent origin

anatomical pathology a medical specialty concerned with the diagnosis of disease and gaining additional medical information based on the examination of organs, tissues, and cells

anthropology the scientific study of humans; includes the investigation of human origin and the development of physical, cultural, religious, and social attributes

artefact artificial product; in relation to autopsy, a sign or finding imitating pathology, disease, or injury occurring in life

asphyxia sudden death due to lack of oxygen such as occurs with smothering, suffocation, neck compression (e.g., strangulation), and other modes of interference with oxygen delivery in the body

Asphyxia is a complex and confusing term used in varying ways by different authors. The common notion of asphyxia is that of a mechanical interference of some sort with breathing.

mechanical asphyxia, the common understanding of the term asphyxia; mechanical interference with breathing, including smothering, choking, throttling (manual strangulation), ligature strangulation, hanging, and severe sustained compression of the chest (and abdomen) termed traumatic asphyxia

atrophy the partial or complete wasting away of a part of the body

Causes of atrophy include poor nourishment, poor circulation, loss of hormonal support to the organ, loss of nerve supply, disuse, disease, or lack of exercise.

autopsy post-mortem dissection and examination of the organs and tissues of the deceased to discover disease and injury causing or contributing to death

axon a nerve fibre

bilateral both sides (of the body)

biochemistry (biochemical) relating to the chemical substances present in living organisms and the reactions and methods used to identify or characterize them

biomechanics the application of mechanical forces to living organisms and the investigation of the effects of the interaction of force and the body or system; includes forces that arise from within and outside the body

biopsy the removal of a sample of tissue from a living person for laboratory examination

brainstem the stem-like part of the brain that connects the cerebral hemispheres with the spinal cord

bruise, bruising bleeding into tissues from damaged blood vessels, usually as a result of external injury; most commonly understood as a bruise in or under the skin but can occur in any tissue or organ (e.g., muscle, heart, liver)

burr hole surgery a form of surgery in which a hole is drilled into the skull, exposing the dura mater (the outermost layer of membrane surrounding the brain and spinal cord) in order to treat health problems; used to treat epidural and subdural hematomas and to gain surgical access for other procedures such as intracranial pressure monitoring

cardiac pertaining to the heart

cardiorespiratory arrest the cessation both of normal circulation of the blood due to failure of the heart and of normal breathing

cerebellum the portion of the brain forming the largest segment of the rhombencephalon (hind brain)

It is involved in the synergic control of skeletal muscles and plays an important role in the coordination of voluntary movements.

cerebral relating to or located in the hemispheres of the brain (cerebrum)

cerebral contusion traumatic brain injury in the form of bruised brain tissue

Often appearing as multiple microhemorrhages (small blood vessel leaks into brain tissue), they occur primarily under the site of an impact. Contusions can cause increases in intracranial pressure and damage to delicate brain tissue.

cerebral edema accumulation of excessive fluid in the substance of the brain

The brain is especially susceptible to injury from edema, because it is located within a confined space and cannot expand. Also known as brain edema, brain swelling, swelling of the brain, and wet brain.

cerebrum the largest part of the brain, consisting of two hemispheres separated by a deep longitudinal fissure

clinical relating to patients

congenital born with

congestion an excessive amount of blood in an organ or in tissue

contusion bruise

***coup*/*contre coup* injuries** The *coup* is the damage to the brain just beneath the site of impact. *Contre coup* is damage that may occur approximately to the opposite side of the brain as the brain bounces against the skull.

craniotomy a surgical operation in which part of the skull, called a bone flap, is temporarily removed in order to access the brain

CT (computerized tomography) CT scanning computes multiple X-ray images to generate cross-sectional and other views of the body's anatomy. It can identify normal and abnormal structures and be used to guide medical procedures.

cyanosis a bluish coloration of the skin due to the presence of deoxygenated hemoglobin in blood vessels near the skin surface, i.e., in life, a sign of oxygen deficiency

cyanosis of the nailbeds See *cyanosis*. Cyanosis of the nailbeds is less serious than central (blue lips and mucous membranes) cyanosis. Post-mortem, this is an artefact.

diagnosis the term denoting the disease or syndrome a person has or is believed to have

diastasis the separation of normally joined parts, such as the separation of adjacent bones without fracture or of certain abdominal muscles during pregnancy

Diastasis occurring with bones in the skull is a possible indication of cerebral edema.

diffuse axonal injury disruption of the axons, not necessarily directly due to trauma

duodenum the first part of the small intestine

edema an abnormal buildup of fluid between tissue cells

en bloc as a whole or en masse; used to refer to surgical excision

entomology the study of insects

epicardium the protective outer layer of the wall of the heart

epidemiology (epidemiological) the study of the distribution and determinants of health-related states and events in populations, and the application of this study to the control of health problems

Epidemiology is concerned with the traditional study of epidemic diseases caused by infectious agents, and with health-related phenomena including acci-

dents, suicide, climate, toxic agents such as lead, air pollution, and catastrophes due to ionizing radiation.

epiglottis (**epiglottic**) the flap of cartilage lying behind the tongue and in front of the entrance to the larynx (voice box) that keeps food from going into the trachea (windpipe) during swallowing

When it gets infected and inflamed, it can obstruct, or close off, the windpipe. This obstruction may be fatal unless treated quickly.

etiology the cause of a disease or the study of the causes of disease

exhumation removal of a dead body from the grave after it has been buried

exsanguination a loss of blood

filicide the killing of a child by a parent

fissure a groove, natural division, deep furrow, cleft, or tear in a part of the body

formalin an aqueous solution of 37% formaldehyde (a colourless gas with a distinctive smell that, when dissolved in water, gives a solution in which organic specimens are preserved)

fracture a break of a bone

ganglion a mass of nervous tissue composed principally of neuron cell bodies and lying outside the brain or spinal cord

general pathology the branch of medicine concerned with all aspects of laboratory investigation in health and disease

The discipline incorporates both morphological and non-morphological diagnostic techniques in the areas of anatomical pathology, medical biochemistry, medical microbiology, hematopathology, and transfusion medicine.

hematological pathology the domain of laboratory medical practice and science concerned with the study, investigation, diagnosis, and therapeutic monitoring of disorders of blood, blood-forming elements, hemostasis, and immune function in adults and children

hematoma a collection of blood, generally the result of hemorrhage/internal bleeding; usually resulting from injury (e.g., bruises in skin) but indicative of more serious injury when located within organs, most critically inside the skull, where hematomas may place pressure on the brain

hemorrhage the loss of blood from a ruptured blood vessel

Hirschsprung's disease the most common cause of lower gastrointestinal obstruction in neonates

Patients with this disease exhibit signs of an extremely dilated colon and accompanying chronic constipation, fecal impaction, and overflow diarrhea.

histology the study of tissue sectioned as a thin slice, using a microtome (a mechanical instrument used to cut biological specimens into very thin segments for microscopic examination)

histopathology a branch of pathology concerned with the study of the microscopic changes in diseased tissues

hypoxic-ischemic encephalopathy brain damage caused by a lack of oxygen and blood flow to the brain

Brain damage occurs very quickly and, once it occurs, is, effectively, irreversible.

infanticide Infanticide is defined in the *Criminal Code*, RSC 1985, c. C-46, s. 233, as follows: "A female person commits infanticide when by a wilful act or omission she causes the death of her newly-born child, if at the time of the act or omission she is not fully recovered from the effects of giving birth to the child and by reason thereof or of the effect of lactation consequent on the birth of the child her mind is then disturbed."

The term has been used historically in forensic pathology to indicate all forms of homicide of babies around the time of birth.

inflammation one mechanism the body uses to protect itself from invasion by foreign organisms and to repair tissue trauma

Its clinical hallmarks are redness, heat, swelling, pain, and loss of function of a body part. It is also marked by the migration of white blood cells into the affected area; this can be seen under the microscope.

intracranial within or introduced into the skull

intracranial pressure Increased intracranial pressure is a serious medical problem because it causes the compression of important brain structures and restricts the blood flow through blood vessels that supply the brain, possibly damaging it. Symptoms in infants include a bulging fontanelle (one of two "soft spots" on an infant's head), lethargy, and vomiting.

intrathoracic within the cavity of the chest

laceration a wound or irregular tear of the flesh caused by a blunt impact

larynx (laryngeal) also known as the voice box, a structure in the neck involved in protection of the trachea (windpipe) and in sound production

lesion a circumscribed area of pathologically altered tissue, an injury or wound, or a single patch in a skin disease

liver the largest solid organ in the body, situated on the right side below the diaphragm

The liver secretes bile (a fluid) and is the site of numerous metabolic functions.

lividity (post-mortem) a dark-blue staining of the dependent surface of a cadaver, resulting from the pooling and congestion of blood

malignant growing worse; resisting treatment (said of cancerous growths); tending or threatening to produce death

mandible (mandibular) the lower jaw

microbiology (microbiological) the scientific study of micro-organisms

neuropathologist a pathologist who specializes in the diagnosis of diseases of the brain and nervous system by microscopic examination of the tissue and other means

odontology a science dealing with the teeth, their structure and development, and their diseases

forensic odontology, a branch of forensic medicine that deals with teeth and marks left by teeth (as in identifying criminal suspects or the remains of a dead person)

osteology the science concerned with the structure and function of bones

pancreas a gland located behind the stomach

The secretions of the pancreas consist of powerful enzymes that contribute to the digestion of all food types in the small intestine.

parietal bone the main bone of the side and top of the skull

pathologist a medical professional trained to examine tissues, cells, and specimens of body fluids for evidence of disease

pathology the study of the nature and cause of disease, which involves changes in structure and function

pediatrics that branch of medicine involving the diagnosis and treatment of illness in children

petechial hemorrhage (petechiae) pinpoint hemorrhage; tiny purple or red spots that appear on the skin because of small spots of bleeding in the skin

pulmonary concerning, affecting, or associated with the lungs

pulmonary congestion a condition characterized by the engorgement of the pulmonary vessels

pulmonary pleura the portion of the pleura (the delicate membranous covering of the lungs) that covers the surface of the lungs and dips into the fissures between its lobes

radiologist a physician who uses X-rays or other sources of radiation, sound, or radio-frequencies for diagnosis and treatment

radiology the branch of medicine concerned with radioactive substances, including X-rays, and the application of this information to prevention, diagnosis, and treatment of disease

re-bleeding (of a healing subdural hemorrhage) refers to the controversy in pediatric forensic pathology about whether a relatively insignificant old or heal-

ing subdural hemorrhage can develop into a massive and life-threatening acute subdural hemorrhage as a result of normal handling or minor trauma

retinal hemorrhage bleeding onto the surface of the retina (the light-sensitive membrane in the back of the eye) caused by the rupture of the tiny blood vessels that lie on the surface of the retina

Retinal hemorrhage indicates increased pressure within the skull, possibly resulting from head trauma and bleeding. It was once believed to be pathognomonic (a sign or symptom that is so characteristic of a disease that it makes the diagnosis) of shaken baby syndrome, although this is no longer generally believed to be true.

rigor mortis the stiffening of the muscles after death

shaken baby syndrome (SBS) sometimes called shaken infant syndrome; a serious illness characterized by subdural hemorrhage, petechial and other hemorrhages in the retina, and hypoxic-ischemic encephalopathy, usually in circumstances where there is no evidence of blunt impact to the head

Injuries to the neck such as hemorrhage around cervical spine nerve roots may also be present.

skeletal survey a radiological study of the entire skeleton to look for evidence of occult fractures, multiple myeloma, metastatic tumour, or child abuse

skull sutures the fibrous joints between the bones of the skull that allow the baby's skull to expand with the growing brain

spinal cord part of the central nervous system

The spinal cord is an ovoid column of nerve tissues that extends from the medulla to the lumbar vertebrae. It is the pathway for sensory impulses to the brain and motor impulses from the brain.

spleen a dark-red, oval lymphoid organ in the upper-left abdominal quadrant, posterior and slightly inferior to the stomach

After birth, the spleen forms lymphocytes (white blood cells responsible for much of the body's immune protection).

status epilepticus continuous seizure activity without a pause, that is, without an intervening period of normal brain function

subdural hematoma (or subdural hemorrhage) caused through the stretching and tearing of small veins in the brain, most often resulting from head injury

Blood collects between the dura (the outer protective covering of the brain) and the arachnoid (the middle layer of the membranes that envelop the central nervous system), often causing an increase in intracranial pressure and possible damage to delicate brain tissue.

Onset of symptoms is slower than other types of hemorrhaging, usually occurring within 24 hours, but possibly taking up to two weeks to appear. Signs of subdural hemorrhage may include loss of consciousness or fluctuating levels of consciousness, numbness, disorientation, nausea or vomiting, personality changes, a deviated gaze, and difficulty in speaking and walking.

subgaleal bruise bruising between the galeal aponeurosis, a fibro-muscular layer effectively attaching the scalp to the skull

sudden infant death syndrome (SIDS) the sudden unexpected death of an infant under 12 months of age, with onset of the fatal episode apparently occurring during sleep, that remains unexplained after a thorough investigation, including performance of a complete autopsy and review of the circumstances of the death and clinical history

sudden unexplained death syndrome (SUDS) a broader categorization of deaths in infancy that includes unexplained deaths other than sudden infant death syndrome

SUDS is sometimes referred to slightly differently as "sudden unexpected death syndrome" or "sudden unidentified death syndrome." "Sudden unexpected death in infancy" or SUDI is also used.

surgical pathology the application of pathology procedures and techniques for investigating tissues removed surgically

thoracic involving or located in the chest

thymus a small glandular organ situated behind the top of the breastbone, consisting mainly of lymphatic tissue

toxicology the division of medical and biological science concerned with toxic substances, their detection, their avoidance, their chemistry and pharmacological actions, and their antidotes and treatment

ulcer(ation) a lesion which often heals poorly, on a surface such as skin, cornea, or mucous membrane

viscera the internal organs of the body, specifically those within the chest (e.g., the heart and lungs) or abdomen (e.g., the liver, pancreas, and intestines)

Wilms' tumour a rapidly developing tumour of the kidney that usually occurs in children

Systemic Review

1

The Death of a Child and the Criminal Justice System

The sudden, unexpected death of a child is a devastating event for parents, for family, and for the entire community. If something suggests that a criminal act may have been involved, the devastation takes on a further tragic dimension. This reality lies at the core of the cases we examined at this Inquiry. Each case tells the story in its own way. But the theme remains as constant as it is powerful.

For the parents, the loss is shattering. Children are not supposed to die unexpectedly, and certainly not before their parents. If a suspicion arises that a parent killed the child, the death is only the beginning of the nightmare. The parent is immediately subjected to an intensive police investigation that inevitably stands in the way of any grieving process. If a charge is laid, it is very likely to be a serious one, with the parent removed from the home and often held without bail. The child protection authorities will likely seize the surviving children, remove them from the home, and place them in care. Emotions in the community will often run high. Each new trauma builds on the ones before.

For the surviving children, the impact is profound as well. They are often very young themselves, yet must cope with the sudden inexplicable loss of a sibling. If one of their parents is suspected, the children will likely be removed from their home and family, sometimes for years or even permanently. The same fate may befall children born later to the parents. They must live with the horror that the parent they love is suspected of killing a brother or sister.

For the extended families, there is also much pain. The child's death is their loss too. Some family members will be prepared to sacrifice everything to defend their loved one against any criminal charge. Others may be convinced of the suspected parent's guilt. Splits can emerge that remain painful for years, if not forever.

If the person suspected is not a parent but the child's caregiver, such as a babysitter, there can be similar trauma. Babysitters are often young people themselves. The shock of being suspected of killing a child in their care is profound.

The families of young suspects will also likely exhaust all the family's resources to come to their defence. A suspected caregiver who is charged faces the same lost freedom and the same community stigma as a suspected parent.

For the community itself, the death of a child in criminally suspicious circumstances is deeply disturbing. Children are the community's most precious and most defenceless asset. The sense of outrage and the urgent need to understand what happened are overwhelming.

Thus, the tragedy of a child who dies unexpectedly in suspicious circumstances has many victims. It becomes vital for society to deal with the tragedy in a way that is right and just, and that allows all those affected to come to terms with it. The criminal justice system is central to this task. It must seek to determine whether there is truth to the suspicion that the child was killed and, if so, by whom. Despite the complex and difficult challenges of investigating and adjudicating pediatric death cases, the criminal justice system must do so correctly and fairly, often in a highly charged emotional atmosphere.

The consequences of failure in these circumstances are extraordinarily high. For the parent or caregiver who is wrongly convicted, it almost certainly means time, perhaps years, unnecessarily suffered in jail, a shattered family, and the stigma of being labelled a child killer. Even if the criminal justice system stops short of conviction, family resources, both financial and emotional, are often exhausted in the struggle. And in either case, there may be a killer who goes unpunished. For the community at large, failure in such traumatic circumstances comes at a huge cost to the public's faith in the criminal justice system – a faith that is essential if the justice system is to play the role required of it by society.

The cases we examined demonstrate how vital the role of the pathologist can be in the success or failure of the criminal justice system in coping with the sudden, unexpected death of an infant in criminally suspicious circumstances. The suspected parent or caregiver will often have been the only person in contact with the child in the hours preceding death. There may be little additional evidence. But if the pathologist determines the cause of the child's death, that opinion may be enough to play a decisive role in whether someone is charged and convicted. In these circumstances, the criminal justice system must be able to rely confidently on the opinion if it is to deliver a just outcome. The fate of the person suspected, the family, the surviving children, and the peace of mind of the community all depend on it.

The far-reaching human consequences of flawed forensic pathology provided the context for our work from the very beginning. Before the hearings began, I had the benefit of meeting with individuals who were directly affected by the events that precipitated the Inquiry. They spoke poignantly about the pain of losing a child, and the added stress and shame that follow when the loss becomes

the subject of criminal proceedings. The central role that flawed pediatric forensic pathology played in these cases was unmistakeable.

One tragic case involved William Mullins-Johnson, who was convicted of the first-degree murder of his niece Valin, in large measure because of the pathology evidence of Dr. Charles Smith. Dr. Smith's opinion was that the little girl had been strangled and sexually assaulted while Mr. Mullins-Johnson was babysitting her. This opinion was ultimately determined to be wrong. Mr. Mullins-Johnson has been found to have been wrongly convicted and was acquitted, but only after spending more than 12 years in prison.

During his testimony at the Inquiry, Dr. Smith was invited by Mr. Mullins-Johnson's lawyer to apologize. Mr. Mullins-Johnson was pointed out to him in the audience. Struggling with emotion, Dr. Smith offered his apology. Mr. Mullins-Johnson's spontaneous and deeply moving response is an eloquent testament to the human cost of failed pathology where a child dies in suspicious circumstances. This was their exchange:

> DR. CHARLES SMITH: Could you stand, sir?
>
> (BRIEF PAUSE)
>
> DR. CHARLES SMITH: Sir, I don't expect that you would forgive me, but I do want to make it – I'm sorry. I do want to make it very clear to you that I am profoundly sorry for the role that I played in the ultimate decision that affected you. I am sorry.
>
> MR. WILLIAM MULLINS-JOHNSON: For my healing, I'll forgive you but I'll never forget what you did to me. You put me in an environment where I could have been killed any day for something that never happened. You destroyed my family, my brother's relationship with me and my niece that's still left and my nephew that's still living. They hate me because of what you did to me. I'll never forget that but for my own healing I must forgive you.

This Inquiry was given two tasks. The first is to determine what went so badly wrong in the practice and oversight of pediatric forensic pathology in Ontario, especially as it relates to the criminal justice system. This task is addressed in this volume. It is my report on the systemic review and assessment of the practice and oversight of pediatric forensic pathology in Ontario, from 1981 to 2001. It chronicles the systemic failings that occurred as they affected the criminal justice system.

My second task is to make recommendations to restore and enhance public confidence in pediatric forensic pathology. That is the subject of the following volume.

My recommendations attempt to ensure that pediatric forensic pathology appropriately supports society's interest in protecting children from harm and bringing those who do harm children before the courts to be dealt with according to the law. If implemented, my recommendations will, I hope, also ensure that no one has to endure the horror of being charged criminally or having a family pulled apart or being wrongfully convicted because of flawed forensic pathology.

2
Growing Concerns

From 1981 to 2005, Dr. Charles Smith worked as a pediatric pathologist at Toronto's world-renowned Hospital for Sick Children (SickKids). Although he had no formal training or certification in forensic pathology, as the 1980s came to an end he started to become involved in pediatric cases that engaged the criminal justice system. Then, in 1992, he was appointed director of the newly established Ontario Pediatric Forensic Pathology Unit (OPFPU) at SickKids. He soon came to dominate pediatric forensic pathology in Ontario. He worked at the best children's hospital in Canada. His experience seemed unequalled, and his manner brooked no disagreement. He was widely seen as the expert to go to for the most difficult criminally suspicious pediatric deaths. In many of these cases his view of the cause of death was the critical opinion, and figured prominently in the outcome.

Over the course of the 1990s, Dr. Smith's reputation grew. But public concerns about his professional competence did as well. As early as 1991, a year before Dr. Smith's appointment as director, a trial judge acquitted a girl who, as a 12-year-old babysitter, had been charged with manslaughter in the death of 16-month-old Amber. His reasons for judgment strongly criticized Dr. Smith, the Crown's central witness, for both his methodology and his conclusions. The case is a cautionary tale of the devastating impact that flawed forensic pathology and irresponsible expert testimony can have on the lives of both those whose children die in suspicious circumstances and those accused of having caused the death. It was also a harbinger of things to come.

Over the decade, this judgment was followed by other warning signals about Dr. Smith's competence and professionalism. Unfortunately, throughout the 1990s, these signs were largely ignored by those tasked with the oversight of Dr. Smith and his work. Ultimately, 14 years after the first warning signal had sounded, the growing concerns culminated in what is now known as the Chief

Coroner's Review. In 2005, the Chief Coroner for Ontario, Dr. Barry McLellan, called a full review into the work of Dr. Smith in criminally suspicious cases and homicides in the 1990s. The results of that review triggered this Commission. A brief outline of the principal events that caused concerns to grow provides a useful backdrop to our work.

The Key Participants

Before describing the warning signs and concerns about Dr. Smith that arose in the 1990s, it is necessary to introduce the main participants in pediatric forensic pathology in Ontario in those years. They were:

- Dr. Charles Smith, the director of the Ontario Pediatric Forensic Pathology Unit from 1992 to 2004;
- Dr. James Young, the Chief Coroner for the Province of Ontario from 1990 to 2004;
- Dr. James Cairns, the Deputy Chief Coroner for the Province of Ontario from 1991 to 2008; and
- Dr. David Chiasson, the Chief Forensic Pathologist for the Province of Ontario from 1994 to 2001.

Dr. Smith was trained as a pediatric pathologist. In 1981, he began working full time at SickKids. Like most pathologists at the time, he had no formal training in forensic pathology. Because of his strong interest in autopsies, however, he began to perform more of them than his colleagues at SickKids, who favoured surgical or clinical pathology for living patients. Initially, he had only limited exposure to criminally suspicious death investigations, but he learned on the job. By the 1990s, he was performing the majority of his autopsies under coroner's warrant. In 1992, although he had been involved with only a small number of criminally suspicious cases, Dr. Smith was appointed the first director of the OPFPU, the unit that was to provide pediatric forensic pathology services for coroners conducting death investigations.

Dr. Young was the Chief Coroner for Ontario throughout the 1990s. In 1975, he graduated from the University of Toronto medical school, where he had no forensic pathology training. He initially practised as a general practitioner in Elmvale, Ontario. From 1977 to 1982, he was also a part-time investigating coroner for Simcoe County. In 1982, Dr. Young left his medical practice and became the full-time regional coroner for Metropolitan Toronto and the Central Region. Dr. Young held this position until 1987, when he became the Deputy Chief

Coroner for Ontario. In 1990, he was appointed Chief Coroner for Ontario, a position he held until April 2004, when he was succeeded by Dr. Barry McLellan. In addition to his role as Chief Coroner, Dr. Young held the position of assistant deputy minister of public safety in the Ministry of the Solicitor General (now the Ministry of Community Safety and Correctional Services) from 1994 to January 2005. From June 2002 to April 2004, Dr. Young was also Commissioner of Public Safety and Security for the Province of Ontario. In 2005, he was appointed special advisor to the deputy minister, Public Safety and Emergency Preparedness Canada. Currently, he is a private consultant.

Dr. Cairns was the Deputy Chief Coroner throughout a large part of the 1990s. He graduated from Queen's University of Belfast medical school in Northern Ireland in 1969. The extent of his training in forensic medicine or forensic pathology was a two-year required course in forensic medicine during medical school. The course included training in wound identification and description, and in writing death certificates, but none in histology – a central component of forensic pathology.

In 1969, Dr. Cairns took an internship at the Emergency Department at Belfast City Hospital. Three years later he moved to Canada, where he worked as a family and emergency physician in Brampton, Ontario, until 1979. From 1979 to 1991, Dr. Cairns was the local investigating coroner in Brampton. In 1989, during his tenure as an investigating coroner, Dr. Cairns became the president of the Ontario Coroners Association. In October 1991, he assumed the position of Deputy Chief Coroner, a position he held until his retirement in January 2008.

Dr. Chiasson was the Chief Forensic Pathologist for Ontario from 1994 to 2001. He was one of the few formally trained and certified forensic pathologists at the time, having trained at the Office of the Chief Medical Examiner in Baltimore, Maryland, from 1991 to 1992. Dr. Chiasson graduated from medical school at Dalhousie University in 1979. While still a student, he developed an interest in pathology and took a one-month forensic pathology elective course in Colorado. After practising as a general practitioner and an assistant medical examiner in Antigonish, Nova Scotia, he did his residency in anatomical pathology at the University of Toronto from 1983 to 1987. As part of his training, he completed two rotations in pediatric pathology at SickKids. His role as a representative on the Residency Training Committee afforded him occasions to work with Dr. Smith, who at that time was the residency training director in anatomical pathology for the University of Toronto.

Dr. Chiasson worked in cardiac pathology from 1989 to 1991. In 1991, he decided to move into forensic pathology and began doing fee-for-service work for the Office of the Chief Coroner for Ontario (OCCO). Recognizing the importance

of formal training in forensic pathology, Dr. Chiasson approached Dr. Young, and the OCCO agreed to provide Dr. Chiasson with financial support for his forensic pathology training. From 1992 to 1994, he worked at the Toronto Hospital and also performed autopsies for the OCCO. In April 1994, Dr. Young appointed Dr. Chiasson to the position of Chief Forensic Pathologist. Dr. Chiasson was the Chief Forensic Pathologist until he resigned in June 2001. Dr. Chiasson is currently the director of the OPFPU at SickKids.

Two others also require introduction at this stage. Dr. Barry McLellan was the Acting Chief Coroner for Ontario from 2002 to 2004 and, on Dr. Young's retirement in 2004, became the Chief Coroner. Dr. McLellan obtained his medical degree from the University of Toronto in 1981. He subsequently undertook specialty training in emergency medicine and held a variety of positions at the Sunnybrook Health Sciences Centre. Through his work with trauma victims, Dr. McLellan became interested in how the coroner's system prevented injuries and deaths. In 1993, he was appointed an investigating coroner. In 1998, Dr. McLellan was appointed the regional coroner for Northeastern Ontario, and, in 2000, he became the regional coroner for the Greater Toronto Area East Region.

On June 30, 2001, Dr. McLellan was appointed Deputy Chief Coroner of forensic services at the OCCO. In the absence of a Chief Forensic Pathologist at that time, he also assumed the administrative functions associated with that position, including organizing daily rounds and educational courses, setting policy, and dealing with pathologists in relation to timeliness issues.

Dr. McLellan became Acting Chief Coroner for Ontario in July 2002. He assumed responsibility for almost all of the OCCO's daily management. After Dr. Young resigned in April 2004, Dr. McLellan became the Chief Coroner for Ontario. Under Dr. McLellan's direction, the OCCO instituted a number of new policies and quality control practices to improve the quality of pathology services in coronial death investigations. In September 2007, Dr. McLellan resigned from the position of Chief Coroner to become the president and chief executive officer of Toronto's Sunnybrook Health Sciences Centre.

In 2006, the current Chief Forensic Pathologist, Dr. Michael Pollanen, was appointed to the position, which had been vacant since Dr. Chiasson's resignation in 2001. Dr. Pollanen completed his PhD in pathology and neuropathology at the University of Toronto in 1995 and won the Governor General's gold medal for his work. In 1999, he obtained his medical degree from the University of Toronto. He subsequently completed a specialty certification in anatomical pathology as a fellow of the Royal College of Physicians and Surgeons of Canada. He also obtained specialty certification in forensic pathology in the United Kingdom. In 2003, Dr. Pollanen became a staff forensic pathologist at the

Provincial Forensic Pathology Unit (PFPU) at the OCCO in Toronto. The following year, he was appointed medical director of the unit. He is also an associate professor of pathology at the University of Toronto and a consulting forensic pathologist for SickKids.

Causes of Growing Concerns

Amber's Case

Amber was born in March 1987 in Timmins, Ontario, and died in July 1988. She was 16 months old. Her summer babysitter, a 12-year-old girl known as S.M., had been carefully selected by Amber's parents and her initial interactions with Amber had been closely supervised by Amber's mother. Amber was a happy and healthy toddler with no known health problems. She was very fond of S.M.

On the afternoon of July 28, 1988, Amber, S.M., and S.M.'s mother arrived by ambulance at a hospital in Timmins. Amber was semi-conscious. According to S.M., Amber had fallen down five carpeted stairs in her family home. A surgeon at the hospital performed bilateral burr hole surgery on Amber, which revealed significant cranial swelling, a left subdural hematoma, and cerebral contusion.[1] Amber was then transferred by air ambulance to SickKids, where a neurosurgeon performed a craniotomy and removed the subdural hematoma. However, her brain continued to swell.

The SickKids doctors suspected that Amber's devastating injuries were not accidental and consulted with the hospital's Suspected Child Abuse and Neglect (SCAN) Program. One of the SCAN doctors examined Amber and agreed that her injuries were out of proportion to the reported history. Amber never regained consciousness, and she died on July 30, 1988.

The concerns of the SCAN physicians were never communicated to the coroner. He concluded that Amber had died of a head injury caused by an accidental fall and did not order an autopsy. When the SCAN doctors and Dr. Smith learned that no autopsy had been performed, they agreed that Dr. Smith should approach the OCCO about an exhumation. In their view, the history of a short fall did not explain Amber's injuries or her death.

In August 1988, an exhumation order was eventually issued, Amber's body was exhumed, and Dr. Smith performed the post-mortem examination at the PFPU in Toronto. At the time, he had neither formal training in, nor much experience,

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

conducting post-mortem examinations in criminally suspicious circumstances. Dr. Smith determined that Amber had died of a head injury, with a unilateral subdural hemorrhage (caused through the stretching and tearing of small veins in the brain), bilateral retinal hemorrhage, optic nerve hemorrhage, and cerebral edema (accumulation of excessive fluid in the substance of the brain; also known as swelling of the brain). He also discovered several areas of bruising, including those on Amber's forehead, her right cheek, her left rear hip, and her legs. After the autopsy, he told the attending police officers that he felt strongly that Amber had been shaken to death, and there was no way a fall like the one reported by S.M. could account for Amber's death.

Dr. Smith completed his report of post-mortem examination in late November 1988. Two weeks later, in mid-December 1988, he and Dr. Young, who was then Deputy Chief Coroner for Ontario, travelled to Timmins to meet with Crown counsel and the police. Dr. Smith and Dr. Young informed them that Amber had died of a head injury caused by severe shaking. Two days later, the police arrested and charged S.M. with manslaughter.

S.M.'s trial began in Timmins on October 2, 1989, before Justice Patrick Dunn of the Ontario Court (Provincial Division). Dr. Smith, the principal witness for the Crown, testified over five days in February 1990. One of the SCAN physicians and several other SickKids physicians also testified for the Crown.

At the trial, Dr. Smith told the court that there was "no possibility what-soever" that a fall down the five carpeted steps in Amber's home could account for her death. In his view, small household falls never caused a child's death. Despite the controversy surrounding the topic, Dr. Smith was unequivocal, stating, "[Y]ou have to drop [children] from three storeys in order to kill half of them. You have to drop them from more than three storeys in order to kill more than half of them." Dr. Smith never mentioned that his opinion on this topic was in any way controversial. He told the court that Amber died of "pure shaking"; that is, shaking without impact.

S.M.'s family sold their family home and cashed in their retirement savings to fund her defence. Defence counsel called approximately 10 experts in total, including leading forensic pathologists, neuropathologists, and experts in biomechanics. Although their evidence was inconsistent on a few of the many issues, they all agreed that, in rare circumstances, low-level falls could cause serious injury or even death in infants and children.

On July 25, 1991, Justice Dunn delivered his reasons for judgment. He acquitted S.M. of manslaughter. He found S.M.'s explanation that Amber had fallen down the stairs to be credible and accepted the defence experts' evidence that small household falls could cause serious injury or death in a child of Amber's

age. He emphatically rejected Dr. Smith's evidence. In a detailed and trenchant review of Dr. Smith's forensic analysis and approach, Justice Dunn concluded that Dr. Smith lacked objectivity, failed to investigate thoroughly all relevant facts, and neglected to keep adequate records of his work and findings. He also determined that Dr. Smith lacked familiarity with the relevant scientific literature.

Almost all of Justice Dunn's criticisms have stood the test of time. Most of the weaknesses that Justice Dunn identified in Dr. Smith's forensic pathology reappeared in Dr. Smith's work in criminally suspicious cases over the next decade. Justice Dunn's judgment proved to be prophetic.

In January 1992, SCAN physicians, Dr. Smith, and Crown counsel met to discuss Justice Dunn's reasons for judgment. No one present at that meeting appears to have taken to heart Justice Dunn's many criticisms of Dr. Smith and the other hospital physicians. Rather, they concluded that the judge did not adequately understand the science of shaken baby syndrome.

In November 1991, S.M.'s father, D.M., sent Justice Dunn's reasons for judgment to the College of Physicians and Surgeons of Ontario (CPSO), and in March 1992 he filed a formal complaint with the CPSO regarding Dr. Smith, two other SickKids physicians, and the SCAN team. Subsequently, Dr. Young and Dr. Cairns also learned of S.M.'s acquittal.

Despite the significance of Justice Dunn's criticisms, the OCCO failed to pursue the matter beyond informal discussions with Dr. Smith. Although the CPSO did initiate an investigation as a result of D.M.'s complaint, Dr. Smith actively thwarted that attempt. Dr. Smith told the CPSO that, during the trial of S.M., Justice Dunn repeatedly indicated to him that he believed that S.M. was guilty. Dr. Smith told Dr. Young and Dr. Cairns that, after delivering judgment in the case, Justice Dunn had a change of heart and admitted to Dr. Smith that, had he fully understood the medical evidence presented at the trial, he would have convicted S.M. of the manslaughter charge.

None of these allegations was true. Nevertheless, both the CPSO and the OCCO accepted them at face value. Neither organization investigated the truth of Dr. Smith's claims. In fact, when Dr. Young and Dr. Cairns learned of S.M.'s acquittal, neither of them even read Justice Dunn's decision to inform themselves of the trial judge's criticisms.

Justice Dunn's decision raised a danger signal about Dr. Smith's competence and professionalism. Unfortunately that signal was ignored, and any opportunity for re-evaluation of Dr. Smith's work was lost.

Another opportunity arose in Nicholas' case.

Nicholas' Case

Nicholas died on November 30, 1995, in Sudbury, Ontario. He was 11 months old. That day, his mother, Lianne Gagnon, saw Nicholas crawl underneath a sewing table and fall from a standing to a sitting position. She assumed that Nicholas had hit his head on the underside of the sewing machine. He cried and then stopped breathing, almost immediately. An ambulance took Nicholas to Sudbury General Hospital, where he was pronounced dead.

The next day, a pathologist at Sudbury General Hospital performed the post-mortem examination. He concluded that no anatomical or toxicological cause of death had been established, and that the autopsy findings were consistent with sudden infant death syndrome (SIDS), provided all other aspects of the investigation were negative.

Almost a year later, in November 1996, the regional coroner became concerned that Nicholas' death did not have the typical features of SIDS and referred the case for review to an expert committee at the OCCO, the Paediatric Death Review Committee (PDRC). The PDRC in turn assigned the case to Dr. Smith. During his initial review, Dr. Smith had two pediatric radiologists at SickKids, Dr. Paul Babyn and Dr. Derek Armstrong, review a copy of the X-rays taken at the autopsy. Dr. Babyn wrote a letter to Dr. Smith in which he opined that the radiographs showed a mild diastasis (widening) of the skull sutures and a suspected fracture to the left side of Nicholas' mandible.

Dr. Smith produced his own consultation report to the PDRC in January 1997. He concluded that "in the absence of an alternate explanation, the death of this young boy is attributed to blunt head injury." Dr. Smith based this conclusion on five findings, two of which were taken from Dr. Babyn's report. The five were cerebral edema; an increased head circumference; split skull sutures; a fracture to the left side of Nicholas' mandible; and a scalp injury. Shortly thereafter, Dr. Smith met the investigating coroner, the regional coroner, and several police officers at Sudbury General Hospital to discuss his findings. He informed the members of the death investigation team of his five findings, which led the police to treat the case as a potential homicide. Not long after the meeting, however, Dr. Babyn and Dr. Armstrong examined the original radiographs and informed Dr. Smith that they were no longer convinced that Nicholas had a fracture to his mandible.

In May 1997, Dr. Smith and Dr. Cairns met with the Sudbury police and the regional coroner. They all concluded that a re-examination of Nicholas' body was warranted. During the meeting, the investigating police officer also gave Nicholas'

medical records to Dr. Smith. The records revealed that Nicholas had a large head during his life, meaning his head circumference at death was within the range of normal. Thus, one of the five findings supporting Dr. Smith's opinion – an increased head circumference – was disproved.

On June 25, 1997, Nicholas' body was exhumed. Dr. Smith took his 11-year-old son with him to the disinterment. Dr. Smith performed the second autopsy the next day. At the second autopsy, Dr. Smith noted some hemorrhagic discolouration along the skull sutures, which he believed was in keeping with his finding of split skull sutures. He also confirmed that there was no fracture to Nicholas' left mandible. The second of the five findings underlying Dr. Smith's diagnosis was disproved.

Despite this new evidence, Dr. Smith's opinion did not waver. In August 1997, he continued to insist that Nicholas had not died of natural causes but from cerebral edema, consistent with a blunt force injury to the head. He told the police that Ms. Gagnon's story that Nicholas had died after a small bump to the head was inconsistent with the medical evidence.

Notwithstanding Dr. Smith's opinion, Crown counsel and the police ultimately determined that there was no reasonable prospect of conviction if criminal charges were laid in connection with Nicholas' death. In December 1997, however, the police reported their suspicions of child abuse to the local children's aid society (CAS), and informed the CAS that Ms. Gagnon was expecting another child. So, as potential criminal proceedings came to a close, CAS proceedings were just beginning.

In April and May 1998, the CAS held two case conferences. Dr. Cairns attended both, while Dr. Smith was present only at the second. During the meetings, Dr. Cairns informed the CAS that Nicholas had not died of SIDS, but of cerebral edema. Dr. Smith was more specific. He told the CAS that he was 99 per cent certain that Nicholas had died of a non-accidental trauma caused by his mother. Armed with the opinions of the Deputy Chief Coroner and the leading pediatric forensic pathologist in the province, the CAS commenced an application for Crown wardship of Ms. Gagnon's unborn child.

During those proceedings, the Gagnon family retained a respected neuropathologist, Dr. William Halliday, to provide an opinion on the case. Like S.M.'s family, Ms. Gagnon's parents drained their retirement savings to mount a defence for their daughter. In June and July 1998, Dr. Smith, Dr. Halliday, and Dr. Cairns exchanged affidavits.

Dr. Halliday swore his first affidavit in June 1998. He opined that Dr. Smith's conclusion about Nicholas' death went "far beyond the boundaries that can be

supported by the presenting scientific and forensic facts." He classified Nicholas' death as sudden unexplained death syndrome (SUDS),[2] or undetermined. On receiving Dr. Halliday's affidavit, the CAS contacted Dr. Cairns and Dr. Smith. Both doctors remained steadfast in their view that Nicholas' death was not accidental. They informed the CAS that Dr. Halliday's opinion was unsustainable and that the OCCO's opinion on the cause of Nicholas' death had not changed.

Dr. Cairns and Dr. Smith then confirmed their positions in writing and under oath. In June 1998, Dr. Cairns swore an affidavit in which he confirmed that he "wholly agree[d] with the findings of Dr. Smith." Dr. Cairns had little pathology training or expertise, but his affidavit contained what purported to be an expert pathology opinion. As a result, the CAS believed, mistakenly, that the Deputy Chief Coroner was qualified to offer an expert opinion on the cause of Nicholas' death, and that his expert opinion independently supported Dr. Smith's.

At the end of June 1998, Dr. Smith swore his first affidavit. In his affidavit, Dr. Smith misrepresented Dr. Babyn's finding of "mild diastasis" as a "marked widening" of the skull sutures. He opined, "at a high level of certainty," that Nicholas died of a non-accidental injury, likely a blunt impact to the head. Although Dr. Smith allowed for the possibility that Nicholas' death was caused by asphyxia, he maintained that Ms. Gagnon's story was not sufficient to explain Nicholas' death.

In July 1998, Dr. Halliday and Dr. Smith exchanged two more affidavits. They continued to disagree on what caused Nicholas' death. Dr. Halliday raised the possibility that Nicholas had suffered a head injury several weeks before his death and that he was re-injured when he bumped his head on the underside of the sewing machine table. Dr. Smith believed that the scenario was implausible.

In the meantime, on June 27, 1998, Ms. Gagnon gave birth to a daughter. Immediately following the baby's discharge from the hospital, the infant was placed in the custody of Ms. Gagnon's parents, as a result of a settlement reached between the CAS and the Gagnon family. Two days later, the CAS filed a child protection application for Crown wardship over Ms. Gagnon's daughter. At the end of July 1998, the Court made an interim order directing that Ms. Gagnon's daughter be placed in the care of her grandparents, subject to CAS supervision and on the condition that Ms. Gagnon's contact with her daughter be supervised at all times. Two days later, Ms. Gagnon's name was placed on the Child Abuse Register.

In December 1998, because of the pathologists' conflicting opinions, counsel for the CAS and counsel for Ms. Gagnon agreed that an independent opinion on

[2] "SUDS" is sometimes referred to slightly differently as "sudden unexpected death syndrome" or "sudden unidentified death syndrome." "SUDI," or sudden unexpected death in infancy, is also used. The OCCO uses the term "undetermined," although "unascertained" has also been used in Ontario and elsewhere.

the pathology findings was needed and sought the assistance of the OCCO. The OCCO retained an American forensic pathologist, Dr. Mary Case, to conduct an independent review of the case. The OCCO decided that it would accept Dr. Case's opinion as conclusive, whatever it might be.

Dr. Case produced her consultation report to the OCCO in early March 1999. In her view, the cause of Nicholas' death was undetermined, and there were no findings to attribute Nicholas' death to either a head injury or asphyxia. She concluded that the discolouration observed along the sutures likely occurred post-mortem, as a result of a long interment and exhumation; and that Dr. Smith's finding of cerebral edema was entirely non-specific. In other words, there was no evidence to suggest that Nicholas had died of a head injury.

As a result, on March 25, 1999, the CAS vacated all temporary orders in respect of Ms. Gagnon's daughter, withdrew the child protection application, and removed Ms. Gagnon's name from the Child Abuse Register. Ms. Gagnon's ordeal was finally over.

That was not the end of the Gagnons' story, however. During and after the CAS proceedings, Ms. Gagnon's father, Maurice Gagnon, tried to alert the OCCO and others of his concerns about the conduct of Dr. Smith and Dr. Cairns. He filed complaint after complaint, with many institutions. In October 1998, Mr. Gagnon complained to the CPSO about Dr. Smith's conduct in bringing his son to the disinterment. In February 1999, he filed a complaint about Dr. Smith with the Coroner's Council, which was charged with investigating complaints about coroners. After learning that the Coroner's Council had been abolished, Mr. Gagnon complained again to the CPSO, in November 1999 and in March and May 2001, alleging that Dr. Smith's actions amounted to professional misconduct. With respect to Dr. Cairns, Mr. Gagnon filed a complaint with the Solicitor General of Ontario, claiming, among other things, that Dr. Cairns was unduly influenced by Dr. Smith's opinion and that Dr. Cairns' judgment had been clouded by his quest to eradicate child abuse. In June 2000, Mr. Gagnon wrote to the Ombudsman of Ontario and requested an objective investigation of his complaint against Dr. Smith and Dr. Cairns, as well as a thorough investigation of the complaints process at the OCCO. And in August 2003, Mr. Gagnon wrote to the Office of the Auditor General of Ontario, regarding the OCCO's lack of public accountability and negligence in its continued funding of the OPFPU.

Mr. Gagnon was persistent. His letters were well researched and well reasoned. Given what is now known, many of his concerns about Dr. Smith, Dr. Cairns, and the OCCO were legitimate. Unfortunately, those in the senior positions at the OCCO did not listen. Dr. Young responded to several of Mr. Gagnon's complaints. Despite Dr. Case's clear opinion, which the OCCO accepted, that

Dr. Smith's conclusion was unsubstantiated and baseless, Dr. Young continued to assert that Dr. Smith's opinion in Nicholas' case fell within a reasonable range. In essence, the thrust of Dr. Young's responses was to defend the pathologist that he and others at the OCCO had touted for so long.

Dr. Smith's reaction to the complaints made against him was no better. As with the complaint in Amber's case, he responded by denying that he had done anything wrong. He responded not only by emphasizing the reasons for his opinion, but by telling the CPSO that he had never received some of the relevant materials from the coroner or police (though he had), and by claiming that he was not involved in any way with the CAS (though he clearly was). Like Amber's case, Nicholas' case presented a prime opportunity for the OCCO and the CPSO to re-evaluate Dr. Smith's prominent status. Unfortunately, that opportunity was also lost.

As the decade unfolded, there would be more lost opportunities.

Jenna's Case

On January 21, 1997, at approximately 5:00 p.m., Brenda Waudby left her 21-month-old daughter Jenna and Jenna's sister in the care of J.D., a 14-year-old boy who lived in an upstairs apartment in Peterborough, Ontario. Just after midnight, at 12:30 a.m., J.D. realized that Jenna had stopped breathing. J.D.'s mother called 911, and an ambulance brought Jenna to Peterborough Civic Hospital. At the hospital, an emergency physician noticed some signs of a possible sexual assault, including possible rectal stretching, tears in the little girl's vulva, and a curly hair in her vulva area. Jenna died at 1:50 a.m.

Jenna's body was transported to the OPFPU at SickKids. Dr. Smith performed the autopsy, but did not conduct a complete sexual assault examination. Although he examined Jenna's vaginal area externally, he did not take any swabs. And although he collected a hair from Jenna's vaginal area, he did not submit it for forensic analysis.

Jenna had severe injuries to her abdomen. After the autopsy, Dr. Smith told Constable Scott Kirkland, the forensic identification officer who attended the autopsy, that Jenna had suffered a blow with a blunt object, causing a rupture to her duodenum, pancreas, and liver. There was no evidence that the injuries had begun to heal, so Dr. Smith opined that they occurred within a few hours of death. His opinion later changed, however, after he viewed the tissues under the microscope. In February 1997, Dr. Smith told the police that all of Jenna's injuries occurred within 24 hours of her death. And in July 1997, he advised that Jenna had suffered multiple rib injuries, likely sustained five to seven days

before her death. Ultimately, the police understood Dr. Smith's opinion to be that the injuries responsible for Jenna's death could have occurred some 24 hours before death.

Jenna had been in the care of her mother, not J.D., 24 hours before her death. Thus, on September 18, 1997, the police arrested and charged Ms. Waudby with second-degree murder. At this time, she gave a statement to the police and admitted that she had hit Jenna two days before her death. The CAS apprehended Jenna's older sister from Ms. Waudby's care.

Ms. Waudby's preliminary hearing took place in October 1998. Dr. Smith testified on behalf of the Crown. He told the court that there was no physical evidence to suggest that Jenna had been sexually abused. When directed to the hospital emergency record, which documented the emergency physician's observation of a curly hair in Jenna's vulva area, Dr. Smith made no mention of the hair that he had seized from Jenna's vaginal area and denied any knowledge of a pubic hair found on Jenna's body at the autopsy. During the preliminary hearing, Dr. Smith also gave his opinion on the timing of Jenna's fatal injuries. His testimony, although extremely confusing on many points, left the clear impression that Jenna's injuries occurred approximately 24 or 28 hours before her death. The preliminary hearing judge committed Ms. Waudby to stand trial on the charge of second-degree murder.

In November 1998, Ms. Waudby's lawyer, James Hauraney, consulted Dr. Sigmund Ein, a staff surgeon at the Division of General Surgery at SickKids, on the timing of Jenna's fatal injuries. Dr. Ein concluded that Jenna had suffered her fatal injuries on the evening of her death. This timing was significant because it pointed to J.D., not Ms. Waudby, as the perpetrator. In December 1998, Dr. Ein spoke with Dr. Smith. Contrary to the evidence he had given at the preliminary hearing only two months earlier, Dr. Smith agreed with Dr. Ein. However, when Mr. Hauraney asked Dr. Smith to confirm his statement in writing, Dr. Smith did not respond.

Four months later, in April 1999, Dr. Ein hosted a meeting with the police, Crown counsel, Mr. Hauraney, and Dr. Smith. During the meeting, Dr. Ein opined that Jenna's injuries were inflicted after 5 p.m. on the evening of her death. Again, contrary to what he had told the police and the court, Dr. Smith agreed. Therefore, both experts now suggested that Jenna was in the care of J.D. and not Ms. Waudby when she suffered her injuries.

Mr. Hauraney sought further opinions from a pediatric surgeon, a pediatrician, and a forensic pathologist. Each agreed with Dr. Ein. Jenna would not have appeared normal immediately after sustaining her injuries. Therefore, they must have been inflicted after Ms. Waudby handed her over to J.D.

On receiving the opinions of the defence experts, on May 10, 1998, the Crown Attorney's office consulted with Dr. Bonita Porter, the Deputy Chief Coroner (Inquests) at the OCCO, for clarification on the timing of Jenna's fatal injuries. On May 26, 1999, Dr. Porter produced her report. Like the others, Dr. Porter concluded that Jenna's injuries were inflicted shortly – less than six hours – before her death.

As a result, on June 15, 1999, the Crown withdrew the second-degree murder charge against Ms. Waudby. Crown counsel acknowledged to the court that the medical evidence could no longer substantiate that Ms. Waudby had care of Jenna at the time she sustained her fatal injuries.

Several days before the withdrawal of the criminal charge, however, Ms. Waudby had pleaded guilty to a charge of child abuse under the *Child and Family Services Act*, RSO 1990, c. C.11. The plea was in relation to an incident that occurred one to three weeks before Jenna's death, as evidenced by Jenna's old rib injuries, and it served, in part, as the basis for the continued involvement of the CAS.[3] Ultimately, in July 1999, a Family Court judge ordered that Jenna's sister be returned to Ms. Waudby's care but that Ms. Waudby's son, born on May 1, 1999, remain in the care of his father, with access granted to Ms. Waudby.

Like S.M.'s father, D.M., and Mr. Gagnon, Ms. Waudby had concerns over Dr. Smith's conduct, and she tried to raise them with anyone who might have the authority to hold him accountable. In December 1999, Ms. Waudby's counsel wrote, on her behalf, to the premier of Ontario, the Attorney General of Ontario, the Solicitor General of Ontario, the minister of community and social services, and Ms. Waudby's local member of the legislature, requesting a public inquiry into the matter. In May 2001, Ms. Waudby asked the federal minister of justice for a public inquiry. Also in May 2001, Ms. Waudby filed a complaint against Dr. Smith with the CPSO, alleging that Dr. Smith had failed to perform an adequate sexual assault examination, had lost a hair collected from Jenna's body at the autopsy, and had failed to provide an accurate opinion on the timing of Jenna's injuries.

About the same time, in July 2001, the chief of the Peterborough Lakefield Community Police Service assigned Detective Constable (now Sergeant) Larry Charmley to review the previous investigation into Jenna's death. Detective Constable Charmley learned from Mr. Hauraney that a possible sexual assault might have been overlooked and that a hair noted in Jenna's vaginal area was missing.

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[3] The pathology evidence that formed the basis of the child abuse plea could not be confirmed upon review by Dr. Pollanen. This is discussed in Chapter 8, Dr. Smith and the Practice of Pediatric Forensic Pathology.

In October 2001, when Detective Constable Charmley spoke with Dr. Smith, the police learned that Dr. Smith had collected a hair from Jenna's body and that he had arranged for an expert on sexual abuse in children to examine Jenna during her post-mortem examination. Dr. Smith stated that he and the sexual abuse expert had agreed that there was no evidence of sexual abuse. Dr. Smith also claimed that the officer present at the autopsy did not believe that the hair was relevant and necessary to seize. In November 2001, Detective Constable Charmley retrieved the hair from Dr. Smith's office. It was in a sealed envelope labelled, "hair from pubic area." A seal on the envelope indicated that the contents were seized from Jenna's autopsy.

The police eventually submitted the hair for testing to both the Centre of Forensic Sciences (CFS) in Toronto and the Federal Bureau of Investigation (FBI) laboratory in Washington, DC. The CFS reported that it was not able to do a DNA analysis because the hair did not have a root. In addition, in part because of the length of time between Jenna's autopsy (when the hair was first collected) and the forensic analysis, microscopic comparison was of little or no value. In short, Dr. Smith's decision to seize the hair but not to submit it for analysis directly affected the forensic significance of the evidence. The FBI laboratory was, however, able to rule out both Ms. Waudby and J.D. as the source of the hair based on a mitochondrial DNA analysis.

Between 2001 and 2005, two parallel investigations took place. The CPSO investigated Ms. Waudby's complaint. As in Amber's and Nicholas' cases, Dr. Smith's responses to the investigation lacked candour. He made false or misleading statements to the CPSO, as well as to Dr. Cairns, alleging, among other things, that he had performed an adequate sexual assault examination; that he had collected a hair from Jenna's body and offered it to the forensic identification officer, who refused it; that he had kept the hair anyway and that he had brought the rejected item with him to the preliminary hearing in October 1998. No matter how preposterous and contradictory these explanations now sound, in the early 2000s, they worked. The CPSO believed him – and even commended him for seizing and retaining the hair despite the police officer's alleged rejection of it.

In the meantime, the police continued their investigation into the real perpetrator of Jenna's injuries. Together with the OCCO they consulted several more experts about Jenna's injuries, including a pediatrician, two pediatric surgeons, a forensic pathologist, and a forensic odontologist. The forensic pathologist was Dr. Pollanen, who by then was working at the Provincial Forensic Pathology Unit. He and the clinicians agreed that Jenna sustained her fatal injuries in the few hours before her death. Dr. Smith's evidence at the preliminary hearing, that Jenna had suffered her injuries 24 or 28 hours before death, was therefore wrong.

The police determined that the new medical opinions provided stronger grounds to believe that Jenna received her fatal injuries while in the care of J.D. As a result, the police used an undercover officer to befriend J.D. In November 2005, J.D. confessed to punching, poking, and sexually assaulting Jenna on the night of her death. In December 2005, the police charged him with second-degree murder and two counts of sexual assault. In December 2006, J.D. pleaded guilty to manslaughter. He was ultimately sentenced as a youth to 22 months of incarceration followed by 11 months of community supervision.

Sharon's Case

Another danger signal arose when Sharon died in Kingston, Ontario, in June 1997, five months after Jenna had died. She was seven-and-a-half years old. On June 12, 1997, at approximately 9:30 p.m., a neighbour reported Sharon missing. Members of the Kingston Police Service searched her home and found her dead, in the basement of her home. She had obviously been savagely attacked. Her body displayed dozens of penetrating wounds. A large wound was visible on the back of her head, and a big piece of her scalp lay near her partially clad body. The officers noticed a strong smell of animal urine and feces in the basement. The only dog present in Sharon's home when the officers found Sharon was a small dog belonging to Sharon's family.

On June 13 and 15, 1997, Dr. Smith performed the post-mortem examination at the OCCO in Toronto. At the time, he had very little experience with penetrating wounds, having seen only one or two cases involving stab wounds and one or two other cases involving dog bites. He performed the autopsy anyway. At the conclusion of the examination, Dr. Smith told the police that the cause of death was exsanguination secondary to multiple stab wounds.

A day or two later, the police learned that, in addition to the small dog the officers had seen in Sharon's home, a pit bull dog belonging to a neighbour had also been present in her home the day Sharon died. In the course of their investigation, the police discovered important information about the pit bull that suggested it might have played a part in Sharon's death: the dog had a red substance on its paws and chest when its owner picked it up from Sharon's house at 8:30 p.m. on the night of her death, its feces may have contained blond hair in the days following Sharon's death, and there was blood on the dog's collar and hair. In August 1997, the pit bull was euthanized for an unrelated incident of nipping and biting, and its head was destroyed.

Shortly after the police learned about the pit bull, an officer phoned Dr. Smith about concerns with some of the markings to Sharon's upper back. Dr. Smith defin-

itively told the officer that a domestic or wild animal had not caused the marks. Nine days later, the police arrested and charged Sharon's mother, Louise Reynolds, with second-degree murder. The police and the Crown theory was that Ms. Reynolds had killed Sharon in a fit of rage over Sharon's head-lice problem. Ms. Reynolds was in custody without bail for 22 months, from June 1997 to April 1999.

Ms. Reynolds denied that she had killed Sharon. The defence theory was that Sharon had been attacked by the pit bull and that Sharon's injuries were therefore bite marks, not stab wounds. To respond to the defence's suggestion, and at the recommendation of the regional coroner, the Crown sought an opinion from a forensic odontologist, Dr. Robert Wood. Dr. Wood reviewed the autopsy photographs and produced a consultation report in February 1998. He opined that the markings on Sharon's body were, "without equivocation," not dog bite marks.

After repeated requests to Dr. Smith for his report, and even the issuance of a subpoena to oblige him to attend court and to produce it, he finally provided his report of post-mortem examination to the Crown on March 8, 1998, nine months after completing the post-mortem examination. As he had previously indicated to the police, he concluded in his report that Sharon had died of multiple stab wounds.

Meanwhile, the defence retained its own forensic odontologist, Dr. Robert Dorion. On April 4, 1998, Dr. Dorion prepared a brief report based on his review of the autopsy photographs. His opinion directly contradicted Dr. Wood's. He opined that there were more than 20 bite marks on Sharon's body, and that those marks were caused by a powerful animal – most likely a dog.

Ms. Reynolds' preliminary hearing commenced shortly afterwards. It took place over 15 days, from April 1998 to November 1998. Dr. Wood did not testify, but Dr. Smith did. He told the court, unequivocally, that Sharon had suffered multiple stab wounds, and he suggested scissors as a possible weapon. He categorically denied suggestions by defence counsel that a dog had attacked Sharon, saying dismissively, "As absurd as it is to think that a polar bear attacked Sharon, so is it equally absurd that it's a dog wound." On November 19, 1998, the preliminary hearing judge committed Ms. Reynolds to stand trial on the charge of second-degree murder.

In February 1999, at a meeting of the American Academy of Forensic Sciences, Dr. Cairns and Dr. Young learned that four respected experts – Dr. Dorion, Dr. Michael Baden (a forensic pathologist), Dr. James (Rex) Ferris (a forensic pathologist), and Dr. Lowell Levine (a forensic odontologist) – strongly disagreed with Dr. Smith's conclusion in Sharon's case. The experts believed that Sharon was killed during a dog attack, and they expressed concern that a miscarriage of justice might be occurring in Kingston. Their remarks impressed Dr. Young and Dr. Cairns because these experts were "heavy hitters."

After the February 1999 meeting, Dr. Cairns met with Dr. Smith, Dr. Wood, and Dr. Chiasson. Dr. Wood and Dr. Smith continued to maintain that a dog was not responsible for any of Sharon's wounds. Nonetheless, all four agreed that an exhumation and second autopsy would be needed to rule out any involvement by a dog.

In July 1999, Sharon's body was exhumed. Dr. Chiasson performed a second autopsy at the OCCO in Toronto. Dr. Smith, Dr. Wood, Dr. Dorion, and Dr. Ferris, who had been retained by the defence, attended the autopsy. The OCCO's experts, Dr. Wood, Dr. Chiasson, and Dr. Smith, all produced reports following the second post-mortem examination. Dr. Wood and Dr. Smith revised their initial opinions. However, all three opinions were similar: a dog had caused at least some of Sharon's injuries, but it was still possible that a weapon caused some others. In particular, there were some marks on Sharon's skull and neck that Dr. Wood and Dr. Smith opined could not be explained by a dog attack.

The defence experts disagreed. From May to August 2000, Crown counsel Ed Bradley received two reports from Dr. Ferris, who criticized Dr. Smith's methodology and his conclusions. In Dr. Ferris' view, Sharon died as a result of a dog attack and, contrary to the assertions of Dr. Smith and Dr. Wood, all of her injuries could be explained by such an attack.

Faced once again with conflicting expert opinions, the OCCO sought an independent opinion. Dr. Young and Mr. Bradley agreed to have an out-of-province expert review the autopsy materials and provide an opinion on the cause of Sharon's death. In September 2000, the OCCO retained Dr. Steven Symes, a leading forensic anthropologist from the University of Tennessee. About the same time, Dr. Smith and Dr. Wood met with Crown counsel and the police. The two experts continued to maintain that some of Sharon's wounds could not be explained by a dog attack.

Dr. Symes produced his report in early December 2000. He concluded that most of the injuries were definitely caused by a dog attack, but that some fresh cut marks on the skull appeared to have been caused by a scalpel or sharp knife. When asked about these markings, Barry Blenkinsop, the Chief Pathologist Assistant at the OCCO, who assisted at Sharon's initial autopsy, insisted that they were not caused during the initial autopsy.

Later in December, Mr. Bradley spoke with Dr. Cairns, who was now skeptical of Dr. Smith's conclusion. In January 2001, Mr. Bradley again spoke to Dr. Smith. For the first time, Dr. Smith acknowledged that he could not dispute the evidence offered by the defence experts. However, he still believed that his opinion – that some injuries were not attributable to a dog attack – was correct.

On January 25, 2001, after receiving the reports from Dr. Ferris and Dr. Symes,

and speaking with Dr. Smith, the Crown withdrew the charge of second-degree murder against Ms. Reynolds. In withdrawing the charge, Crown counsel informed the court that it no longer had proof that the death was caused by stab wounds. Without that proof, the Crown had no reasonable prospect of conviction.

Dr. Smith's errors in Sharon's case were basic. He lacked the forensic pathology training and experience required to assess properly Sharon's penetrating wounds. Yet he took the case on anyway. The results were catastrophic. He turned what forensically qualified experts say are clearly dog bites into something much more sinister. Dr. Smith's misdiagnosis in Sharon's case might have been prevented if he had had the appropriate training and expertise in forensic pathology, or if he had consulted with someone with such a background.

There was much media attention in late January 2001 surrounding the termination of the criminal proceedings against Ms. Reynolds. Indeed, from the fall of 1999 on, Dr. Smith's mistakes had begun to attract significant media attention. On November 10, 1999, CBC television's investigative series *the fifth estate* critically examined his work in the cases of Amber, Nicholas, and Sharon. And on May 14, 2001, *Maclean's* magazine outlined the questions raised about Dr. Smith in an article entitled, "Dead Wrong."

In late January 2001, along with the withdrawal of the charge against Ms. Reynolds, two more events attracted media attention. On January 22, 2001, three days before the withdrawal of the charge against Ms. Reynolds, the Crown in another case involving Dr. Smith, Tyrell's case, stayed the criminal proceedings against the boy's caregiver. The defence in Tyrell's case had obtained opinions from three prominent experts that directly contradicted Dr. Smith's opinion in the case. By then, all this attention had led Dr. Young to conclude not that Dr. Smith's work had been flawed, but that he had become such a "lightning rod" that he should not continue to do autopsies for the OCCO. Thus, on January 25, 2001, at Dr. Young's insistence, Dr. Smith requested that he be excused from the performance of coroner's autopsies and that an external review be conducted into his work.

After a decade of inaction, Dr. Smith's errors and the attention they had attracted finally caused the leadership at the OCCO to act, but only tentatively. Dr. Young concluded that Dr. Smith should no longer perform autopsies in criminally suspicious cases and homicides. He also proposed an external review of Dr. Smith's cases to assess his competence. Dr. Young told the media and the Ministry of the Attorney General that the OCCO would undertake such a review. But before the external review could get off the ground, Dr. Young reconsidered the idea. Although Dr. Young decided as early as February 2001 that no external review was to be conducted, his actions and those of Dr. Cairns caused

significant confusion and misunderstanding among both stakeholders in the criminal justice system and the public at large about whether a review was being undertaken, and, if so, what its extent would be. In addition, despite these growing concerns about Dr. Smith's professional competence, Dr. Young allowed Dr. Smith to remain director of the OPFPU and to carry with him the reputation that the position entailed.

It took more mistakes by Dr. Smith and the appointment of a new Chief Coroner, Dr. McLellan, before Dr. Smith would finally be forced to resign from his position in July 2004. The full review into his work in criminally suspicious cases and homicides was called in June 2005, but not before Dr. Smith's work harmed two more cases: Athena's case and Valin's case.

Athena's Case

In June 2003, another trial judge dealt a blow to public confidence in the practice of pediatric forensic pathology in Ontario. In staying the charges of first-degree murder against Athena's parents, Justice W. Brian Trafford of the Ontario Superior Court of Justice condemned Dr. Smith's conduct in Athena's case. The concern raised was not in relation to a misdiagnosis but rather to Dr. Smith's complete disregard for the needs of the criminal justice system and, more specifically, his considerable delays in producing an addendum to his report of post-mortem examination, which was urgently needed by the criminal justice system.

On March 6, 1998, Athena died in Toronto at the age of three months. Dr. Smith performed the autopsy the next day. He waited six weeks before submitting samples taken from the autopsy to the CFS for analysis. The CFS in turn took five months to complete its report. Dr. Smith produced his report of post-mortem examination one month after that, and Athena's father was charged with manslaughter. There was thus a seven-and-a-half-month delay between the autopsy and the production of Dr. Smith's report on October 26, 1998.

Dr. Smith's delay in submitting the samples was not the most troubling aspect of his conduct in the case, however. Many months later, in July 1999, Dr. Smith told the police and Crown counsel that the liver injury likely took place within 12 hours of Athena's death. Athena's parents had told the police that they were with Athena during the entire 24-hour period before her death. In light of Dr. Smith's opinion on the timing of the liver injury, the police believed they had reasonable and probable grounds to charge both parents with second-degree murder. But they wanted Dr. Smith's opinion in writing. Shortly after the meeting, the police asked Dr. Smith to prepare an addendum to his initial report, outlining his opinion on the timing of Athena's injuries.

Dr. Smith failed to produce the requested addendum. In the fall of 1999, an officer phoned Dr. Smith on numerous occasions, requesting the report, but he continued to delay. In the winter of 2000, an officer and Crown counsel sent letters to Dr. Smith, formally requesting the report and stressing that it was urgently needed. Still, Dr. Smith delayed. Finally, in April 2000, on the very day that the police issued a subpoena for the production of his addendum, Dr. Smith produced a one-and-a-half-page letter outlining his opinion. That was eight-and-a-half months after the initial request.

Ultimately, on June 23, 2003, Justice Trafford stayed the proceedings against Athena's parents on the basis that the overall delay violated their *Charter* right to be tried within a reasonable time. The Crown appealed. On April 15, 2005, the Court of Appeal for Ontario dismissed the appeal. The Court found, among other things, that the failings of Dr. Smith caused the matter to be delayed for the better part of two years. Thus, the concerns with Dr. Smith's work were not limited to misdiagnoses and overstated opinions. They included a complete dereliction of his duties as an expert to assist the OCCO and serve the criminal justice system.

Valin's Case

The events in Valin's case that are most relevant to this story of growing concerns took place in 2003 and later, after Dr. Smith's removal from the roster for coroner's autopsies. However, it is helpful to provide an overview of the case from its beginning, a decade earlier.

Valin died in June 1993, at the age of four, in Sault Ste. Marie, Ontario. On the evening of June 26, 1993, Valin's parents left Valin and her brother in the care of their uncle, William Mullins-Johnson. They did not check on her when they returned late that night. The next morning, at approximately 7 a.m., Valin's mother found Valin in bed, face down and on her knees. She called 911. Ambulance attendants arrived at the scene and concluded that Valin was already dead.

On June 27, 1993, a pathologist at a local Sault Ste. Marie hospital, Dr. Bhubendra Rasaiah, performed the autopsy. Because he had concerns that Valin might have been sexually abused, Dr. Rasaiah asked Dr. Patricia Zehr, a gynecologist-obstetrician with a specialty in child abuse, to examine her. Dr. Zehr concluded that there was evidence of chronic sexual abuse. That day, the police arrested and charged Mr. Mullins-Johnson with first-degree murder and aggravated sexual assault.

Dr. Rasaiah issued his report of post-mortem examination on July 13, 1993. Among other things, he reported that Valin had a dilated vaginal opening and a

markedly dilated rectal opening. He concluded that Valin had died of cardiorespiratory arrest due to asphyxia. Dr. Rasaiah also consulted the director of SCAN at SickKids, who asked Dr. Smith for his assistance. She and Dr. Smith reviewed the autopsy photographs and wrote a joint consultation report. In this report of August 6, 1993, they observed that Valin's anus was gaping with a large opening, that there were fissures inside the anus, and that there was bruising to Valin's face and chest. They concluded that Valin had likely died of asphyxia, resulting from chest or abdominal compression, and that Valin had suffered anal penetration by a round, blunt object.

Mr. Mullins-Johnson's trial took place in September 1994. Four pathologists testified: Dr. Rasaiah and Dr. Smith for the Crown, and Dr. Frederick Jaffe and Dr. Ferris for the defence. To sustain a conviction for first-degree murder, the Crown had the burden of proving that Mr. Mullins-Johnson caused Valin's death while committing a sexual assault. The Crown's theory was that Valin was the victim of chronic sexual abuse and had died during a sexual assault at a time when she was being cared for by Mr. Mullins-Johnson. The key pathology issues were thus the time of death, the cause of death, and whether there was evidence of sexual abuse.

Dr. Smith did not offer a specific opinion on the time of Valin's death. In his view, the pathology evidence could not substantiate a specific time period. With respect to the cause of death, Dr. Smith testified that Valin had died of asphyxia, possibly due to manual strangulation. He also told the court that he had found evidence of recent sexual abuse: he had observed, microscopically, one "fresh" laceration in the cells that line the anal-rectum region.

The other pathologists agreed, to varying degrees, with Dr. Smith's opinion. However, unlike Dr. Smith, none of them saw an acute injury that would suggest that the sexual abuse had occurred at or just before death. Dr. Jaffe saw some old damage, and Dr. Ferris opined that anal penetration might have occurred eight to 18 hours before death.

On September 21, 1994, a jury convicted Mr. Mullins-Johnson of first-degree murder. He was sentenced to life in prison with no eligibility for parole for 25 years. Mr. Mullins-Johnson appealed to the Court of Appeal for Ontario. On December 19, 1996, the Court dismissed the appeal. Justice Stephen Borins dissented, which gave Mr. Mullins-Johnson the right to appeal to the Supreme Court of Canada. The Supreme Court heard and dismissed Mr. Mullins-Johnson's appeal on May 26, 1998.

In February 2003, James Lockyer, on behalf of the Association in Defence of the Wrongly Convicted (AIDWYC), wrote to the Crown Law Office, requesting the microscopic slides and tissue blocks from which the slides were made to allow

Dr. Bernard Knight, a forensic pathologist, to review Valin's case. Arising out of that request, in May 2003 the police contacted Dr. Rasaiah about the materials. Dr. Rasaiah determined from his records that he had sent the slides and blocks from Valin's autopsy to Dr. Smith in June 1994, and that they had never been returned. In June 2003, Dr. Rasaiah phoned Dr. Smith about the matter. Dr. Smith indicated that he would look for the materials.

When Dr. Smith did not respond further on the matter, Dr. Rasaiah phoned him a second time in October 2003. This time, he left a message. As before, Dr. Smith did not respond. Two weeks later, Crown counsel Philip Downes became involved. He wrote to Dr. Smith, indicating that defence counsel was looking into the conviction of Mr. Mullins-Johnson and wanted access to the autopsy materials from Valin's case. He asked Dr. Smith to inform him whether he knew the whereabouts of the material. Still, Dr. Smith did not reply.

Mr. Downes did not give up. In December 2003, he spoke with Dr. Smith on the phone. Dr. Smith told him that his assistant had searched unsuccessfully for the materials in the SickKids archives. Dr. Smith did not believe that he still had the slides and blocks, but he told Mr. Downes that he would take another look later that week. Mr. Downes asked Dr. Smith to confirm in writing his position on the whereabouts of the materials, and Dr. Smith agreed. Despite his agreement, Dr. Smith never responded, either verbally or in writing.

Still, Mr. Downes did not give up. In January and March 2004, Mr. Downes wrote to Dr. Smith two more times, requesting that Dr. Smith confirm in writing his position on the whereabouts of the materials. Mr. Downes even sent his March 2004 letter by registered mail. Despite Mr. Downes' efforts, Dr. Smith did not respond.

Finally, in November 2004, Mr. Downes contacted Dr. McLellan, who had recently been appointed Chief Coroner, and requested the OCCO's assistance in determining the whereabouts of the materials. Dr. McLellan acted quickly to investigate Mr. Downes' request. On November 26, 2004, Dr. Cairns and the OCCO executive officer, Dorothy Zwolakowski, attended SickKids to discuss the issue with Dr. Smith. Dr. Smith first denied any knowledge of the case, and then he was adamant that he did not have the materials. He even told Dr. Cairns that he had personally gone to the post office some time in the 1990s to send the materials back to Dr. Rasaiah. Not satisfied, Dr. Cairns asked Maxine Johnson, a senior administrative assistant at SickKids, to assist in the search for the materials. After the meeting, Ms. Johnson and Ms. Zwolakowski searched Dr. Smith's office and discovered a couple of slides from Valin's autopsy. Three days later, on November 29, 2004, Ms. Johnson found 20 more slides on a shelf in Dr. Smith's office. Contrary to what Dr. Smith had told the Deputy Chief Coroner, it was clear that he had never returned the materials to Dr. Rasaiah.

This sequence of events is disturbing. Dr. Smith received and ignored request after request for the autopsy materials from a case he had reviewed and in which a man was in prison for first-degree murder. The materials were found in his own office almost 18 months after the first unanswered request. The case raises serious concerns about the storage and retention of autopsy materials and, more important, about Dr. Smith's disregard for the needs of the criminal justice system.

Fortunately, Dr. McLellan and Dr. Pollanen recognized the urgency and significance of the Crown's request. Their quick and thoughtful action to find the needed evidence in Valin's case ultimately assisted in the acquittal of Mr. Mullins-Johnson in 2007. Events unfolded quickly after the discovery of the material in November 2004. Dr. McLellan asked Dr. Pollanen to catalogue the 20 or so slides that had been located. In doing so, Dr. Pollanen concluded that the slides had clearly been misinterpreted and, in sharp contrast with the experts' evidence at Mr. Mullins-Johnson's trial, that the anus and vagina were essentially normal. Alarmed by this discovery, Dr. Pollanen raised his concerns with Dr. McLellan. Ultimately, the OCCO and the Crown decided to provide Dr. Pollanen with all the necessary materials and asked him to prepare a full report.

On January 19, 2005, Dr. Pollanen produced his first report on the case. He concluded that the cause of death was unascertained and that there was no evidence of penetrating trauma. Dr. Smith had misinterpreted what were in reality post-mortem artefacts for injury when he told the court in 1994 that Valin had died of strangulation and that she had been sexually assaulted.

After they provided Dr. Pollanen's first report to the Crown, the OCCO leadership concluded that an innocent man was sitting in jail. According to Dr. Cairns, at this juncture, for the first time, they seriously considered the prospect of a complete external review of Dr. Smith's work. As a result, the OCCO assisted the Crown with respect to Valin's case and finally dealt head on with concerns about Dr. Smith's work.

In mid-February 2005, the Crown asked the OCCO for the names of forensic pathologists who could review Valin's case. Dr. Pollanen prepared a list of possible candidates whom he considered among the best forensic pathologists.

Moreover, as a result of the OCCO's concerns about the way Dr. Smith stored and catalogued autopsy materials, on March 31, 2005, Dr. McLellan announced that the OCCO would audit all tissue samples from homicides and criminally suspicious cases that had been conducted at SickKids since 1991 (the "Tissue Audit"). The OCCO sought not only to ensure that slides, blocks, and tissues could be accounted for but to restore public confidence in the OCCO's ability to maintain control of exhibits and materials from autopsies.

Seventy cases were identified as falling within the scope of the Tissue Audit. During the audit, Ms. Johnson and Ms. Zwolakowski found some unusual items in Dr. Smith's office. Importantly, on May 6, 2005, they discovered 28 paraffin tissue blocks and 10 more microscopic slides from Valin's case in Dr. Smith's office. Shortly thereafter, Dr. Pollanen reviewed these materials and completed a supplementary report. He again concluded that the cause of Valin's death was unascertained and determined that the findings in the anal-rectal tissue were post-mortem artefact.

On June 7, 2005, Dr. McLellan made two announcements. In the first, he gave the results of the Tissue Audit and indicated that 70 cases had been identified and audited. Dr. Smith had been the pathologist in 40 of these 70 cases. With some minor exceptions, the slides and tissues were accounted for in all 70 cases, including Valin's case. In those few cases where microscopic slides could not be located, tissue blocks had been found that could allow new slides to be prepared. Second, and more important, Dr. McLellan announced that the OCCO would conduct a formal review of the work of Dr. Smith in the 40 cases identified in the Tissue Audit. In short, Dr. McLellan implemented a review process that would confront squarely the serious questions about Dr. Smith's work.

In July 2005, Dr. McLellan sent the slides and blocks from Valin's case to Dr. Knight, who completed his report the following month. Dr. Knight agreed with Dr. Pollanen and concluded that there was nothing in the histological material to support the infliction of any anal trauma. In early September 2005, Dr. Pollanen and OCCO counsel met with AIDWYC to discuss his findings in the case.

Shortly after the meeting, on September 7, 2005, Mr. Mullins-Johnson filed an application for ministerial review pursuant to Part XXI.1 of the *Criminal Code*. The Attorney General of Ontario wanted an independent review of Dr. Pollanen's opinion, and on September 14, 2005, the OCCO sought the opinions of Dr. Jack Crane, Dr. Christopher Milroy, and Dr. John Butt, three leading authorities on forensic pathology. On September 21, 2005, 11 years after his conviction, Mr. Mullins-Johnson was granted bail pending his application.

Mr. Lockyer gave Dr. Ferris an opportunity to reconsider the case. In December 2005, Dr. Ferris provided a report to Mr. Lockyer. He abandoned his original conclusions and acknowledged that there was no evidence to determine either the cause or the time of Valin's death, and no evidence that she had been the victim of sexual abuse. Between May and September 2006, Dr. Crane, Dr. Milroy, and Dr. Butt also issued their reports on the case. These international experts found what Dr. Pollanen had found: Dr. Smith had misinterpreted post-mortem changes for injury. All three agreed that the cause of Valin's death was undetermined and that there was no evidence of sexual abuse.

In 2007, events moved quickly on the case. On April 27, the Attorney General of Ontario called publicly for an acquittal of Mr. Mullins-Johnson. On July 17, the federal minister of justice granted Mr. Mullins-Johnson's application for ministerial review and referred the case to the Court of Appeal for Ontario. On October 19, that Court allowed the appeal, quashed Mr. Mullins-Johnson's conviction for first-degree murder, and entered an acquittal.

The Chief Coroner's Review

In April 2005, shortly after the announcement of the Tissue Audit, AIDWYC wrote to Dr. McLellan and the Attorney General of Ontario, requesting a full public inquiry into the work of Dr. Smith. AIDWYC cited continuing concerns over Dr. Smith's work as the reason for its request. By this time, there had been significant media coverage of many of the cases in which Dr. Smith had played a key role, including the cases involving Amber, Nicholas, Jenna, Tyrell, Sharon, Athena, and Valin.

Dr. McLellan believed that, notwithstanding the positive results of the Tissue Audit, a formal review was needed to maintain public confidence in the OCCO's work. In an act of courage, Dr. McLellan decided that the OCCO would conduct a full external review of Dr. Smith's work.

In his June 7, 2005, press release, Dr. McLellan announced the "Chief Coroner's Review." He stated that the OCCO was aware of concerns about conclusions reached in a number of cases where Dr. Smith was the primary or the consulting pathologist. He said that, to maintain public confidence, pathologists external to the OCCO would conduct a formal review of all the criminally suspicious cases since 1991 in which Dr. Smith had conducted the autopsy or provided a consultation opinion. The purpose of the review was to ensure that the conclusions reached by Dr. Smith were reasonably supported on the materials available.

On November 1, 2005, Dr. McLellan provided more details on the format of the Chief Coroner's Review, including both the criteria to be applied by the expert reviewers and the materials subject to the Review. He indicated that the OCCO had selected 44 cases and provided the names of four external pathologists who would form the Review Panel. He estimated that the entire Review would be completed within one year.

As events unfolded, the Chief Coroner's Review took on a slightly different form from that announced by Dr. McLellan in June and November 2005. Another reviewer was added. A total of 45 of Dr. Smith's cases were selected by the OCCO for review, 35 cases were reviewed by the five external pathologists, and 10 cases were reviewed by two Ontario pathologists.

The 45 cases met three criteria: they were criminally suspicious or homicide cases; they dated (with one exception)[4] from 1991, the year in which the OPFPU was created, to 2001, the year in which Dr. Smith stopped performing criminally suspicious autopsies; and, finally, they were cases in which Dr. Smith had performed the autopsy or had been consulted.

The OCCO identified cases that met these criteria with the assistance of the Ministry of the Attorney General and various police services. The initial 40 cases identified by Dr. McLellan in his June 2005 announcement were ascertained through the Tissue Audit. That number increased to 43 by July 2005, to 44 by November 2005, and to 45 by the end of the Chief Coroner's Review. The five additional cases were ones in which Dr. Smith had not performed the initial autopsy, but had been consulted as an expert.

On April 19, 2007, Dr. McLellan announced the results of the Chief Coroner's Review. He announced that, in 20 of the 45 cases, the Chief Coroner's Review pathologists took issue with Dr. Smith's opinion, as expressed in his report or his testimony, or both. Those 20 cases formed much of the factual background examined by this Inquiry, with 18 of them coming under particularly close scrutiny. Ultimately, therefore, the material reviewed and the results reached during the Chief Coroner's Review created much of the factual basis for our work.

The Review Parameters

In his June 7, 2005, announcement, Dr. McLellan indicated that the format of the Chief Coroner's Review would be determined after consultation with the Forensic Services Advisory Committee (FSAC). The FSAC is a multidisciplinary committee made up of representatives from the OCCO, the CFS, the Crown, the police services, criminal defence lawyers, and forensic pathologists. The committee was critically important in the determination of the scope and process of the Review and the material to be used by the Review Panel.

On November 1, 2005, Dr. McLellan announced that the materials to be reviewed would include Dr. Smith's autopsy or consultation reports; the coroner's warrant for autopsy; any other autopsy or consultation reports arising from the investigation; photographs from the autopsy and the death scene; microscopic slides and any other pathologic materials; police reports; reports of the CFS; and court transcripts.

[4] Amber's case did not fit into the inclusion criteria. Amber's case dated back to 1988, but was selected for review because it had been the subject of significant public attention.

The materials that were eventually provided to the reviewers came from three sources: the OCCO, the Ministry of the Attorney General, and SickKids. Although it was agreed that, in all cases, Dr. Smith's report, photographs, and transcripts would be included in the Review package, the decision of whether other materials ought to be included was left for determination on a case-by-case basis.

The final autopsy report review form asked the Review Panel questions that fell into five categories. The expert reviewers were asked whether or not Dr. Smith's

1 report of post-mortem examination provided adequate descriptions of the external examination, the injuries, and any natural disease;
2 description and/or interpretation of the injuries provided in the report reasonably matched the photographs and the histology evidence;
3 testimony, when applicable, was reasonable and balanced;
4 testimony on cause of death, when applicable, was the same as that provided in his report; and
5 opinion on the cause of death was independently reviewable and was reasonable based on the available information.

The form gave the expert reviewers the option of answering, Yes, No, or N/A to each of these questions. It also included room for narrative comments.

The Review Panel

The FSAC discussed the selection of the expert reviewers in the early stages of the design process. In a document submitted to the FSAC at its initial July 5, 2005, meeting, Dr. Pollanen proposed that members of the Review Panel meet five criteria. They must be considered forensic pathologists, either by training, experience, qualification, or some combination thereof; have performed autopsies on infants and children, and have testified in relation to such autopsies; be acquainted with the coroner's system of death investigation; have knowledge of the procedures and historical practices of Ontario's coroner system and the OPFPU; and be respected in the Ontario forensic pathology community.

By the fall of 2005, one Canadian and three international experts had been selected: Dr. John Butt from Vancouver; Dr. Jack Crane from Northern Ireland; Dr. Christopher Milroy from England; and Dr. Helen Whitwell from England. As discussions of the review process continued, it became apparent than an additional expert reviewer would be needed to complete it in a timely fashion. In 2006, Dr. Pekka Saukko from Finland was added to the roster.

The five reviewers met all of Dr. Pollanen's criteria, with the exception of the fourth; they lacked knowledge of the procedures and historical practices of Ontario's coroner system and the OPFPU. Accordingly, this information was provided to them when they met in Toronto to conduct their reviews. Each of the five reviewers had obtained formal training and certification in forensic pathology, and, as evidenced by their qualifications, which are set out below, each was eminently qualified for the task. I am satisfied that the five forensic pathologists are among the very best in the world. The OCCO was extremely fortunate to obtain their services.

Dr. John Butt

Dr. Butt graduated from the University of Alberta medical school in 1960. He obtained pathology training both in Canada and in England, training in 1965 in morbid anatomy and hematology as an associate resident at Vancouver General Hospital and working at the Institute of Neurology, Queen's Square, in London, England, in 1965–66. From 1967 to 1971, he worked at Guy's Hospital in the Department of Clinical Pathology and Department of Morbid Anatomy. In 1969, Dr. Butt obtained his diploma in medical jurisprudence (DMJ) in pathology from the Worshipful Society of Apothecaries of London. He became a member of the Royal College of Pathologists in 1973 by examination in morbid anatomy and forensic pathology, and in 1985, he became a fellow.

Dr. Butt has also taught forensic pathology. From 1971 to 1973, he was a lecturer at the Department of Forensic Medicine at Charing Cross Hospital medical school in London. From 1974 to 1977, he served as a full-time associate professor in the Division of Pathology at the University of Calgary, Faculty of Medicine. While in Alberta, Dr. Butt was also responsible for organizing the forensic pathology service to support the coroner's system. He was Alberta's Chief Coroner for a brief period, before the province moved to a medical examiner system. In 1977, Dr. Butt became the first chief medical examiner for the Province of Alberta, remaining in that position until 1993. From 1996 to 1999, he was the chief medical examiner for the Province of Nova Scotia. During that time, he was also a professor of pathology at the Dalhousie University medical school.

Dr. Butt has also been highly involved in the National Association of Medical Examiners, an American organization dedicated to the improvement of death investigations. He has served as president, vice-president, chairman, and member of the board of directors of that association. In April 2000, he was appointed a member of the Order of Canada.

Dr. Jack Crane

Dr. Crane obtained his bachelor of medicine and surgery degree from Queen's University of Belfast in 1977. In 1982 he received his DMJ (Clinical), and in 1983 he obtained his DMJ (Pathology) from the Worshipful Society of Apothecaries of London. Dr. Crane then specialized in forensic pathology, becoming a member of the Royal College of Pathologists in 1984. In 1985, he became a fellow of the Royal College of Physicians of Ireland, Faculty of Pathology. In 1990, he was appointed state pathologist for Northern Ireland.

In 1993, he became a professor of forensic medicine at Queen's University of Belfast, a position he continues to hold in 2008. Dr. Crane also sits on several committees. He is a council member of the Royal College of Pathologists, chair of the Forensic Pathology Sub-Committee, member of the Home Office Policy Delivery Board, member of the Forensic Pathology Council, and member of the Scientific Standards of Policy Advisory Board for Forensic Pathology. He is an examiner in forensic pathology at the Royal College of Pathologists and is the chief examiner and convenor for the DMJ at the Worshipful Society. Dr. Crane is also widely published.

Dr. Christopher Milroy

Dr. Milroy graduated from the University of Liverpool with a bachelor's degree in medicine and surgery in 1983. In 1990, he became a member of the Royal College of Pathologists, with a subspecialty in histopathology. Dr. Milroy then spent 18 months at the University of Sheffield, receiving specific training in forensic pathology. In 1991, he obtained his DMJ in forensic pathology from the Worshipful Society of Apothecaries in London. In 1994, Dr. Milroy was granted his medical degree, the North American equivalent of a PhD, in forensic pathology from the University of Liverpool. He became a fellow at the Royal College of Pathologists in 1998 and in 2004 received his law degree from the University of London.

Dr. Milroy has also taught forensic pathology and is widely published in the field. In 2000, he was appointed professor of forensic pathology at the University of Sheffield. Since 1991, Dr. Milroy has been on the United Kingdom Home Office list of registered forensic pathologists. He is currently the Chief Forensic Pathologist of the Forensic Science Service and consultant pathologist to the Home Office. He is also involved in the examining of potential forensic pathologists by the Royal College of Pathologists and the Worshipful Society.

Dr. Helen Whitwell

Dr. Whitwell obtained her bachelor of medicine and surgery degree in 1977 from the University of Manchester. In 1985, she became a member of the Royal College of Pathologists in general histopathology, and in 1990 she obtained her DMJ in pathology from the Worshipful Society of Apothecaries in London. In 1996, she became a fellow of the Royal College of Pathologists. In 2003 and 2005, respectively, she became a fellow of the Australasian College of Biomedical Scientists; and of the Faculty of Forensic and Legal Medicine, as a founding fellow, at the Royal College of Pathologists.

Dr. Whitwell has been highly involved with the Home Office and the Royal College of Pathologists. In the 1990s, she served on the Neuropathology Sub-Committee of the Royal College of Pathologists, the Home Office Policy Advisory Board in Forensic Pathology and its Quality Assurance and Scientific Standards Committee, and the Association of Clinical Pathologists Sub-Committee on Forensic Pathology. From 2000 to 2004, she continued as a member of the Home Office Policy Advisory Board. From 2001 to 2004, she was also the chair of the Royal College of Pathologists Standing Advisory Committee in Forensic Pathology. Since 2000, she has served on the Home Office Policy Advisory Board Scientific Standards Committee. She is an external examiner for the Royal College of Pathologists in forensic pathology and is the deputy convenor for the DMJ in forensic medical sciences offered by the Worshipful Society.

Between 2000 and 2004, Dr. Whitwell was a professor in and the head of the Department of Forensic Pathology at the University of Sheffield. Since 2004, she has continued as an honorary professor at the university. Since 1988, she has been on the Home Office list of accredited forensic pathologists.

Dr. Whitwell's subspecialty is forensic neuropathology, and she has been consulted nationally and internationally in forensic neuropathological cases. From 1986 to 1998, Dr. Whitwell was the senior consultant neuropathologist at the Queen Elizabeth Hospital–University Hospital NHS Trust in Birmingham. From 1999 to 2001, she was involved in a prominent study on the patterns of brain damage in infant head injury. She is a reviewer of scientific papers for several pathology, neuropathology, forensic science, and legal medicine journals. Dr. Whitwell has contributed chapters to various books on her subspecialty. She has presented at numerous national and international lectures and scientific meetings. Her writings and presentations cover many of the issues specifically raised in the 45 cases subject to the Chief Coroner's Review, such as head injury, brain death, and shaken baby syndrome. In 2005, she edited and contributed to a textbook on forensic neuropathology.

Dr. Pekka Saukko

Dr. Saukko qualified in medicine from the University of Vienna in 1975. He became a registered physician in 1976 and began training in forensic medicine at the Department of Forensic Medicine at the University of Oulu in Finland. He was certified as a specialist in forensic medicine by the National Board of Health in Finland in 1981 and, two years later, was awarded a doctorate in medical science and delivered a thesis in forensic pathology at the University of Oulu.

In 1986, Dr. Saukko was appointed adjunct professor of forensic medicine at the University of Oulu. From 1978 to 1989, he served as the provincial medical officer, forensic expert, at the Provincial Government of Oulu, Department of Social Affairs and Health. He was a professor of forensic medicine at the University of Tampere and the University of Kuopio from 1989 to 1991, and in 1992 he was appointed the head of the Department of Forensic Medicine at the University of Turku. Dr. Saukko is a founding member and current president of the European Council of Legal Medicine, a professional organization representing forensic pathology within the European Union and the European Economic Space. He is widely published in the area of forensic medicine and forensic pathology – in peer-reviewed scientific journals, international textbooks, and forensic science encyclopedias. Since 1993, he has been editor in chief of one of the leading international peer-reviewed forensic journals, the *Forensic Science International*, and a member of the editorial board of a further six national and international forensic science journals. In 2004, he co-authored the third edition of *Knight's Forensic Pathology*, one of the most prominent textbooks in the area.

Dr. Smith's Involvement in the Chief Coroner's Review

The FSAC and its subcommittee, tasked with making recommendations on the design of the review process, considered whether it should involve Dr. Smith in the Review. Ultimately, both committees determined that the appearance of independence in the Chief Coroner's Review would be best served by not having Dr. Smith directly involved. On November 3, 2005, counsel for Dr. Smith indicated to the OCCO that Dr. Smith was willing to cooperate in the OCCO's implementation of the Chief Coroner's Review but understood the necessity of an independent and objective review.

The Review Process

The FSAC determined, subsequent to recommendation from its subcommittee, that the cases should be streamed to give certain ones higher priority. The cases

involving individuals whose liberty interests remained at issue, including cases where individuals were out of custody but on parole or bail, were deemed high priority and were thus to be reviewed earlier in the process. Cases were classified into four categories according to their legal outcome:

1 cases involving individuals who were out of custody, with no restrictions on their liberty;
2 cases involving individuals who were out of custody, but with restrictions on their liberty;
3 cases involving individuals who were in custody, without an extant appeal or application for ministerial review; and
4 cases involving individuals who were in custody, with an extant appeal or application for ministerial review.

The FSAC determined that it would give priority to cases falling within the second through fourth categories. On November 1, 2005, Dr. McLellan announced that 10 high-priority cases had been identified. Two of the 10 cases ended up being a part of the 18 cases considered in detail by the Commission: Valin's case and Kenneth's case.[5] In April 2006, an additional case, Jenna's, which was also examined by the Commission, was added for priority review.

In addition to streaming the cases by legal outcome, the FSAC classified the cases according to the potential issues they raised. A subset of cases was given to Ontario forensic pathologists for review. The rationale was that these cases were relatively straightforward. Assigning them to the Ontario forensic pathologists would assist in having the Chief Coroner's Review finish on time. Because pediatric forensic autopsies were at the time also being performed at the Hamilton and the London regional forensic pathology units, Dr. McLellan asked the directors of the units, Dr. Chitra Rao and Dr. Michael Shkrum, respectively, to be the Ontario forensic pathologists for that subset of 10 of the 45 cases. Both Dr. Rao and Dr. Shkrum have formal training in forensic pathology.

The remaining 35 cases were assigned to the external reviewers.

Dr. Rao completed her review of her cases on July 17, 2006, and Dr. Shkrum completed his review on July 31, 2006. In none of the 10 cases did either Dr. Rao or Dr. Shkrum find concerns with Dr. Smith's work that was considered worthy of further review by the external panel.

[5] See Appendix 28 at the end of Volume 4 for summaries of the 20 cases that the Review Panel found problematic.

Early in the process, the FSAC recognized a need to notify the families of the deceased and counsel for any accused persons involved in the cases included in the Chief Coroner's Review. On September 19, 2005, the FSAC decided that the regional coroners should notify these people, preferably in a face-to-face meeting or over the telephone.

Initially, the FSAC had anticipated sending review packages to the reviewers. From a practical point of view, however, it became evident that sending the materials around the world would not permit the Review to be completed within Dr. McLellan's one-year time frame. In addition, the FSAC wanted to ensure that forensic materials such as microscopic slides were secure. Ultimately, the decision was made to bring the pathologists to Toronto in two panels to review the 35 remaining cases.

The five reviewers – Dr. Butt, Dr. Crane, Dr. Milroy, Dr. Whitwell, and Dr. Saukko – came to Toronto in December 2006 and sat in two panels. Each reviewer was assigned seven cases. Then, at the completion of the individual reviews, each panel held reconciliation meetings with Dr. Pollanen to ensure that members of the panel were in agreement and to provide a mechanism for dissenting opinions to be heard and discussed. Dr. Pollanen was not a voting member on the cases that he had reviewed: the cases of Jenna, Valin, Paolo, and Joshua.

There were two panels. The first included Dr. Crane, Dr. Milroy, and Dr. Whitwell. They met in Toronto from December 4 to 8, 2006. Dr. Pollanen testified that these three experts often worked together and had requested to be placed on a panel together.

Dr. Pollanen also gave the reviewers a document that he had prepared, entitled "Preliminary Observations on Smith Cases for External Review (n=35)." For each of the 35 cases, Dr. Pollanen set out Dr. Smith's opinion on the cause of death, as well as his own preliminary observations of the case. Dr. Pollanen testified that, given the tight time frame, the document was intended to orient the reviewers to the main issues that were apparent. His preliminary observations were meant to serve as a starting point for the experts' independent reviews.

The reviewers spent the following three days individually reviewing their seven cases. Then, on December 8, 2006, a reconciliation meeting took place at the OCCO. During the meeting, the reviewers discussed their findings in each of their seven cases and came to an agreement on all 21 cases.

The second panel convened in Toronto from December 11 to 15, 2006. It included Dr. Butt, Dr. Saukko, and Dr. Milroy. Dr. Butt and Dr. Saukko were each assigned seven cases. Dr. Milroy, who was on the first panel as well, was not assigned any additional cases. The panel's reconciliation meeting took place on December 15, 2006. The second panel came to an agreement on all remaining 14 cases.

Results of the Review

The results of the Chief Coroner's Review may be summarized as follows:

1 In all but one of the 45 cases, the reviewers agreed that Dr. Smith had conducted the important examinations that were indicated.
2 In nine of the 45 cases, the reviewers did not agree with significant facts that appeared in either Dr. Smith's report or his testimony.
3 In 20 of the 45 cases, the reviewers took issue with Dr. Smith's opinion in either his report or his testimony, or both. In 12 of those 20 cases, there had been findings of guilt by the courts.[6]

The external reviewers identified three categories of issues with respect to Dr. Smith's work: forensic pathology, testimony, and administration. More specifically, the reviewers noted that Dr. Smith appeared to have no training in forensic pathology, which resulted in misdiagnosis in a number of instances; that he provided unbalanced or emotive testimony, which tended to invite inappropriate and adverse conclusions; and that he did not seem to recognize the importance of working in a forensic environment and the importance of the continuity of evidence.

After they had received the results, Dr. McLellan and Dr. Pollanen discussed some of the limitations to the Chief Coroner's Review process. On January 8, 2007, Dr. Pollanen wrote a memorandum to Dr. McLellan containing his thoughts and observations. The memorandum provided important insight into the narrow scope of the Chief Coroner's Review and its corresponding limitations. In particular, Dr. Pollanen identified several considerations that had to be taken into account in assessing the results of the Review. A failure to do so could result in a skewed view of both the scope of the Chief Coroner's Review and Dr. Smith's work in general.

Importantly, the Chief Coroner's Review focused on a small subset of Dr. Smith's cases. It was limited to the 45 cases in which Dr. Smith was involved that entered the criminal justice system. The reality was, however, that much of Dr. Smith's work involved non-criminally suspicious cases. The narrow scope of the Chief Coroner's Review thus limited significantly what its results could say about Dr. Smith's work on a more general level. The Review Panel simply did not consider the quality of his work in general.

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[6] In a 13th case, the Court found the accused not criminally responsible for the child's death by reason of a mental disorder.

Dr. Pollanen rightly pointed to several more limitations that flow from the Review's narrow focus. First, to use any kind of statistical analysis could be seriously flawed. For instance, to say that Dr. Smith's "error rate" was 20 of 45 would be wrong. Instead, the Chief Coroner's Review showed that Dr. Smith had committed errors in 20 of the 45 cases reviewed. These 45 cases consisted of only a very small subset of his overall work in the relevant time period, and they were some of the most difficult, and important, cases a pathologist could encounter.

Second, the reality is that medical knowledge evolves with research and time. What was once considered diagnostic of a certain condition might later be cast in doubt. Importantly, the Review Panel was not asked to consider if Dr. Smith's opinion or his testimony was reasonable in light of the state of knowledge at the time. When the reviewers checked "No" on their review forms to indicate that Dr. Smith's opinion on the cause of death was not reasonable on the available evidence, they applied their knowledge in 2006 to Dr. Smith's opinions in the 1990s. Significant advances in medical knowledge, particularly in relation to the diagnosis of infant head injury, have been made. What was reasonable in the 1990s might no longer be so a decade later. As a result, Dr. Pollanen rightly pointed out that *any* review of infant head injury cases might identify problematic cases. The problems identified in some cases therefore might not relate so much to Dr. Smith's competence as to the shift in knowledge on the topic.

Third, the Chief Coroner's Review did not consider the efficacy of the oversight of Dr. Smith's work, or how the death investigation system or criminal justice system interfaced with Dr. Smith. The Review was not designed as an assessment of the OCCO's quality assurance processes in existence at the time, and therefore its results said nothing about those processes.

Finally, the Chief Coroner's Review did not consider the role of the coroner or other members of the death investigation team in these 45 cases. The reality is that the pathologist is but one member of the death investigation team and that he or she relies, in important ways, on the work of other members. The Chief Coroner's Review did not consider the roles of those other members and how competently they fulfilled their duties. Inadequate pre-autopsy information from the investigating coroner might lead to an inadequate post-mortem examination, for instance. If that deficiency was present in any of the 45 cases, the Chief Coroner's Review did not consider it. Any claim that the errors in the 20 cases were solely Dr. Smith's would therefore be wrong.

Nonetheless, the fundamental result of the Review was that five world-renowned experts all took serious issue with Dr. Smith's work in 20 of his cases. These cases were among his most difficult. But they were also among his most

important because they were cases where serious criminal charges were at stake for individuals and where the criminal justice system had relied, often fundamentally, on his professional abilities.

3

Establishment of the Commission

On April 19, 2007, Dr. Barry McLellan, Chief Coroner for Ontario, announced the results of the Chief Coroner's Review. The public learned that five eminent forensic pathologists, all of whom have impeccable international reputations, had concluded that, in a number of cases of suspicious child deaths where Dr. Charles Smith either performed the autopsy or was consulted, his conclusions were not reasonably supported by the materials available. In 20 of the cases examined, they took issue with Dr. Smith's opinion in either his report or his testimony, or both. Even more troubling was that in 12 of those 20 cases, there were findings of guilt, many on very serious charges.

The results of the Review constituted the last and most serious blow to public faith in pediatric forensic pathology and the central role it must play in criminal proceedings involving child deaths. Six days later, by an Order in Council signed on April 25, 2007, the Province of Ontario established this Commission.

The Commission is required to conduct a systemic review and assessment of the way in which pediatric forensic pathology was practised and overseen in Ontario, particularly as it relates to the criminal justice system from 1981 to 2001, the years in which Dr. Smith was involved. It is also to consider any changes made since 2001. The purpose of the review is to provide the basis for the Commission to make recommendations to restore and enhance public confidence in pediatric forensic pathology in Ontario and its future use in investigations and criminal proceedings.

The terms of reference of the Commission provide:

4. The Commission shall conduct a systemic review and assessment and report on:
   a. the policies, procedures, practices, accountability and oversight mechanisms, quality control measures and institutional arrangements of pedi-

atric forensic pathology in Ontario from 1981 to 2001 as they relate to its practice and use in investigations and criminal proceedings;

b. the legislative and regulatory provisions in existence that related to, or had implications for, the practice of pediatric forensic pathology in Ontario between 1981 to 2001; and

c. any changes to the items referenced in the above two paragraphs, subsequent to 2001

in order to make recommendations to restore and enhance public confidence in pediatric forensic pathology in Ontario and its future use in investigations and criminal proceedings.

5. In fulfilling its mandate, the Commission shall not report on any individual cases that are, have been, or may be subject to a criminal investigation or proceeding.
6. The Commission shall perform its duties without expressing any conclusion or recommendation regarding professional discipline matters involving any person or the civil or criminal liability of any person or organization.

Public inquiries, by their very nature, are concerned with how systems worked, or more often, did not work, in a particular setting. Absent this systemic concern, most public inquiries could be replaced by a criminal or civil trial. It is the attention paid to systemic failings and systemic solutions that differentiates a public inquiry from a trial.

The Order in Council directs me in express terms to conduct a systemic review. Does this differentiate my task in any way from that of the usual public inquiry?

The answer is yes, although in the end the difference may be merely a question of emphasis and focus. Unlike many public inquiries, I was not directed to turn over every stone in order to find out all that happened in a particular tragedy. I am not to examine every detail in every case that formed part of the Chief Coroner's Review to determine what happened and why. I am not directed to determine what actually caused the death of any child, or whether the forensic pathology affected the way the police investigated the circumstances of any suspicious child death, or whether the work of Dr. Smith determined the way in which any particular case was decided.

However, I am directed to assess and report on the practice of pediatric forensic pathology in Ontario. It would be impossible for me to do so without making certain factual findings about the practice in specific cases. In saying this, I am mindful of the limitation imposed by the Order in Council. I am not to report on any individual cases that are, have been, or may be subject to a criminal investigation or

proceeding. All of the 20 cases identified by the Chief Coroner's Review fall into this category. All 20 involve a criminal investigation or proceeding. Indeed, in 12, there were criminal convictions, or findings of guilt.

In order to fulfill my mandate, the Order in Council directs me to those very cases. Without facts, I cannot review the practice of pediatric forensic pathology in Ontario in the 1980s and 1990s, much less make coherent and soundly based recommendations on how to improve it in the decades to come. Indeed, Dr. Smith acknowledges that, in order to fulfill my mandate, I must examine and comment on his work, both in the 20 cases and more generally.

Moreover, findings about Dr. Smith's practices, and the practices of other pathologists, as found in these cases are directly relevant to issues of accountability, oversight, and quality control. It is impossible to assess the effectiveness of the oversight mechanisms in those years without first determining whether there were practices in these cases that should have received greater scrutiny. It would be unfair to conclude that an oversight mechanism rightly lost the public's confidence unless there were flawed practices that ought to have been identified and corrected. For me to recommend significant organizational or systemic change, I must conclude that there is good reason to do so, based on what actually happened and why.

I am also satisfied that the mandate to conduct a systemic review must be interpreted in a way that reflects the purpose for which it was called. Like many public inquiries, this Inquiry was called in the aftermath of a loss of public confidence in an essential public service. The public was understandably shocked by the results of the Chief Coroner's Review. In many of the 20 cases, parents or caregivers were charged with criminal offences that bear a significant social stigma. Some of those charged were convicted and incarcerated. In some of the cases, siblings of the deceased children were removed from the care of parents. In Valin's case, the Court of Appeal for Ontario has determined that a miscarriage of justice occurred. An examination of the practices exemplified in these cases is essential if the systemic review is to achieve the purpose intended for it in the Order in Council – namely, to provide the basis for recommendations to restore the public confidence lost as a result of what happened in these cases.

Thus, the overarching purpose of the Inquiry is the restoring of public confidence in the practice of pediatric forensic pathology in Ontario and in the oversight systems that are necessary to support it. The Inquiry must address the legitimate questions about what went wrong with the practice and oversight of pediatric forensic pathology in order to fulfill that purpose and to ensure, so far as possible, that what went wrong does not happen again.

It bears repeating that, because of our systemic focus, the Inquiry did not

investigate any of the 20 cases exhaustively. Commission counsel called evidence only about those aspects of these cases that are relevant to my mandate to conduct a systemic review of the practice of pediatric forensic pathology and its oversight in Dr. Smith's time. Indeed, in one case, which is the subject of an ongoing police investigation, my review was limited to a single discrete issue. I simply did not conduct a full and complete examination of any case. Nor have I attempted to determine, for example, whether any particular individual ought to have been charged with or convicted of a criminal offence, or whether any particular individual was wrongly charged or convicted, or whether child protection proceedings ought to have been instituted, or whether a miscarriage of justice occurred in any case. I make findings in some of the 20 cases to illustrate why and how the system failed in the particular circumstances. However, because of the systemic nature of the Inquiry and the manner in which it proceeded, I am in no position to report on any of the 20 cases and I have not done so.

As a matter of law, I cannot conclude that any individual has breached any legal standard that would entail criminal or civil liability or professional discipline. It is for courts to reach conclusions of civil or criminal liability and for professional regulators to do the same in matters of professional discipline. I have therefore avoided using language that could mistakenly convey the impression that I have made such an impermissible finding. Throughout the report, however, I occasionally use terms such as "fault," "responsible," "failure," "improper," and "lack of professionalism," which could be seen to have a legal connotation. I do not intend by such terms to reach any conclusions in law, or to equate these words with the way they may be used in a professional discipline context or in a civil or criminal proceeding. I intend that readers should attach only the usual, non-legal meaning to these words. For example, by professionalism, I mean no more than those qualities that the public ordinarily expects from a professional.

An additional comment is perhaps useful about the provision in my mandate that requires me to proceed without expressing any conclusion or recommendation regarding matters of professional discipline. Although this provision was not found in our survey of the terms of reference of other commissions, I have interpreted it using the well-known principles on the power of a public inquiry set out by the Supreme Court of Canada, particularly in the case quoted below. The provision does not preclude me from finding misconduct where the facts warrant. That would have made my mandate impossible to fulfill.

The power of a public inquiry to find misconduct is clear from the *Public Inquiries Act*, RSO 1990, c. P.41. It was described by Justice Peter Cory in *Canada (Attorney General) v. Canada (Commission of Inquiry on the Blood System)*, [1997] 3 SCR 440 at para. 40:

> However, in my view, the power of commissioners to make findings of misconduct must encompass not only finding the facts, but also evaluating and interpreting them. This means that commissioners must be able to weigh the testimony of witnesses appearing before them and to make findings of credibility. This authority flows from the wording of s. 13 of the Act, which refers to a commissioner's jurisdiction to make findings of "misconduct". According to the *Concise Oxford Dictionary* (8th ed. 1990), misconduct is "improper or unprofessional behaviour" or "bad management". Without the power to evaluate and weigh testimony, it would be impossible for a commissioner to determine whether behavior was "improper" as opposed to "proper", or what constituted "bad management" as opposed to "good management". The authority to make these evaluations of the facts established during an inquiry must, by necessary implication, be included in the authorization to make findings of misconduct contained in s. 13 [the counterpart of s. 5 in the Ontario legislation]. Further, it simply would not make sense for the government to appoint a commissioner who necessarily becomes very knowledgeable about all aspects of the events under investigation, and then prevent the commissioner from relying upon this knowledge to make informed evaluations of the evidence presented.

Thus, my use of language like "misconduct," when applied to a professional like a doctor, is not intended as a conclusion regarding a professional discipline matter. That would require not only that I find facts that I determine to be misconduct but that I go further to conclude that the misconduct constitutes a matter of professional discipline. I have not done so and my Report should not be read that way.

Finally, I have also kept in mind the difference between an inquiry and a civil or criminal trial in determining the facts required for my report. The systemic review called for by my mandate clearly necessitates that I find the facts of what happened during the years under review. I have been careful to avoid expressing those facts in language that would either constitute or suggest findings of civil or criminal liability. I have been fortunate that, in very many instances, the facts were not disputed.

Where it was necessary to make factual findings from conflicting evidence, I have made them only where the evidence made those findings more likely than not. Indeed, where there could be significant adverse consequences to the reputation of an individual, I have required clear, cogent, and convincing evidence.

The processes and procedures that the Commission has used are fully outlined in Volume 4. At this point a brief description will suffice.

Immediately upon the establishment of the Commission, I appointed Linda

Rothstein as lead Commission counsel, Mark Sandler as special counsel, criminal law, and Robert Centa and Jennifer McAleer as assistant Commission counsel. I asked Professor Kent Roach to be the Commission's research director, assisted by Professor Lorne Sossin. Commission counsel quickly put together a small but very talented group of young lawyers and administrative staff. This team has simply been invaluable to me throughout. They have been superb.

The Commission began its work by establishing its Rules of Standing and Funding and setting up its research program.

Professor Roach put together a roster of highly qualified scholars whose independent research was of substantial assistance to the Commission and will add significantly to the body of knowledge of forensic pathology and related topics.

The legal team proceeded to gather and organize the large quantity of relevant information and documentation. An easily searchable electronic database was created. Standing was granted to the Office of the Chief Coroner for Ontario, Her Majesty the Queen in Right of the Province of Ontario, the Hospital for Sick Children, the College of Physicians and Surgeons of Ontario, two groups of affected individuals, five organizations involved in various ways in the criminal justice system, and of course Dr. Smith. Limited standing was granted to one individual. Funding was also granted to a number of these parties.

Beginning in June 2007, I held separate private meetings with a number of individuals and families who have been affected by the practice and oversight of pediatric forensic pathology in Ontario. Although these meetings were not part of the Commission's fact-finding process, the insights they gave me have assisted in anchoring the work of the Commission in real human experience. In addition, the Commission has been able to provide counselling services for those individuals who wished it, to assist them in moving forward with their lives.

In order to better understand the specific pathology errors made in the cases, the Commission invited the five forensic pathology experts from the Chief Coroner's Review – Dr. John Butt, Dr. Jack Crane, Dr. Christopher Milroy, Dr. Pekka Saukko, and Dr. Helen Whitwell – to return to Toronto, in order to produce more detailed reports on their assigned cases. The expert reviewers graciously accepted, and their expanded forensic reports were vital to the work of the Commission.

After ruling on a number of motions for directions and publication bans, the Commission began its public hearings in early November 2007. With the cooperation and hard work of all, the Commission was able to sit long hours and full weeks, allowing it to conclude its fact gathering by the beginning of February 2008. The Commission then conducted a series of intensive policy roundtables over three weeks in February. The Commission heard from experts from around

the world and from a variety of disciplines on topics ranging from the organization of pediatric forensic pathology to the effective communication of expert scientific evidence in the justice system. The roundtables focused entirely on the policy aspects of my mandate, and were of great assistance in determining what recommendations to make and why.

The final two days of these roundtables were held in Thunder Bay. These two sessions, together with visits I made in October 2007 to two First Nations communities in Northern Ontario, helped the Commission address the special challenges of making available pediatric forensic pathology to distant communities in general and to Aboriginal communities in particular.

The public part of the Commission's work was concluded with the receipt of written submissions and then two days of oral submissions on March 31 and April 1, 2008. These have been of great assistance as I moved to the last phase of my task, the writing of this report.

Before I turn to my detailed assessment of the practice and oversight of pediatric forensic pathology in Ontario from 1981 to 2001, I think some additional context is helpful. The next chapter, Chapter 4, describes in general terms how the investigation of a suspicious pediatric death takes place and the roles that the various participants, including the pathologist, play in it. Chapter 5 sets out the legislative context in which such an investigation is done, and Chapter 6 provides an overview of the science of forensic pathology.

4

Investigation of Suspicious Pediatric Deaths

The Office of the Chief Coroner for Ontario (OCCO) investigates approximately 250 pediatric deaths each year. The vast majority of these deaths have a natural cause. About 35 to 40 pediatric deaths will ultimately be classified as undetermined. Up to 25 pediatric deaths initially seem criminally suspicious each year, but only five to 15 will eventually be classified as homicides or criminally suspicious deaths. Thus, a death originally criminally suspicious may, as the death investigation unfolds, cease being so. The reverse is equally true: a case that raises no concerns in the beginning may become criminally suspicious because of information that comes to light during the death investigation.

Several organizations and professionals play a role in the investigation of a suspicious pediatric death in Ontario. Coroners, police officers, pathologists, Crown counsel, and local child protection authorities may all investigate different aspects of the death. These professionals work together in what may loosely be described as Ontario's death investigation system.

The objective of the death investigation system is to ensure that every death is explained and no death is overlooked, concealed, or ignored. It also provides an essential service to the administration of justice. The coroner (who may be assisted by a pathologist and other medical experts) is responsible for initially determining how, where, when, and by what means a person died. The coroner will make the determination of whether a death was due to natural causes, accident, suicide, or homicide (as that term is used in OCCO policies, not the *Criminal Code*, RSC 1985, c. C-46), or whether the cause of death was undetermined.

The police are responsible for collecting evidence and for laying criminal charges where the evidence, including expert opinions regarding cause of death, supports those criminal charges. The local child protection authority may intervene with the family, where warranted, if there are surviving siblings who may be in need of protection.

If criminal charges are laid, Crown counsel will determine whether there is a reasonable prospect of conviction, and, if there is, will prosecute the accused at trial.

A Hypothetical Death Investigation: Toronto, 1997

I will describe "who does what" through a hypothetical, but typical, pediatric death investigation. This investigation involves the death of an eight-month-old child who died at home in Toronto in 1997. The death was considered to be suspicious and ultimately resulted in criminal charges. The procedures and practices generally reflect those used at the time and location of the death investigation. They matter because the roles of the various participants in the death investigation system have varied over both time and place. I have chosen 1997 because the OCCO introduced several important initiatives in 1995, and they are reflected in the example.

As I will describe in other parts of my Report, remote First Nations communities and other Northern Ontario communities have not, generally, received the same level of death investigation as is described in this example. For example, most often a coroner does not travel to the death scene in these remote communities, and the communication between the coroner and the family may not be as frequent as that described below. In my view this disparity must be addressed, and I make recommendations to do so later in my Report.

The Initial Police Investigation

Our hypothetical example begins with a distraught mother calling 911 about her eight-month-old daughter who appeared to be lifeless in her crib. In response, the 911 operator dispatched the police, ambulance personnel, and the fire department to the house.

Police officers must approach pediatric deaths with care and compassion. They must collect all relevant evidence and investigate thoroughly to determine what happened. At the same time, they must take care not to unnecessarily compound the grieving parents' profound sense of loss, guilt, and depression.

In our example, by the time the police arrived, the ambulance personnel had concluded that the child was dead. Police have a duty under the *Coroners Act*, RSO 1990, c. C.37, to notify the coroner of the death where an officer has reason to believe that a deceased person died suddenly and unexpectedly, or as a result of violence, negligence, or misconduct. The death of this previously healthy infant

clearly met the definition of a sudden and unexpected death. Whether or not the officers observed anything suspicious, they were obliged to investigate and report this sudden and unexpected death.

To assist with this process, the OCCO published guidelines that police may use when collecting evidence in cases of sudden and unexpected death of children under the age of two. It was recommended that officers at the scene report on the circumstances of the child's death, arrange identification and labelling of the body, arrange transportation of the body to a mortuary, and investigate further if there are suspicious circumstances. In addition, the police were to look for any evidence of injury to the child.

If the police suspected that the deceased child had been abused, and there was a surviving sibling in the house, they had an obligation to report their suspicions to the local children's aid society (CAS), which would then conduct its own investigation into the family's situation. (At the time of our example, 1997, information-sharing practices among the police, the coroner, and the CAS varied from one community to another.) If the CAS determined that a surviving sibling was at risk, it would begin proceedings to either remove the suspected offender from the home or have that child removed from his or her family and placed in protection. Those proceedings would run in parallel with any criminal investigation, and in many cases would conclude long before any criminal trial. Child protection proceedings may or may not make use of the pathologist's evidence.

The Coroner's Initial Role

Because the child died in Toronto, the police officers notified the coroner by calling the coroners' dispatching service. The dispatcher then contacted the coroner on call at that time. The dispatcher made no attempt to match the type or complexity of the case with the skills or experience of the coroner assigned to it.

In Ontario, all coroners are medical doctors in good standing with the College of Physicians and Surgeons of Ontario. Most coroners are family physicians who maintain medical practices in addition to serving as part-time, fee-for-service coroners. Very few work full time as coroners.

The *Coroners Act* defines which cases coroners can and must investigate, describes the purpose of their investigation, provides the powers they possess to investigate the death, identifies to whom they can release information arising from an investigation, and contains provisions relating to inquests. The *Coroners Act* required the coroner to investigate the death of this infant because there was reason to believe that the baby girl had died suddenly and unexpectedly, which is one of the triggering circumstances listed in the statute. As required by the

Coroners Act, the coroner issued a warrant to take possession of the child's body, which initiated the coroner's death investigation.

Coroners investigate deaths in order to answer five questions: Who died? How, where, and when did he or she die? And by what means did the death occur? Coroners are interested not simply in determining the actual physical cause of death. The medical factors relevant to the cause of death are only some of the many factors they consider. Non-medical factors are, in many cases, equally important. A coroner conducts death investigations, in part, to reduce the risk of similar deaths in the future.

The coroner in our example travelled to the scene to view the body, which remained at the home. There the coroner met and spoke with family members to explain the coroner's involvement, to learn if they had any specific concerns, to outline the future steps in the investigation, and to answer their questions. Coroners have the power under the *Coroners Act* to gather information. As part of the investigation, in our example the coroner inspected and made copies of the child's medical records. It is the coroner's responsibility to make sure that the pathologist who will do the autopsy receives a copy of any relevant medical or hospital records.

Coroners cannot use their powers under the *Coroners Act* to further a police investigation. Indeed, they have to be very careful that they do not jeopardize a future criminal prosecution by using their powers inappropriately to further such an investigation. If the police wish to obtain evidence for a criminal proceeding, they must comply with the requirements of the *Criminal Code* and the *Canadian Charter of Rights and Freedoms*.

In many instances, a coroner decides case by case whether an autopsy will be performed. In 1995, the OCCO issued Memorandum 631, attaching the Protocol for the Investigation of Sudden and Unexpected Deaths in Children under 2 Years of Age, which required that an autopsy always be performed in these cases. In our hypothetical example, therefore, the coroner issued a warrant for post-mortem examination, as required under the *Coroners Act*, to authorize an autopsy on the body. In the warrant, the coroner was required to provide the name of the deceased, the name of the pathologist to perform the autopsy, a full description of the circumstances or medical history indicating why the autopsy was required, and any toxicology, X-ray, or other special investigations that might assist the coroner.

The warrant for post-mortem examination is an important source of relevant information for the pathologist performing the autopsy. It is widely accepted that pathologists will be better able to direct their attention where it is needed during the post-mortem examination if they are given relevant information about the

death. For these reasons, a coroner should include as much detail as possible. At the time of our case, however, the warrants were often cryptic and contained little information.

After issuing the warrant for post-mortem examination, the coroner telephoned the pathologist to provide additional information in advance of the examination. Whether the coroner and the pathologist took detailed notes of the information shared during this conversation depended on their individual practices.

Role of the Pathologist and the Police at the Post-Mortem Examination

In 1997, pathologists performed virtually all autopsies conducted under a coroner's warrant. Pathologists are medical doctors who are specially trained to examine bodies and their tissues both visually and under a microscope. Some pathologists have additional training or certification relating to young people (pediatric pathologists) and/or to the investigation of deaths that raise both medical and legal issues (forensic pathologists). In 1997, and indeed today, no Ontario pathologists had certified expertise or training in both pediatric pathology and forensic pathology.

Because the eight-month-old child died in Toronto, the police accompanied the body to the Ontario Pediatric Forensic Pathology Unit (OPFPU) at Toronto's Hospital for Sick Children (SickKids). In 1991, the Ministry of the Solicitor General signed a contract with SickKids to establish the OPFPU for the purpose of performing autopsies under coroner's warrants on most deceased infants and children in Toronto and the surrounding area. The pathologists at the OPFPU were pediatric pathologists who performed these autopsies on a fee-for-service basis. In 1997, there were no pathologists at the OPFPU with certified expertise or training in forensic pathology.

The police, in this case the forensic identification officer, accompanied the child's body to the OPFPU. A police officer does this for at least three reasons: to identify the body to the pathologist; to maintain continuity of evidence in the event that the police subsequently lay charges in connection with the death; and to provide the pathologist with information acquired during the investigation to that point. In 1997, it would have been extremely unusual for a pathologist to travel to and view the death scene.

The police officer met with the pathologist in the conference room and told the pathologist what she had learned. Typically, the officer did not filter out any potentially irrelevant or prejudicial information, nor did the officer provide the

information to the pathologist in writing. In addition, neither the officer nor the pathologist took detailed notes of their conversation.

The police officer next accompanied the pathologist to the autopsy suite, where she took notes on the autopsy. The pathologist conducted the post-mortem examination in accordance with the protocol. A pathology assistant, a trained non-medical laboratory professional, assisted the pathologist with the preparation and examination of tissues. This pathologist noted observations made during the autopsy but did not list all the procedures performed. In 1997, some pathologists dictated their notes as they went along, some made written notes, and others typed their notes directly into a computer. It would have been unusual at that time for a pathologist to make notes of the information the police officer communicated during the autopsy.

The first stage of a post-mortem examination is the external examination of the body. This examination consists of X-rays, visual examination, collection of physical evidence (if any), and the taking of measurements. In our example, the child's entire body was X-rayed and additional X-rays were taken of the ribs, knees, shoulders, and skull. A qualified radiologist then reviewed the X-rays before the autopsy, looking for bone fractures and paying particular attention to the skull, ribs, and long bones. The presence of new, healing, or old fractures is of critical importance, and, in our case, the radiologist's report also directed the pathologist to bony injuries that could not be recognized by the naked eye.

The pathologist then inspected the body, documenting external marks of injury. In particular, the pathologist diagrammed and recorded the size, shape, colour, location, and pattern of bruises, scrapes, cuts, and penetrating wounds. As in most cases, both the police and a hospital photographer took photographs of the whole body, of any wounds, and at various points throughout the autopsy as directed by the pathologist.

The pathologist also looked for any physical evidence (for example, fibres, hairs, and fluid stains) that could be seized for testing by the Centre of Forensic Sciences (CFS). In some cases, although not this one, a pathologist would take swabs of the genitalia, anus, or any possible bite marks. The pathologist also took a series of standard measurements, including weight, length, and circumference of the head, chest, and abdomen.

The second stage of a post-mortem examination is the internal examination. The pathologist opened the body and examined, removed, and weighed the major internal organs. The pathologist carefully examined the rib cage for evidence of recent or healing fractures. Special dissection techniques were used to examine the neck for evidence that the death may have been caused by asphyxia due to neck compression, and the pathologist examined the spinal cord and

brain, looking for, among other things, subdural hemorrhage, which is common in head injury cases.

The pathologist took samples of tissues for technicians at SickKids to prepare for examination under a microscope, a process that would take between a few days and a few weeks. The list of tissues sampled varies from case to case, but would include the cerebrum, cerebellum, brain stem and spinal cord, heart, left and right lung, thymus, liver, spleen, pancreas, and kidneys. A pathologist can generally be expected to examine 30 to 35 glass slides, or more in cases where special samples are required.

The pathologist consulted with any additional experts considered necessary. In our example, he requested that a pediatric neuropathologist examine slides from the brain of the deceased child. The pathologist also drew blood for toxicological screening for alcohol and drugs, a procedure that would be completed at the CFS. Depending on the circumstances of the case, the pathologist could have requested additional microbiological, biochemical, and other tests. In 1997, it would have been common for the pathologist not to document or record such consultations – often described as informal.

At the conclusion of the autopsy, the pathologist provided the police and the coroner with a preliminary opinion on the cause of death. Typically, this opinion was not in writing and was offered without the benefit of the results of the toxicological screens or the microscopic examination of the tissues. In 1997, the only record of this opinion was generally found in the police officer's notes of the conversation with the pathologist. The police incorporated the pathologist's preliminary opinion on cause of death into their investigation.

Over the following weeks, the pathologist examined the tissue samples with the aid of a microscope and reviewed the results of the ancillary testing, such as the toxicological and microbiological testing and the neuropathology report.

The pathologist synthesized all this information and wrote the formal report of post-mortem examination – Form 14 under the *Coroners Act*. The pathologist was able to complete the report only after all the professionals who conducted ancillary testing had reported their results, especially those on toxicology.

The report contained six headings: identification (who identified the body and who was present during the examination); observations made on external examination; observations made on internal examination; microscopic and laboratory findings; X-ray findings; and summary of abnormal findings. Finally, the report contained a space for the pathologist to record the opinion on the cause of death.

The pathologist, like most Ontario pathologists in 1997, did not include the history of the case, commentary, or an exhibit list in the report – Form 14 did not

direct the pathologist to do so. Reports prepared at this time commonly contained no case history or circumstantial evidence, even where the pathologist relied on such information or evidence in reaching an opinion on cause of death. They included little or no discussion, commentary, or interpretation. Thus, the report conveyed little of the reasoning used by the pathologist to reach the report's conclusions.

Role of the Police, the OCCO, and the Pathologist: From Completion of Report through Trial

After the pathologist completed the report of post-mortem examination, he forwarded it to the regional coroner who in turn forwarded it to the Chief Forensic Pathologist. The Chief Forensic Pathologist reviewed the report to ensure that its conclusions were reasonable, and to identify any major forensic pathology issues that needed to be addressed before the pathologist released the report to the Crown. The Chief Forensic Pathologist was responsible for ensuring that the injuries were properly documented, the report contained no inconsistencies, the summary of abnormal findings was accurate, and the cause of death was supported by the findings. The Chief Forensic Pathologist would not review photographs or slides unless he had identified a potential problem. Once the Chief Forensic Pathologist had reviewed the report, it was released to Crown counsel.

When the Chief Forensic Pathologist approved the release of the report, the coroner was able to complete the coroner's investigation statement. This document is the official record of the death investigation: it contains the coroner's findings of fact regarding the cause and manner of death, as well as an explanation of why the coroner investigated the case and ordered a post-mortem examination. In our example, the police filed charges, so the coroner did not complete the coroner's investigation statement until the criminal proceedings were over.

In 1997, the police sometimes laid charges against an individual based, in part, on the pathologist's preliminary opinion on cause of death. The amount of contact between the police and the pathologist varied significantly between cases. Often, the pathologist's discussions with police dropped off sharply after the autopsy, even where the police charged an individual. Frequently, the pathologist did not hear from the Crown or the police until shortly before the preliminary hearing or the trial. If a pathologist received additional information from the police or Crown counsel that affected his or her opinion on the cause of death, the pathologist would likely have prepared a supplementary report. Similarly, if a pathologist modified an opinion for any reason after releasing the report, he or she would likely have issued a supplementary report.

In our example, the Crown counsel called the pathologist to testify at both the preliminary hearing and the trial. The purpose of the testimony was for the pathologist to communicate his findings to the court. Like all expert witnesses who are permitted to give opinion evidence, the pathologist was there to assist the court, not the party who called the pathologist to the stand. Expert witnesses must serve and place the interests of justice ahead of the interest of either party. Experts – in 1997 and today as well – must be independent, and they must always remember that they are not there to secure a conviction or an acquittal. This participation in the criminal justice system, which of course does not occur in every case in which a post-mortem examination is conducted, is the final task performed by a pathologist in a death investigation.

5
Legislative Context

When any of its citizens die unexpectedly, it is important for a society to understand why and to learn from the experience. In this way, similar deaths may be prevented in the future. The drive to understand such deaths is a manifestation of the value the society places on life and human dignity. To that end, Ontario has created an independent, publicly funded death investigation system to inquire into, and report on, untimely and suspicious deaths in the province. In addition, where the death is criminally suspicious, the work of the death investigation system is often vital to the criminal justice system.

The legislation creating today's system is the *Coroners Act*, RSO 1990, c. C.37. The current *Coroners Act* has been in force since December 31, 1991, and is based largely on the *Coroners Act, 1972*, SO 1972, c. 98. Although the current legislative framework in Ontario is only 36 years old, the concept of a coroner emerged in England before the 12th century. As Dr. Randy Hanzlick, forensic pathologist and chief medical examiner in Fulton County, Georgia, noted in a research study prepared for the Commission:

> Although the concept of a "coroner" seems to have existed before the 12th century, the role of the coroner was formalized in the "Articles of Eyre" promulgated under Richard the Lionhearted by Hubert Walter in 1194. The articles provided that designated knights and a clerk would attend death scenes to investigate the circumstances and protect the interests of the Crown. These persons were known as *custos placitorum coronae* (keepers of the Crown's pleas) and became known as "crowners" or "coroners."[1]

[1] Randy Hanzlick, "Options for Modernizing the Ontario Coroner System," in *Controversies in Pediatric Forensic Pathology*, vol. 1 of Inquiry into Pediatric Forensic Pathology in Ontario, Independent Research Studies (Toronto: Ministry of the Attorney General, 2008), 274.

The office of coroner was first established in what became Ontario before 1780, and the first statutory reference to coroners was found in an 1833 statute dealing with criminal procedure in Upper Canada. In those days, the coroner performed a function analogous to the contemporary preliminary hearing.

As I explained in Chapter 4, Investigation of Suspicious Pediatric Deaths, today the coroner investigates the deaths of vulnerable citizens and those who die in suspicious circumstances and holds inquests, if necessary, to answer five fundamental questions: Who died? How did they die? Where did they die? When did they die? By what means did they die? By answering these questions, and by recommending ways to improve public safety and to prevent similar deaths in the future, the coronial system serves the living. Although coroners no longer function as a preliminary hearing into a criminal charge, the death investigation system, and particularly its forensic pathology component, continues to play an essential role in the criminal justice system.

The *Coroners Act* establishes the key administrative positions in the coronial system; provides the mandate and powers of a coroner; defines what cases a coroner must investigate and for what purposes; and establishes the circumstances that require a coroner to conduct an inquest, as well as the factors to be considered by a coroner when determining whether to hold a discretionary inquest.

Positions Established by the *Coroners Act*

The *Coroners Act* creates the following statutory positions, all of which are appointed by the lieutenant governor in council: Chief Coroner for Ontario, the Deputy Chief Coroners for Ontario, the regional coroners, and the local coroner.

The Chief Coroner for Ontario is appointed under s. 4(1) of the *Coroners Act*. The *Coroners Act* assigns six duties to the Chief Coroner:

1. to administer the *Coroners Act* and its regulations;
2. to supervise, direct, and control all coroners in Ontario in the performance of their duties;
3. to conduct programs for the instruction of coroners in their duties;
4. to bring the findings and recommendations of coroners' juries to the attention of appropriate persons, agencies, and ministries of government;
5. to prepare, publish, and distribute a code of ethics for the guidance of coroners; and
6. to perform such other duties that are assigned under the Act or any other act, or by the regulations, or the lieutenant governor in council.

The Chief Coroner reports to the commissioner of community safety within the Ministry of Community Safety and Correctional Services. Although the Office of the Chief Coroner for Ontario (OCCO) must be independent from government for the purposes of its substantive decision making, it is accountable to the government for its fiscal management and policy.

The Chief Coroner is supported by two Deputy Chief Coroners, who are appointed under s. 4(2) of the *Coroners Act*. The Deputy Chief Coroners may act for and have all the powers and authority of the Chief Coroner during her or his absence. Currently, one Deputy Chief Coroner provides advice and policy direction to the regional coroners regarding investigations. The other Deputy Chief Coroner is in charge of inquests.

Regional coroners are appointed under s. 5(1) of the *Coroners Act*. They assist the Chief Coroner in the performance of his or her duties in their regions and perform other assigned duties. They may have direct communication with investigating coroners in complex or otherwise high-profile cases.

Local coroners are appointed under s. 3(1) of the *Coroners Act*. Unlike other jurisdictions, Ontario requires that all investigating coroners be qualified medical practitioners who are licensed to practise and are in good standing with the College of Physicians and Surgeons of Ontario (CPSO). Unlike the Chief Coroner, Deputy Chief Coroner, and regional coroners, local investigating coroners do not hold their position on a full-time basis. There are approximately 329 coroners in Ontario, all of whom work on a fee-for-service basis.

Until 1998, the Coroner's Council dealt with significant complaints about the work of coroners. The council was disbanded on December 18, 1998, when ss. 6 and 7 of the *Coroners Act* were repealed as part of the province's red-tape reduction process. No formal complaints process was put in its place.

Duties and Powers of Coroners

Paragraphs 10(1)(a) and (d) of the *Coroners Act* require a person to notify a coroner immediately, or to notify a police officer who will notify a coroner, if the person has reason to believe that someone died in certain circumstances as listed in the *Coroners Act*. These circumstances include violence, misadventure, negligence, misconduct, and malpractice, as well as sudden and unexpected death. When a coroner has reason to believe that a person died in such circumstances, s. 18(2) requires that coroner to conduct a death investigation in order to answer the five questions listed above.

The *Coroners Act* provides coroners with a number of powers to assist them in their investigation. Four of the most important are the power to seize and

inspect information, the power to order a post-mortem examination, the power to obtain additional expert assistance, and the power to issue a warrant to hold an inquest.

As the first step of the investigation, s. 15 of the *Coroners Act* requires the coroner to issue a warrant to take possession of the body. Section 16 gives the coroner the power to view and/or take possession of the body; to inspect any place where the body is or from where the body was removed; to inspect any place where the person was prior to death; and to inspect and seize anything the coroner believes is material to the investigation. The *Coroners Act* permits the coroner to delegate these powers to another legally qualified medical practitioner or to a police officer.

In many cases, the coroner cannot answer the questions required of her or him by the *Coroners Act* without the assistance of a post-mortem examination to determine the cause of death. Subsection 28(1) of the *Coroners Act* permits the coroner to issue a warrant for a post-mortem examination of the body or for any other examination or analysis. Subsection 28(2) of the *Coroners Act* requires the person who performs the post-mortem examination to report her or his findings immediately in writing to the coroner who issued the warrant, as well as to the Crown attorney, the regional coroner, and the Chief Coroner.

The legislation does not require that a physician, much less a pathologist, perform the post-mortem examination, although as a matter of practice in Ontario today that is always the case. Indeed, today it is always done by a certified pathologist. In most cases, that pathologist is not further certified as a forensic pathologist. Even where the case is criminally suspicious or a likely homicide, the *Coroners Act* does not define the qualifications required of a person conducting a post-mortem examination. The *Coroners Act* does not set out any responsibilities for those conducting the post-mortem examination or require them to provide an independent, objective, and reviewable report of that examination.

Subsection 15(4) of the *Coroners Act* specifies that, subject to the approval of the Chief Coroner, a coroner may obtain assistance or retain expert services, which in practice can include pathologists and laboratory specialists for all or any part of the investigation or inquest. In most cases, at the conclusion of the investigation, the coroner will either decide to hold an inquest to inquire into the circumstances of death or certify that an inquest is not necessary. However, the *Coroners Act* makes holding an inquest mandatory in certain circumstances, such as deaths in custody.

If an inquest is not mandatory, the coroner may exercise her or his discretion whether to issue a warrant for an inquest. In making this decision, the coroner is

required to consider whether holding an inquest would serve the public interest. Specifically, the coroner must consider whether the coroner's investigation has already answered the five questions about the death, the desirability of the public being fully informed of the circumstances of the death through an inquest, and the likelihood that the jury on an inquest might make useful recommendations to avoid similar deaths in the future.

Where the death is criminally suspicious, the coroner will not proceed with an inquest until criminal justice proceedings have been concluded.

The Work of the Office of the Chief Coroner for Ontario

More than 80,000 deaths occur each year in Ontario. The OCCO investigates and reports on about 20,000 of those deaths. Pathologists perform autopsies under coroners' warrants in about 7,000 cases, or over a third of those deaths formally investigated. Some 200 to 250 deaths each year are ultimately deemed by a coroner to be criminally suspicious or homicides (as that term is used in OCCO policies, not the *Criminal Code*, RSC 1985, c. C-46).

The OCCO investigates approximately 250 deaths of children aged five or younger per year. The vast majority of these pediatric deaths have a natural cause. About 35 to 40 pediatric deaths will ultimately be classified as undetermined. Five to 15 will ultimately be classified as homicides or criminally suspicious deaths. As with adults, a death of a child that is originally regarded as criminally suspicious may, as the death investigation unfolds, cease being so. The reverse is equally true. A case that raises no concerns in the beginning may become criminally suspicious because of information uncovered during the death investigation.

In most criminally suspicious deaths and all sudden and unexpected pediatric deaths, a post-mortem examination takes place. These are invariably among the most complex cases to go through the death investigation system. The role of the pathologist is vital to explaining the death, and especially vital if the case moves into the criminal justice system.

As presently drafted, however, the *Coroners Act* fails to recognize that this pathology – because it is done under coroner's warrant, I call it forensic pathology – is the essential specialized discipline of the death investigation system. There is no reference in the *Coroners Act* to the position of Chief Forensic Pathologist or the duties that should go with it; no legislative recognition of the forensic pathology service provided to the death investigation system; no legislative structure provided for such a service; no definition of forensic pathology; and not even a requirement that autopsies be conducted by a pathologist, much less a

certified forensic pathologist. Thus, forensic pathology operates in Ontario in a legislative context that is, to put it charitably, underdeveloped. In my view, these weaknesses in the *Coroners Act* must be addressed if there is to be a proper statutory framework for death investigations in Ontario.

6

The Science and Culture of Forensic Pathology

The cases we examined at the Inquiry and from which many of our systemic lessons were drawn all involved the criminal justice system in some way. In a few, there was a criminal investigation but no criminal charge. Others proceeded to a criminal charge and some beyond that, to a preliminary hearing or trial. In each case, there had been the death of a young child and an autopsy done by a pathologist under a coroner's warrant. To allow a proper understanding of what happened in these cases, and what must be learned from them, I think it essential to provide at least a general overview of the relevant science: forensic pathology, and its subset, pediatric forensic pathology.

Forensic pathology is a branch of the field of medicine called pathology. Broadly speaking, pathology is the study of disease – of its causes and the ways in which disease processes affect the body.

A well-known medical textbook, *Robbins Basic Pathology*, describes pathology this way:

> [I]t involves the investigation of the causes (*etiology*) of disease as well as the underlying mechanisms (*pathogenesis*) that result in the presenting signs and symptoms of the patient. Pathologists use a variety of molecular, microbiologic, and immunologic techniques to understand the biochemical, structural, and functional changes that occur in cells, tissues, and organs. To render diagnoses and guide therapy, pathologists identify changes in the gross or microscopic appearance (*morphology*) of cells and tissues, and biochemical alterations in body fluids (such as blood and urine).[1]

[1] Vinay Kumar et al., *Robbins Basic Pathology*, 8th ed. (Philadelphia: Saunders Elsevier, 2007), 1.

As this quotation suggests, the objective of much of pathology is to serve patients by providing an important diagnostic step along the way to treatment and cure or control. In colloquial terms, this is often described as clinical pathology.

The route to forensic pathology is through one of two kinds of pathology: general or anatomical. General pathology is, as its name implies, concerned with all aspects of the laboratory investigation of disease. It incorporates techniques from the other laboratory sciences and pathology specialties, such as anatomical and hematological pathology. Anatomical pathology is more specific. It involves one particular kind of investigation: the study and diagnosis of disease based on the gross, microscopic, and molecular examination of organs, tissues, and whole bodies (as in an autopsy).

Although considered a subspecialty of both general and anatomical pathology, forensic pathology operates on an entirely different paradigm from clinical pathology. Its purpose is to assist the state in finding out why its citizens die. It is concerned with the examination of the dead body for forensic purposes. In forensic pathology, there is no patient. Rather, the medical dimension of forensic pathology involves the study of disease and injury in a deceased person using the basic principles and methodologies of pathology to determine, if possible, the cause of death, and to address the timing of injuries or other medical issues that help explain the death. Its legal dimension is to assist the state's legal systems, most importantly, the criminal justice system, to understand how the death occurred by explaining the relevant pathology.

To put this in practical terms, forensic pathology typically involves the performance of a post-mortem examination, also called an autopsy, which entails the dissection of the body, an examination of organs and tissues, and ancillary investigations including X-rays, laboratory examinations and toxicology testing. Forensic pathologists do more than just perform the post-mortem examination, however. They are called on to meet with other members of the death investigation team to discuss their work. And they must be able to communicate their findings effectively to various participants in the criminal justice system, including police, prosecutors, defence counsel, juries, and the court. In summary, the forensic pathologist focuses on interpreting the post-mortem findings to assist in the end point of the death investigation required by the state, which may include a criminal trial, an inquest, or a coroner's finding of cause and manner of death made without an inquest.

As noted above, the distinctiveness of forensic pathology can be seen by comparing it to clinical pathology. Although the fundamental scientific principles of pathology apply equally to forensic pathology and clinical pathology,

their analytical frameworks are very different. The clinical pathologist focuses on providing diagnostically useful advice to a clinician to assist in the medical management of a patient. The forensic pathologist focuses on providing diagnostically useful conclusions for the death investigation team and the judicial process.

It follows that, although every forensic pathologist needs to be a competent clinical pathologist, the opposite is not true. Many competent clinical pathologists will never have an interest in forensic work and will never need to obtain the requisite knowledge and expertise in forensic work. However, a forensic pathologist must be trained in, and develop an aptitude for, the requirements of the legal process. This requires an emphasis in the conduct of the post-mortem examination on identifying forensically significant findings such as injury, collecting potentially relevant evidence, and maintaining its continuity, all of which do not arise in clinical pathology. It requires that post-mortem documentation serve the needs of the participants in the justice system, including the coroner, police, Crown, defence, and court, which also do not arise in clinical pathology. And it is essential that forensic pathologists be able to testify fairly, objectively, and in language that clearly communicates their findings. Few medical practitioners have, or require, any detailed understanding of the legal system and the legal investigative method. Becoming proficient in these areas is thus one of the features distinguishing forensic pathologists from their clinical counterparts.

Today, the normal route to becoming a properly qualified forensic pathologist begins with completion of an undergraduate medical program. That is followed by a four- or five-year residency in one of the two main specialties within pathology, general pathology or anatomical pathology. Having completed either of these, a pathologist needs a further year or two of specialized training, not yet offered in Canada, to be accredited the subspecialty of forensic pathology.

Pediatric pathology is also a subspecialty of anatomical pathology. The additional training required for the subspecialty focuses on the study of disease in infants and children, which can differ substantially from disease in adults. Its objective is to assist in the treatment of living patients. The training and experience of a pediatric pathologist concentrates on natural, congenital development, and genetic disease processes. There is little focus on death investigation or on participation in the criminal justice system.

Pediatric forensic pathology encompasses the subset of cases within forensic pathology that involves the deaths of infants, children, and adolescents. Although training and experience in pediatric pathology can add great value to the forensic investigation of a pediatric death, forensic pathology remains the core discipline for death investigations in pediatric forensic cases.

Three aspects of forensic pathology should be highlighted at this stage. The first is that forensic pathology is an evolving science. Second, within the science, there are issues of significant controversy. Third, it is an interpretive science, often subject to limitations on the conclusions it can offer. These aspects assist us in understanding not only what went wrong in the cases we examined, but also the relationship between forensic pathology and the needs of the justice system.

Forensic Pathology as an Evolving Science

Like other sciences, forensic pathology was evolving in the 1980s and 1990s, and it continues to evolve today. Time, research, and advances in technology yield new discoveries and knowledge grows. As a result of this progress, theories and diagnoses that were once thought correct or reasonable may be questioned or even rejected.

Two examples help to illustrate how the evolution of forensic pathology through time and research can affect a diagnosis. Traditionally, pathologists considered certain findings diagnostic of "asphyxia" (a deprivation of oxygen). These diagnostic criteria included petechial hemorrhages in the thoracic viscera, congestion and edema of the lungs, cyanosis of the fingernails, and cerebral edema.[2] For many years, pathologists diagnosed asphyxia based on these findings at autopsy. However, researchers eventually discovered that all of these findings are properly regarded as "non-specific." In other words, they are not diagnostic of asphyxia. Indeed, in the 1970s, forensic pathology textbooks began to call these criteria obsolete or, as Lester Adelson described it in his seminal text, *The Pathology of Homicide*, the obsolete diagnostic quintet of asphyxia.

A second example is the evolution of the science and diagnosis of shaken baby syndrome (SBS). Shaken baby syndrome describes a head injury in an infant caused by violent shaking. Three pathology findings, referred to almost universally as the "triad," were traditionally considered diagnostic of SBS: (1) *hypoxic-ischemic encephalopathy* (disease of the brain affecting the brain's function and often associated with swelling), (2) *subdural hemorrhage* (bleeding into the space between the brain and the dura, which is adherent to the inner aspect of the skull), and (3) *retinal hemorrhages* (hemorrhages seen in the retina).

Over time, the presence of diffuse axonal injury (shearing of the axons or nerve fibres) also came to be considered part of the triad, as a subcategory of (1). Many in the medical community held the view that diffuse axonal injury

[2] These medical terms and others used in this Report are defined in the medical glossary at the front of this volume.

occurred as a direct physical consequence of trauma at the time of the injury or very soon after.[3] In other words, they believed that shaking caused immediate neurological effects – either unconsciousness or rapidly deteriorating consciousness. That belief led to the view that, if there had been shaking, the last person with the healthy baby was the "shaker."

As the research and literature on the topic grew, however, a heated debate emerged within the medical community as to the significance of the triad and what conclusions, if any, could be drawn from its presence. The "classic view" was that the presence of the triad was completely diagnostic of a violent shaking, and therefore homicide. However, a contrary view emerged, initially based on largely anecdotal evidence, that the presence of the triad did not necessarily mean that the baby was shaken; rather, the triad consisted of non-specific findings that could be caused by other conditions, including an impact injury to the head, as in an accidental fall.

Mirroring this debate within the literature, many in the pathology community divided into two camps: those who believed that the presence of the triad allowed for a definitive diagnosis of SBS (included within that group was a smaller faction of pathologists who believed that the presence of retinal hemorrhages alone was often sufficient for the diagnosis), and those who questioned whether the presence of the triad permitted such a definitive diagnosis.

A secondary debate also emerged as to whether a child could die from "pure shaking," that is, shaking without impact. There was and continues to be a division of opinion on the issue: those who believe that pure shaking can kill, and those who believe that it cannot. The most controversial SBS cases involve young children with no objective pathological evidence of injury other than the triad.

The debate over SBS started in 1987 in a paper authored by Dr. Anne-Christine Duhaime, who reviewed the biomechanics involved and suggested that the forces required to produce the triad were not reproducible in experimental models of shaking. The debates continued following Dr. Duhaime's article and peaked in 2001 with the publication of two papers written by Dr. Jennian Geddes et al. These papers have come to be known in the forensic pathology community as Geddes I and Geddes II. These studies looked at the descriptive neuropathology of head injuries in infants and children and concluded, in essence, that in the majority of the cases studied, diffuse axonal injury was due to lack of oxygen and blood to the brain, not trauma. As a result, there is no longer the same associa-

[3] Stephen Cordner et al., "Pediatric Forensic Pathology: Limits and Controversies," in *Controversies and Models in Pediatric Forensic Pathology*, vol. 1 of Inquiry into Pediatric Forensic Pathology in Ontario, Independent Research Studies (Toronto: Ministry of the Attorney General, 2008).

tion, as was previously believed, between diffuse axonal injury – one part of the triad – and SBS. This evolution in thinking has potential implications for the amount of force required to produce serious injury or death, and therefore on whether, or to what extent, shaking is inevitably non-accidental.

The debate continues today, as academics and pathologists around the world still query what, if any, conclusions can be drawn safely from the presence of the triad. The evolution of shaken baby syndrome and its inherent controversies has resulted in an extensive review of SBS cases in the United Kingdom, and a request by several parties at this Inquiry for a similar review in Ontario. I return to this issue in Chapter 19, Pediatric Forensic Pathology and Potential Wrongful Convictions, in Volume 3.

Controversies in Forensic Pathology

As is obvious from the brief discussion above, the evolution of forensic pathology has often been accompanied by controversy, as pathologists debate whether new discoveries, research, or anecdotal information cast doubt on previously held opinions or modify the levels of confidence with which those opinions can be held. These controversies are particularly pronounced in pediatric forensic pathology.

I have already outlined, in the most basic terms, the SBS controversy. It has also led to related controversies – for example, whether subdural hemorrhages associated with birth or delivery might generate subdural hematomas which could later be discovered during autopsy or spontaneously generate re-bleeding and be wrongly attributed to inflicted injury.

The SBS controversy is also linked to the controversy surrounding "short falls." The connection between the two arises from the fact that in some cases caregivers suspected of having shaken a baby have at times stated that the child was not shaken, but was rather the victim of a short household fall.

In the past, some literature expressed the view, often in absolute terms, that short falls cannot cause significant head injury leading to death. According to this literature, short falls were unable to generate sufficient force to cause serious injuries or death. Other experts, relying on biomechanical models or what was regarded as credible anecdotal information, contended that short falls could, on rare occasions, result in serious head injuries and death. In rejecting the view that short falls cannot kill, during his evidence at this Inquiry, Dr. Jack Crane, the state pathologist for Northern Ireland, placed the debate within a historical perspective:

> [I]n the '90s there were different views on the amount of force that was required. And some people have been, perhaps, very strident in their views that you require a very considerable fall to do those. And I think what we have found more laterally, as our understanding increases – and Dr. [Christopher] Milroy mentioned these bio-mechanical models – we do know that comparatively low level falls may generate sufficient force – forces that we would expect to cause serious and fatal head injury. I think it's always very dangerous to be very dogmatic about these things, because, as I say, our knowledge does evolve over time and we may have to revise our views on this. But even in the '90s I think, certainly, I wouldn't be dogmatic in saying that you would have to fall a number of storeys before you would sustain a fatal head injury. Simply because from my own experience, I know that's not the case.

Dr. Stephen Cordner, director of the Victorian Institute of Forensic Medicine, together with his associates, in a study commissioned for this Inquiry, examined the existing medical literature (including primary, review, and simulation studies) to see if it allowed for any definite answer to the question of whether short-distance falls cause significant head injury leading to death. They conclude that the answer remains contentious. They note that "[l]arge population studies of childhood injuries on the whole indicate the likelihood of severe head injury is rare. This conclusion is, however, contrasted by anecdotal individual case reports that suggest it does occur."[4]

The Interpretive Nature of Forensic Pathology

The third aspect of forensic pathology of particular relevance here is its interpretive nature. Many findings observed at autopsy are open to interpretation. Post-mortem artefacts provide an important example.

During the death process and even after death, the body can undergo many changes. These post-mortem changes, or "artefacts," may be misinterpreted as injury or disease occurring in life. For instance, gravity combined with the position of the body at death may cause post-mortem staining (lividity) that can appear virtually indistinguishable from bruising. Resuscitation efforts or the handling of a body after death can similarly produce artefacts. And, in practice, the pathologist can leave marks on the body while performing dissections during the autopsy. It is the pathologist's task to interpret the autopsy

[4] *Ibid.*, 42.

findings to determine if they occurred before or after death and if they are relevant to the cause of death or are irrelevant artefacts. There is no hard-and-fast rule for how that is done. It requires training, experience, and judgment. Misinterpretation of artefacts by Dr. Charles Smith and others figured prominently in the errors identified by the Chief Coroner's Review in a number of cases examined at this Inquiry.

For example, in Valin's case, post-mortem dilation of the anus was misinterpreted as evidence of sexual assault, as were observations of "ulceration, laceration, and hemorrhage" in the anus, which were properly attributable to the dissection of tissue or its preparation for microscopic work. Much of what was described as bruising to Valin's body represented artefacts relating to lividity. Similarly, facial petechial hemorrhages, relied on to support a diagnosis of mechanical asphyxia, may also have been explained by lividity, particularly in light of the fact that Valin's body was found face down.

Artefacts represent only one of the interpretive challenges associated with forensic pathology. Dr. Michael Pollanen, Chief Forensic Pathologist for Ontario, identified 16 separate areas in which these challenges arise. The study by Dr. Cordner referred to earlier also identifies a number of issues that raise interpretive challenges, including determinations as to the time of death or the precise aging of injuries.[5]

Moreover, the pathologist's ultimate opinion on the cause of death will often involve an element of interpretation. Whether the pathologist believes that a certain constellation of findings is sufficient to make a diagnosis is up to him or her. Although certain important sources of information ground the pathologist's diagnosis, there is almost invariably some interpretation involved in making that diagnosis. That is particularly true in difficult cases.

The interpretive nature of forensic pathology – both in evaluating the findings made at the autopsy and in determining what, if any, conclusions can be drawn from them – reinforces the limitations of the science. Even where controversy does not divide the pathology community, there are diagnostic challenges that limit what a pathologist can reasonably say about an individual case, and the level of confidence or certainty with which he or she can say it.

[5] *Ibid.*

Interaction between Forensic Pathology and the Criminal Justice System

The interaction between forensic pathology and the criminal justice system raises many systemic issues to which I will return in detail in Volume 3. Three areas can serve as examples:

1 Communication: Criminal cases are investigated, prosecuted, defended, and adjudicated by those who are not pathologists and who may have a limited understanding of pathology. It is therefore a challenge to ensure that forensic pathology opinions, and their limitations, are not only accurately communicated by the pathologist, but also understandable and understood by the criminal justice system.
2 Levels of certainty: The prosecution must prove criminality beyond a reasonable doubt. Although this burden of proof has application to the entirety of the evidence, not individual pieces of it, it is clear that the criminal justice system may make demands on forensic pathology for certainty, when the science may not reasonably permit such confidence. Even when the latter is acknowledged, forensic pathologists may have difficulty quantifying their levels of confidence in ways that not only have scientific validity but are easily utilized by the legal system.
3 Reliability: Opinion testimony represents an exception to the ordinary legal rule that confines witnesses to what they personally saw, heard, or did. Accordingly, it must meet certain preconditions for admissibility. The fact that scientific opinion evidence may be surrounded with an aura of infallibility provides a further impetus for the system to ensure that it receives "reliable" scientific opinion evidence. This situation, together with the demonstrated unreliability of some of the forensic opinion evidence considered at this Inquiry, invites consideration of the extent to which courts should evaluate the reliability of forensic pathology opinions as a precondition to admissibility.

These issues are intimately connected with a reality that must be recognized. The criminal justice system values finality. But as we have seen, forensic pathology is an evolving science in which controversies exist, and where findings and opinions often require interpretation. This tension underlies much of the discussion in Volume 3. As we have also seen, the evolution of scientific knowledge will often be accompanied by controversy – as pathologists debate whether the existing scientific knowledge permits certain opinions to be reasonably formed, and whether new scientific knowledge casts doubt on previously expressed opinions

or, at the very least, modifies the levels of confidence with which those opinions can reasonably be expressed.

In describing the evolution of forensic pathology, its controversies, and its limitations, I have largely focused on pediatric forensic pathology. That focus is driven not only by this Inquiry's mandate, but also by the recognition that pediatric forensic pathology raises unique and exceedingly difficult scientific issues. Sudden infant deaths are not uncommon. The cause of these deaths is often not obvious. Little or no pathology evidence may accompany child abuse. Equally troubling, natural disease in newborns or infants may mimic inflicted trauma. For instance, hemorrhagic disease of the newborn may have, as its first presentation, subdural hemorrhage. By contrast, it is rare for natural diseases to present as trauma in adults. Pediatric issues such as re-bleeding are on the margins of understanding. Others (such as shaken baby syndrome and accidental falls) remain, as we have seen, controversial.

However, an acknowledgement that forensic pathology is evolving, is sometimes accompanied by controversy, and has its limitations as an interpretive science does not reduce its continuing importance to the criminal justice system. This is so for several reasons. First, although difficult questions remain for forensic pathologists, the evolution of the science has increased their knowledge in many important areas and permitted them to provide evidence on which the justice system can rely. Time and research do not call into question all diagnoses. On the contrary, in many ways, the science is well settled.

Second, the fact that an opinion is interpretive and lacks a precisely calibrated expression of certainty does not diminish its importance in the death investigation. Rather, it places an onus on forensic pathologists to offer conclusions which carefully articulate any limitations that apply to them, including the level of certainty or confidence that the evidence and the science permit. The interpretive nature of forensic pathology should not reduce the reliance that coroners, police officers, Crown counsel, and triers of fact place upon it. Understanding the limitations of forensic pathology as a science helps police officers, Crown counsel, and triers of fact assess how much weight to place on an opinion and why. Forensic pathology, when practised properly, can offer methodologically valid, reasonable, and balanced conclusions on which the justice system can rely.

The reliability of forensic pathology opinions matters a great deal to the criminal justice system. In cases in which there are important issues of pathology, as often occurs in pediatric death cases, flawed pathology can lead to tragic outcomes. The cases we examined at this Inquiry provide graphic evidence of that reality. Flawed pathology can result in a parent, family member, or caregiver being wrongly entangled in the criminal justice system, and wrongfully convicted and

incarcerated, as happened to William Mullins-Johnson in Valin's case.

It is equally tragic, however, if flawed pathology steers the criminal justice system away from the true perpetrator, as happened in Jenna's case. In that case, the erroneous pathology failed to focus the criminal investigation on Jenna's babysitter. Instead, Brenda Waudby, Jenna's mother, became the focus of the investigation. As a result, the babysitter, who was the one responsible for Jenna's death, escaped detection for many years.

In either situation, whether the flawed pathology plays a part in a wrongful conviction or in allowing a criminal to escape detection, justice is not served and public confidence in the legal system is diminished. As we will see, both the science and the criminal justice system have important roles to play in ensuring against either possibility.

The Culture of Pediatric Forensic Pathology

With that outline of the science of forensic pathology, I turn now to an overview of the culture within which pediatric forensic pathology was practised in the 1980s and 1990s. Most important, there was a misplaced emphasis on who should lead the practice of pediatric forensic pathology. The prevailing view in Ontario was that pediatric pathologists were best situated to perform forensic autopsies on infants and children. As a result, expertise in pediatric pathology was emphasized over training and qualifications in forensic pathology.

This is exemplified by the experience of Dr. Smith. He was a pediatric pathologist and received training in that subspecialty. He had no forensic pathology training and, despite being appointed the director of the Ontario Pediatric Forensic Pathology Unit (OPFPU), he never obtained any such training. At the Inquiry, he admitted that, in the 1980s, he had virtually no knowledge of forensic pathology as a distinct discipline. And, although his knowledge of the subject began to grow in the 1990s, he continued to believe that pediatric, not forensic, pathology was most relevant to his work at the OPFPU. This view was not unique to Dr. Smith; it reflected the culture in Ontario at the time.

The focus on pediatric pathology was not entirely inexplicable because pediatric pathologists are trained and better situated to determine the presence of natural disease processes in infants and children. However, the failure to recognize the importance of forensic pathology expertise in the performance of postmortem examinations on infants and children, particularly in criminally suspicious cases, was misguided and in some instances had very unfortunate consequences. The problems associated with having pediatric pathologists with no forensic training perform autopsies on infants and children can be severe. By

comparison to those with forensic training, they lack expertise in wound interpretation, have no training or experience in presenting their opinions in a legal setting, and may lack an understanding of the particular needs of the criminal justice system – including the importance of maintaining continuity of the evidence; the importance of documenting samples, procedures, and historical information; and what the system requires of an expert witness. The consequences of this misplaced focus were on full display in the cases examined at the Inquiry.

There was another problem with the culture in which pediatric forensic pathology was practised between 1981 and 2001: conclusions were often based on individual pathologists' experiences rather than on the available research and literature. This experience-based approach applied not only to forensic pathology; it was the traditional approach to expert opinion evidence preferred by the legal system in many circumstances.

This approach had several inherent limitations. Its ability to yield an accurate diagnosis depended on the experience of the pathologist. Anecdotal evidence and authoritative claims based largely on personal experience characterized the experience-based approach, making the opinions reached largely unquantifiable and shielding them from independent verification. And the approach overlooked the growing body of research and literature available on forensic pathology, particularly its more controversial areas. Without the benefit of the literature, pathologists risked lagging behind the evolution of the science.

In recent years, there has been a shift toward what is called an evidence-based approach.[6] Essentially, an evidence-based approach entails consideration of the autopsy findings in light of the medical literature and the use of logic to reason from the findings and the literature to a diagnosis. Unlike the traditional experience-based approach, evidence-based forensic pathology de-emphasizes anecdotal evidence and pathologists' personal experiences. Verifiable empirical data, rather than anecdote, serve as the foundation of an evidence-based opinion. Pathologists remain up to date on the state of the science and are thus able to give up-to-date opinions. The recent shift to an evidence-based approach is a commendable one, and I note that Dr. Pollanen has been instrumental in advocating its adoption in Ontario.

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[6] Gary Edmond, "Pathological Science? Demonstrable Reliability and Expert Forensic Pathology Evidence," in *Pediatric Forensic Pathology and the Justice System*, vol. 2 of Inquiry into Pediatric Forensic Pathology in Ontario, Independent Research Studies (Toronto: Ministry of the Attorney General, 2008).

A Note on Terminology

This description of the science and culture of forensic pathology has involved a number of generic terms. It is important at this point to explain precisely how I use several of these terms through the balance of this report.

First, I use the term "forensic pathology" to mean the pathology related to post-mortem examinations done under coroner's warrant. The science required by these examinations is the science of forensic pathology that I have described.

During the period of my review, most of the pathologists performing these examinations in Ontario were not accredited in forensic pathology. Nevertheless, I refer to all those actually doing forensic pathology as forensic pathologists. And I refer to the autopsies they did as forensic autopsies or coroner's autopsies.

I use the term "certified forensic pathologists," where it is important to the context, to refer to those who have received accreditation in the subspecialty of forensic pathology. As of September 2008, certification can only be acquired abroad, typically in the United States or the United Kingdom.

In Volume 3, I recommend the creation of a Registry of those who are considered competent to perform post-mortem examinations under coroner's warrant. I refer to them as "approved forensic pathologists" because, pursuant to my recommendation, they would be seen as sufficiently skilled to do forensic pathology, whether they are "certified," as I use that term.

I use the term "pediatric forensic pathology" to apply to the practice of forensic pathology in cases where the deceased person is under the age of 18 years. That is the cut-off used by the Office of the Chief Coroner for Ontario's Paediatric Death Review Committee, with some exceptions. That said, the large majority of pediatric forensic pathology cases has always involved the deaths of infants or very young children. That was certainly true of the cases examined at the Inquiry.

Finally, the distinction between criminally suspicious and non-criminally suspicious cases must be kept in mind. Only a small proportion of deaths in which a post-mortem examination is ordered by the coroner are criminally suspicious, which the OCCO defines as a death that may be related to the action of another person or persons. The others are cases in which the coroner determines for other reasons that an autopsy is necessary to permit the coroner to properly answer the questions posed by the legislation – namely, the identity of the deceased and how, when, where, and by what means the deceased came to his or her death.

As I have explained, our terms of reference focused our work on the cases that were the subject of the Chief Coroner's Review, all of which were criminally suspicious. It is clear that these kinds of cases provide forensic pathology with some

of its most difficult challenges. However, we also heard much about the practice and oversight of forensic pathology generally, in both criminally suspicious and non-criminally suspicious cases. In framing my recommendations, I remain mindful of the fact that there are considerably more non-criminally suspicious forensic pathology cases in Ontario than criminally suspicious ones, and that my recommendations must apply to both. Having said that, however, I emphasize that criminally suspicious cases present pediatric forensic pathology with its most difficult challenges, and that systemic failures in criminally suspicious cases can lead to tragic individual consequences. It is vital that the public have confidence in the future use of pediatric forensic pathology in the criminal justice system. This explains why the focus on these cases is so important.

7

Organization of Pediatric Forensic Pathology

My detailed assessment of the practice and oversight of pediatric forensic pathology in Ontario from 1981 to 2001 must begin with a description of how it, and the forensic pathology of which it was a part, were organized in those decades.

It is important to describe the general institutional arrangements in place at the beginning of this period and the way they evolved over the next two decades. This account will provide some insight into a number of flawed practices that were used by pathologists in those years, along with the limited oversight and accountability mechanisms that were applied to them.

It also provides an essential backdrop to understanding the events set out in several of the following chapters – how these practices could fail so badly and how these oversight and accountability mechanisms could prove so inadequate. These systemic failings are at the heart of the review I am required to conduct. It is a tragic story of flawed practices and failed oversight.

The Era of Dr. John Hillsdon Smith, Provincial Forensic Pathologist

Role and Mandate of the Forensic Pathology Branch

From 1975 to 1994, Dr. John Hillsdon Smith was the Provincial Forensic Pathologist for Ontario. He had trained in England and was certified as a forensic pathologist. He headed the Office of the Provincial Forensic Pathologist, also known as the Forensic Pathology Branch, which provided pathology services to the coronial service in Ontario. The branch was responsible for conducting the more complex coroner's autopsies in the province where the requisite expertise was unavailable locally. It also conducted most adult autopsies in the Toronto area.

The mandate of the Forensic Pathology Branch, as described in 1991, was to

provide advice to hospital pathologists, coroners, and police; to perform forensic autopsies on complex cases; to develop educational programs; to perform ancillary tests such as wound-weapon comparisons, special photographic and X-ray tests, identification tests, and tests for drowning; and to perform autopsies for deaths that occurred in Metropolitan Toronto.

Relationship between the Provincial Forensic Pathologist and the OCCO

During Dr. Hillsdon Smith's tenure, the Forensic Pathology Branch was a separate entity from the Office of the Chief Coroner for Ontario (OCCO). The Provincial Forensic Pathologist did not report to the Chief Coroner. Both offices reported to the assistant deputy minister in the Ministry of the Solicitor General, and both were located in the Coroner's Building on Grenville Street in Toronto. The legal authority for virtually all the work of the Forensic Pathology Branch flowed from coroner's warrants for post-mortem examination.

The Forensic Pathology Branch was initially staffed by the Provincial Forensic Pathologist as well as a Deputy Provincial Forensic Pathologist. The other pathologists who performed autopsies at the Coroner's Building provided services on a fee-for-service basis. In addition, the Forensic Pathology Branch had a core staff of full-time administrative and technical staff.

In his testimony at the Inquiry, Dr. James Cairns, Deputy Chief Coroner for Ontario from 1991 to 2008, stated that, when he arrived at the OCCO in 1991, the pathologists worked in the basement, the coroners worked on the second floor, and the two groups did not interact. The autopsy room was on the first floor. Former Chief Coroner for Ontario Dr. James Young, who worked at the OCCO in the 1980s, also described the pathologists and the coroners as disconnected during this period. Dr. Cairns understood that Dr. Hillsdon Smith and Dr. Beatty Cotnam, who was Chief Coroner from 1962 to 1982, had a falling out shortly after Dr. Hillsdon Smith became Provincial Forensic Pathologist. Initially, both men had intended to have their offices on the second floor of the Coroner's Building, but, because of the acrimonious relationship between them, Dr. Hillsdon Smith moved to the basement. Dr. Hillsdon Smith did not have a significantly better relationship with Dr. Ross Bennett, who succeeded Dr. Cotnam, or with Dr. Young, who became Chief Coroner in 1990.

It was not possible at the Inquiry to hear about the relationship between the offices directly from those who held the positions of Provincial Forensic Pathologist and Chief Coroner in the 1980s (they are all deceased). However, based on the evidence of witnesses who worked within the coronial system, I am

satisfied that, at least up until the early 1990s, the relationship suffered from a lack of communication and collaboration, which contributed to an unhealthy situation where pathologists and coroners operated in separate silos.

Training and Experience of Pathologists Performing Pediatric Coroner's Autopsies

In the 1980s and the early 1990s, almost all the coroner's autopsies in Ontario were performed by fee-for-service pathologists who had neither training nor certification in forensic pathology. Many of them worked in community hospitals. In a small number of cases, physicians without any specialization in pathology completed some post-mortem examinations for the OCCO.

Pediatric cases were not streamed to any particular hospitals or pathologists. Many local hospital pathologists, who had no experience with pediatric cases and no forensic training, performed pediatric autopsies. Whether a pathologist had the necessary skill to perform any given autopsy depended largely on individual work experience. The Provincial Forensic Pathologist had neither a process to determine whether a pathologist had appropriate expertise nor any guidelines about where pediatric cases should be performed.

Some pathologists who were doing fee-for-service work for the Forensic Pathology Branch in the Coroner's Building were considered more senior than others and were called in on an as-needed basis. Other than Dr. Hillsdon Smith, however, none of them had formal training in forensic pathology. By the early 1990s, Dr. Hillsdon Smith was himself performing very few autopsies; he preferred to provide consultation services in cases that interested him.

In the 1980s, most pediatric forensic autopsies in the Toronto area were conducted at the Hospital for Sick Children (SickKids), although some criminally suspicious pediatric cases were performed at the Forensic Pathology Branch. Most staff pathologists at SickKids conducted coroner's autopsies on a fee-for-service basis as a required part of their duties for the pathology department. The nine pathologists performing coroner's autopsies at SickKids in the 1980s had varying levels of training or work experience in forensic pathology. None of them had formal certification in forensic pathology, nor had they completed fellowships in that discipline. Only five to 10 criminally suspicious pediatric autopsies were conducted at SickKids each year, so pathology residents who trained there were unlikely to get any significant exposure to criminally suspicious work. Moreover, some of the SickKids pathologists did not feel comfortable or qualified to perform coroner's autopsies, especially those in criminally suspicious cases. On occasion, they declined to take on cases they felt were beyond their expertise.

When that happened, the cases were either given to a colleague who may have had more forensic experience or returned to the Forensic Pathology Branch.

In short, during Dr. Hillsdon Smith's tenure as Provincial Forensic Pathologist, there was inadequate forensic expertise among the pathologists performing autopsies for the OCCO. Until 1991, there was no formal streaming of cases, such as those involving pediatric deaths or criminally suspicious deaths, to pathologists with training or experience in forensic pathology. There was no coherent forensic pathology service. Some pathologists recognized that particular autopsies were beyond their expertise and declined to conduct them, but others did not.

Oversight by the Provincial Forensic Pathologist

From 1981 to about 1990, Dr. Hillsdon Smith made some effort to establish educational courses in forensic pathology for pathologists and police officers. However, apart from this, in general, the oversight, accountability, and quality assurance mechanisms in place during those years were entirely inadequate. Indeed, virtually no such mechanisms were in place at all.

Educational Programs

In the 1980s, Dr. Hillsdon Smith ran annual courses for senior police officers and pathologists. These courses often brought in leading forensic pathologists from across North America on issues such as gunshot wounds. But by 1990, these courses were no longer being offered.

Pathology residents were also sent to the Forensic Pathology Branch to observe autopsies, which provided some education in forensic work. However, because they did not receive any hands-on training in conducting forensic autopsies, this opportunity was of little practical value.

Lack of Policies and Guidelines Regarding Coroner's Autopsies

It appears that Dr. Hillsdon Smith did not issue policies or guidelines to assist pathologists in conducting post-mortem examinations under coroner's warrant. In the 1980s, Dr. Bennett did issue a few memoranda to coroners and pathologists regarding some autopsy procedures, but that was the only formal source of guidance.

Oversight and Quality Control of Coroner's Cases

In addition, during Dr. Hillsdon Smith's tenure, there was little or no case-by-case oversight of the work of fee-for-service pathologists performing autopsies for the

OCCO. There was essentially nothing that could be called quality assurance of pathology work in the province. In those years, the concept had not yet been developed in, or applied to, forensic pathology.

It was very rare for anyone other than the local coroner to review reports of post-mortem examination. Dr. Hillsdon Smith did not see it as his job to review autopsy reports or otherwise supervise the case work of pathologists performing coroner's autopsies across the province. And, during the latter years of his tenure, he conducted only limited oversight of the work of the pathologists within the Forensic Pathology Branch itself. Indeed, by the early 1990s, he had delegated most of his day-to-day administrative duties to Barry Blenkinsop, a long-time pathology assistant, and to Jack Press, a former police officer who was by then his executive assistant. He no longer scheduled the autopsies to be done at the Forensic Pathology Branch. Rather, the scheduling was being done by the OCCO.

After the establishment of the regional forensic pathology units at SickKids and in Ottawa and Hamilton – which, as we will see, occurred in 1991 and 1992 – there was no formal interaction between the Forensic Pathology Branch and these regional units, even though they performed a significant number of criminally suspicious autopsies. Dr. Hillsdon Smith simply had no involvement with the regional forensic pathology units formed during his tenure, and he did not review or supervise the work of those units.

Dr. Hillsdon Smith did not introduce any guidelines, recommendations, or requirements for quality assurance of the coroner's autopsies being performed by fee-for-service pathologists at various hospitals. Indeed, in the 1980s and early 1990s, there were few quality control measures in place at all at hospitals regarding coroner's autopsies. SickKids, for example, felt that the OCCO had exclusive responsibility for oversight of autopsies in criminally suspicious cases. It believed that the hospital had no role to play in supervising or reviewing pathology performed under a coroner's warrant. In part because of concerns about the effect on ongoing criminal investigations, criminally suspicious coroner's cases were not discussed during SickKids rounds or even informally among pathologists. Occasionally, SickKids pathologists consulted with each other about non-criminally suspicious coroner's autopsies, and these cases were sometimes presented at SickKids rounds – at least when the coroner gave permission. But SickKids did not vet or review any post-mortem examination reports in criminally suspicious pediatric cases. It did not view peer review as appropriate because the cases were considered a matter between the individual pathologist and the requesting coroner. As a result, pathologists at institutions such as SickKids did not receive the full benefit of their colleagues' advice and experience in coroner's cases, especially those challenging cases engaging criminal suspicions.

The Era of Dr. David Chiasson, Chief Forensic Pathologist

In 1994, when Dr. Hillsdon Smith retired, Dr. David Chiasson was appointed Chief Forensic Pathologist. At about the same time, the province integrated the Office of the Provincial Forensic Pathologist into the OCCO. Dr. Young orchestrated this integration. He had rightly concluded that the Forensic Pathology Branch was not being properly administered. It was isolated from the work of the OCCO and lacked leadership, and he wanted to integrate the expertise of the pathologists more fully into the OCCO. The title "Provincial Forensic Pathologist" was changed to "Chief Forensic Pathologist," and Dr. Chiasson assumed that office.

Responsibilities of and Relationship between the Chief Coroner and the Chief Forensic Pathologist

After the integration, the Chief Forensic Pathologist reported to the Chief Coroner. Only the Chief Coroner maintained a direct reporting relationship with the Ministry of the Solicitor General. The Chief Forensic Pathologist was no longer directly accountable to the ministry.

In conjunction with the change in organizational structure, the human resources and administrative branches of the Office of the Chief Forensic Pathologist were combined with those of the OCCO. Dr. Chiasson was pleased to have Dr. Young handle the high-level administrative aspects of the work because he regarded Dr. Young as a strong administrator who was also successful in obtaining funding. Moreover, Dr. Chiasson wanted to focus on the day-to-day pathology work of the Provincial Forensic Pathology Unit (PFPU) – as the unit within the OCCO that performed autopsies was now called.

According to the OCCO, the Chief Forensic Pathologist remained responsible for the quality assurance of the work of pathologists on a day-by-day basis. The job description for the Chief Forensic Pathologist, written in late 1993, stated that he worked under the administrative direction of the Chief Coroner, but "on professional matters" was the principal authority in the ministry. The Chief Forensic Pathologist was responsible for directing and controlling forensic pathology at the OCCO, including the provision of professional guidance and direction to pathologists who were performing coroner's autopsies, and for assessing the qualities and qualifications of those pathologists.

The evidence at the Inquiry showed that the decision to integrate the Office of the Provincial Forensic Pathologist into the OCCO was well intentioned. The

object of the structural change was to eliminate the division that separated pathologists from coroners and to encourage a team approach to death investigations. However, the change also eliminated the direct accountability of the Chief Forensic Pathologist to the Ministry of the Solicitor General for the provision of forensic pathology services. Moreover, there was no defined process in the legislation, the regulations, or any formal policies of the OCCO whereby the Chief Forensic Pathologist would discharge an ongoing oversight role.

The structural change did not adequately define the respective roles of the Chief Coroner and the Chief Forensic Pathologist. It was unclear who was ultimately accountable for the oversight of pathologists performing coroner's warrant autopsies. In practice, for example, it was not at all clear whether the Chief Forensic Pathologist or the Chief Coroner was to provide the direct oversight of Dr. Charles Smith. In the result, because the Chief Forensic Pathologist was now below him in the organizational structure, the Chief Coroner, who was not a pathologist, became accountable to the ministry for the provision of highly specialized pathology services. The removal of any direct reporting relationship between the Chief Forensic Pathologist and the ministry had eliminated the only existing mechanism for direct accountability for forensic pathology services in the province and had put the ultimate responsibility for those services on the Chief Coroner.

The amalgamation did not improve accountability for the provision of forensic pathology services in Ontario. Rather, the failure to delineate adequately the respective roles of the Chief Coroner and the Chief Forensic Pathologist, and the failure to ensure that the Chief Forensic Pathologist had clear authority to supervise the pathologists, set the stage for a series of oversight failures.

Staffing at the Provincial Forensic Pathology Unit

In 1994, after the integration, Dr. Chiasson was the only full-time salaried pathologist at the PFPU. The other pathologists worked on a fee-for-service basis. Except for Dr. Chiasson, none of them had formal training in forensic pathology.

Dr. Chiasson's top priority was to improve the quality and efficiency of the unit by hiring full-time certified forensic pathologists. He had informed Dr. Young of his concerns during his initial interviews and had even made staffing by full-time certified forensic pathologists a condition of his accepting the position of Chief Forensic Pathologist. Dr. Young supported a move in this direction.

One primary barrier to recruiting full-time qualified forensic pathologists was the scarcity of such professionals. In 1994 and 1995, only a few Ontario pathologists had formal training and certification in forensic pathology, and they all had full-time hospital positions at salaries the PFPU could not match. Outside

Ontario, the situation was not much better. However, Dr. Chiasson overcame these barriers and, over the next five years, retained several full-time, certified forensic pathologists. His expectation at the beginning was that any pathologist working full time at the unit would have certification in forensic pathology.

His plan began well, but, in the spring and summer of 1999, two of the full-time certified forensic pathologists, Dr. Martin Bullock and Dr. Martin Queen, resigned from the PFPU. Following their departures, the PFPU again, by necessity, turned to part-time fee-for-service pathologists to perform forensic autopsies.

Creation of the Ontario Pediatric Forensic Pathology Unit

Before 1991, there was no formal agreement between the OCCO and SickKids, although pathologists at the hospital did perform post-mortem examinations under coroner's warrant. Individual coroners, in consultation with the OCCO, determined the need for forensic pathology services, including those that might be provided by SickKids in pediatric cases. No remuneration agreement existed between the OCCO and SickKids apart from a facility fee that SickKids charged the OCCO pursuant to regulations under the *Coroners Act*, RSO 1990, c. C.37.

In the late 1980s, Dr. M. James Phillips, the pathologist-in-chief at SickKids, wanted to increase the amount of training and academic research work around coroner's autopsies performed at SickKids and requested that coroner's work be conducted within a more coherent organizational unit at the hospital. He was also concerned that fees paid by the OCCO did not match the costs associated with coroner's warrant autopsies. Consequently, in the late 1980s or 1990, Dr. Phillips approached Dr. Bennett, then Chief Coroner, and proposed creating a specialized unit at SickKids. In developing his proposal, Dr. Phillips consulted with Dr. Smith.

The OCCO had three particular goals for the specialized unit as it conducted pediatric forensic cases: to provide quality reports of post-mortem examination, to train residents, and to engage in research. Dr. Young correctly recognized that the pediatric forensic pathology required by the OCCO needed special expertise and more resources. To fulfill these three objectives, the OCCO needed access to SickKids' laboratories and testing equipment, including specialized X-ray equipment that was not available at the OCCO. It also needed SickKids' expertise in radiology, neuropathology, and other areas. In addition, SickKids had the benefit of the Suspected Child Abuse and Neglect (SCAN) Program, a multidisciplinary team at the hospital that could provide guidance to pathologists in assessing injuries. Dr. Young thought that the specialized unit would also assist the OCCO

in building better relationships with both SickKids and the University of Toronto. The educational component of the unit would be achieved through its involvement with teaching residents, pathologists, coroners, the police, and Crown counsel, and the research component through the unit's support for activities in pediatric forensic pathology.

On September 23, 1991, SickKids and the Ministry of the Solicitor General entered into an agreement (the 1991 Agreement) that created the Ontario Pediatric Forensic Pathology Unit (OPFPU). The OPFPU was the first regional forensic pathology unit created in the province, although others followed in the next few years. It performed autopsies on most infants and children who died in Toronto and the surrounding area, and also on pediatric death cases from elsewhere in the province as needed. The OPFPU was an entity formed by contract and composed of the SickKids pathologists who performed work for the OCCO. It was not a discrete physical unit or a separate entity within the hospital's pathology department.

The 1991 Agreement remained in place until 2004, when a new contract was signed. Schedule A to the 1991 Agreement set out limited terms of reference for the unit, including guidance on the types of cases on which the unit would focus and provisions that the unit would remain involved in teaching, research, and, given the growing concern about child abuse (which is discussed later in this chapter), the OCCO's Paediatric Death Review Committee. It set out that the funds advanced would be used as partial compensation for professional involvement in the autopsies – pathology assistants, histopathology technologists, secretarial support, photographic services, supplies, educational expenses, and capital equipment purchases.

Pursuant to the 1991 Agreement, the Ministry of the Solicitor General agreed to provide SickKids with a $200,000 grant annually. This grant was intended to defray some of the costs associated with performance of coroner's autopsies at SickKids. SickKids submitted annual requests for funding to the ministry. The annual funding provided by the Ministry of Community Safety and Correctional Services and its predecessor ministry has not increased since 1991. SickKids informed the Inquiry that the $200,000 in funding does not now, and did not in 1991, cover the real costs of conducting forensic autopsies at the hospital. Therefore, the SickKids pathology department has absorbed the additional costs.

In practice, SickKids allocated approximately $125,000 of the grant to pay the OPFPU director's salary. However, the 1991 Agreement did not change the remuneration of individual pathologists at SickKids who performed coroner's autopsies. They continued to receive a fee-for-service payment from the OCCO as set out in the *Coroners Act*.

Appointment of Dr. Smith as Director of the OPFPU

The 1991 Agreement did not specify that there would be a director of the OPFPU, and therefore what the duties and responsibilities of that position would be. Initially, Dr. Phillips assumed responsibility for heading the unit. In 1992, the OCCO and SickKids agreed to appoint Dr. Smith as the first official director of the OPFPU.

The OCCO did not select Dr. Smith because of his forensic pathology training or expertise. Nor did Dr. Phillips, who was himself a renowned clinical pathologist but not a forensic pathologist, appoint him on that basis. Indeed, in 1992, Dr. Smith had no forensic pathology training, and by then had been involved in only 10 to 15 criminally suspicious cases. Rather, Dr. Smith was the only pathologist at SickKids who had the interest and the willingness to take on the role. By 1990, Dr. Smith was already devoting much of his time to coroner's cases and had been named staff pathologist in charge of autopsy services at SickKids because of his dedication to coroner's work. He was willing to fill a void that no one else wanted to fill.

When Dr. Smith became the director of the OPFPU, some of the more senior pathologists at SickKids were not comfortable reporting to a junior colleague about their OCCO work. In addition, some of the SickKids pathologists were rightly concerned that Dr. Smith did not have adequate training to take on the role.

When Dr. Smith was appointed as the OPFPU director, he was not qualified to be the director of a specialized unit dedicated to pediatric forensic pathology. Some of the cases for which this unit was responsible were among the most difficult faced by pediatric forensic pathology and the criminal justice system. However, Dr. Young testified that it was not reasonable to require that the director of the OPFPU be an accredited and trained forensic pathologist. In the 1990s, he stated, the pool of such specialists was limited or non-existent. Although it is true that the number of trained and qualified forensic pathologists was limited at the time, it does not appear that Dr. Young conducted a serious search for other, more qualified or experienced candidates or that he attempted to improve Dr. Smith's skills in forensic pathology after recommending his appointment. The need for forensic pathology expertise was simply not appreciated, and Dr. Smith's appointment was convenient.

Oversight and Accountability of the OPFPU

The 1991 Agreement contained virtually no reference to oversight of the OPFPU and very little discussion about an organizational structure. Rather, it focused on

ensuring the flow of the grant money for the unit. The agreement required the OPFPU to report quarterly on its workload and activities to the OCCO, yet it appears that the OPFPU never produced such reports. The activities of the unit were simply reported briefly in SickKids' annual requests to the ministry for the $200,000 grant for the OPFPU.

During negotiations leading up to the 1991 Agreement, SickKids added a section that, it anticipated, would "clarify lines of authority and … underscore the fact that the individual pathologists remain responsible to the coroner (and not to a director of this Unit) for their work." This section stated: "This agreement does not alter the relationship between the Coroners and the individual pathologists making up the unit …" Indeed, it appears that neither party to the 1991 Agreement intended to create any additional or new oversight relationships. The hospital's motivation was clear: in some coroner's warrant cases, pathologists might be required to determine whether a death was attributable to a medical mistake by a colleague at SickKids. In these circumstances, the hospital wanted to maintain a system whereby the pathologist was accountable only to the requesting coroner. The SickKids pathologists viewed the 1991 Agreement as confirming and continuing the arrangement that was informally in place before the formation of the OPFPU, where their working relationship in each case was with the coroner seeking their services.

At the Inquiry, it became apparent that, although not articulated at the time, there were differences of opinion about the general oversight responsibility for the OPFPU. Dr. Young thought that the Chief Forensic Pathologist was ultimately responsible for day-to-day quality assurance of the work of the OPFPU and its pathologists. However, if the Chief Forensic Pathologist was to oversee the OPFPU, that responsibility was never set out in the agreement regarding the OPFPU or elsewhere. In addition, Dr. Smith testified that he felt he reported to Dr. Young and Dr. Cairns, not the Chief Forensic Pathologist. Moreover, Dr. Chiasson said that, although he was responsible in some general sense for supervision of post-mortem examinations as the OCCO's "liaison" to the OPFPU, he was not responsible for oversight of the OPFPU. In his mind, the responsibility for the OPFPU, and for the regional forensic pathology units that came later, rested with the Chief Coroner, not with the Chief Forensic Pathologist. All agreed, however, that SickKids was not itself responsible for oversight and quality control of the OPFPU.

This ambiguity was a significant problem. Effective oversight requires clearly delineated responsibilities, with no ambiguity over who does what. The fuzziness surrounding the ultimate responsibility for the OPFPU was a major weakness in its organization, and it contributed significantly to the failures of

oversight and accountability. As I describe later, the Chief Forensic Pathologist, who should have the requisite expertise, must play a central role in oversight. That position cannot be marginalized in favour of coroners who, without training in forensic pathology, cannot assume primary responsibility for the oversight of pathologists.

The responsibilities of the director for the OPFPU were also the subject of substantial confusion in evidence given at the Inquiry. Dr. Young testified that he understood the director's role to be strictly administrative in nature. He felt that the director administered the budget and ensured that paperwork such as rotation scheduling was completed as necessary, but was not responsible for quality assurance. However, documents surrounding the appointment of the OPFPU director suggest that Dr. Young at least originally contemplated that the director would play a meaningful oversight role. In a letter to Dr. Phillips on March 10, 1992, Dr. Young commented that it might be appropriate to consider that the director supervise the OPFPU "and [be] accountable for its activity." In his May 29, 1992, letter to Dr. Smith appointing him as director, Dr. Phillips noted that the director position "includes the responsibilities for all day to day operations of the Unit."

Moreover, in 1993, Dr. Young asked Dr. Smith to sign off on all reports of post-mortem examination before they were sent from the unit to the OCCO or the regional coroner. The purpose of the signoff was to ensure that the "wording in the conclusion [was] most appropriate for the forensic setting" and was in line with the OCCO's policies. Evidence at the Inquiry indicated that, from time to time, Dr. Smith did have questions or concerns about a pathologist's opinion on the cause of death. In such cases, he approached the pathologist, and they discussed his suggestions or additional considerations, although he left the decision whether to amend the report with the pathologist. Dr. Smith's review of pathologists' reports within the OPFPU did, then, provide a form of quality assurance. It involved consideration not only of compliance with OCCO policies but also of the accuracy of the cause of death opinion itself.

Individual coroners continued to assign coroner's warrant autopsies to the individual OPFPU pathologists. As director of the unit, Dr. Smith had some say in determining who performed which forensic autopsies at the OPFPU.

Dr. Chiasson understood that the directors of all the regional forensic pathology units, including the OPFPU, had responsibility for quality assurance within their units. In fact, during his first few years as Chief Forensic Pathologist, he tried as best he could to ensure that directors fulfilled their responsibilities for quality assurance.

Dr. Phillips also believed that Dr. Smith had some responsibility for the qual-

ity assurance of the work of the OPFPU, including reports of post-mortem examination. He understood that Dr. Smith was responsible for reviewing his colleagues' reports and for monitoring their turnaround times. He thought that the OCCO would not accept any report from SickKids unless Dr. Smith had signed off on it. However, by contrast, Dr. Smith's own reports were not reviewed by anyone at SickKids before they were sent to the OCCO.

When the OPFPU was established, no provisions were put in place to ensure oversight of the work of the director of the OPFPU. No such mechanisms were ever introduced. This omission was a significant quality assurance failing. It was one of the things that allowed many of Dr. Smith's weaknesses to go unnoticed and uncorrected for years.

The 1991 Agreement regarding the OPFPU therefore failed to clearly allocate the responsibility for supervision and oversight. The lines of accountability and oversight were so unclear that the central witnesses each described a different view of the respective roles and obligations of the Chief Coroner, the Chief Forensic Pathologist, and the OPFPU director. This lack of clarity, combined with the fact that no one stepped forward to take responsibility for oversight, resulted in a vacuum where nobody was held to account for the work of the OPFPU. The idea of a specialized regional unit was laudable, but it failed to change in any significant way the historic relationship of the fee-for-service pathologist with the individual coroner, just as it failed to create any additional oversight or quality control mechanisms. It was a missed opportunity.

Unrealized Research Goals of the OPFPU

SickKids and the OCCO understood that research would be a central function of the OPFPU. The body of existing research into pediatric forensic pathology was thin, and, therefore, ongoing research was important. In 1991, for example, $23,938 of the $200,000 grant to the OPFPU was allocated to research in sudden infant death syndrome (SIDS).

Beginning in about 1994, however, Dr. Lawrence Becker, the newly appointed pathologist-in-chief and chief of the Department of Pediatric Laboratory Medicine at SickKids, and Dr. Ernest Cutz, a pathologist at SickKids, expressed concerns to Dr. Young, Dr. Chiasson, and Dr. Cairns about the increasing emphasis on the actual work of forensic autopsies at the OPFPU, and particularly about the adverse effect it was having on their ability to carry out research. Dr. Becker and Dr. Cutz wanted the OPFPU to have a stronger academic focus, particularly in the use of case materials and data for research projects related to SIDS. The investigation of SIDS was a significant area of research within the SickKids pathology department, with Dr. Cutz and Dr. Becker being recognized as eminent

experts in the field. Discussions between Dr. Becker and the OCCO leadership about the issue of research continued sporadically through 1999.

All SIDS autopsies were performed under coroner's warrant. The use of tissue samples from coroner's autopsies for SIDS research became a significant area of dispute within the department at the hospital. According to Dr. Cutz, before the OPFPU was established, Dr. Bennett, as Chief Coroner, had allowed SickKids to use tissue from coroner's autopsies for SIDS research. In February 1994, Dr. Smith drafted a memorandum to Dr. Phillips, informing him that, because of restrictions in the *Coroners Act*, the department could no longer collect or archive tissue from coroner's autopsies for research purposes. The OCCO, through Dr. Smith, ultimately insisted that the SickKids pathologists obtain informed consent from families before taking samples for research purposes, and that they inform the OCCO about the nature and results of all research-based investigations in coroner's cases. Dr. Cutz told the Inquiry that, as a result, their SIDS research projects were terminated.

Whatever caused the ultimate cessation of SIDS research at SickKids, it is obvious that it represented a failure of communication and cooperation between the OCCO and the hospital. It was also a missed opportunity to facilitate important research into a central aspect of pediatric forensic pathology – deaths of children due to SIDS – that SickKids was well placed to continue.

Attempted Re-visioning of the OPFPU

During the mid- to late 1990s, Dr. Chiasson continued to discuss the relationship between the OCCO and the OPFPU with Dr. Becker and Dr. Smith because he had certain concerns about the unit. These concerns focused on three areas: whether or not Dr. Smith and pathologist Dr. Glenn Taylor were doing all of the criminally suspicious and homicide cases at SickKids, as was Dr. Chiasson's preference; the problems with timeliness of post-mortem reports, primarily those of Dr. Smith; and the lack of communication between the OPFPU and the OCCO.

Dr. Chiasson attempted to address at least the timeliness problem directly. He wanted to ensure that Dr. Smith had enough time to concentrate on his coroner's warrant cases and was not diverted by paperwork tasks. Dr. Chiasson understood from Dr. Smith that he had to type or prepare his own reports and that this administrative work created problems for him. Dr. Chiasson therefore suggested to SickKids that Dr. Smith be provided with a dedicated assistant to handle OPFPU communications. It is clear from evidence at the Inquiry, however, that Dr. Smith in fact had adequate administrative support and that this particular aspect of his work did not cause his delays.

When SickKids did not address his concerns about the OPFPU, Dr. Chiasson

proposed a "re-visioning" of the OPFPU in which it would remain a joint venture between the OCCO and SickKids, but would be physically relocated to the OCCO. The director of the OPFPU would report to the Chief Forensic Pathologist. SickKids would continue to provide consultative professional support to the OPFPU, with the OCCO assuming responsibility for administrative and secretarial support. Dr. Chiasson thought that these changes would result in a more responsible unit that maintained a closer collaborative relationship between the OCCO and SickKids. He intended to have all the autopsies in all pediatric forensic cases in Toronto performed at the OCCO, except for non-criminally suspicious cases where the deaths had actually occurred at SickKids.

Despite a series of meetings between senior leaders at SickKids and the OCCO between March and June 1999, the re-visioning proposal did not proceed. Dr. Young testified that he was never in favour of moving the unit from SickKids to the OCCO, although Dr. Chiasson stated that Dr. Young never told him that. Dr. Chiasson believed that the re-visioning failed in large part because of the serious staffing shortages at the PFPU itself. In the spring and summer of 1999, both Dr. Bullock and Dr. Queen resigned from the unit for better-paying positions elsewhere. In mid-July 1999, Dr. John Deck, full-time neuropathologist at the PFPU, went on an extended medical leave of absence. He did not return from leave and retired in 2002. There was simply not the staff at the PFPU to take over the pediatric forensic work. Thus, not only did Dr. Chiasson's hopes for upgrading pediatric forensic pathology come to an end but so did his new vision for the OPFPU.

Regional Forensic Pathology Units

Establishment and Structures

In June 1993, Dr. Young drafted a formal proposal to establish and fund additional regional forensic pathology centres of excellence and to train and recruit new experts in the discipline. He was rightly concerned about the future supply of pathologists to do forensic work in Ontario. He thought that, by moving expertise to various regions, some pressure could be taken off the resources in Toronto. The centres could take advantage of physical facilities in different locations, including a number of newly constructed morgues.

In 1992, the year after the establishment of the OPFPU, the Ministry of the Solicitor General entered into contractual arrangements to establish the Hamilton and the Ottawa regional forensic pathology units. These units were also known as regional centres of excellence. Like the OPFPU, they were each located within teaching hospitals (what are now Hamilton General Hospital and the

Ottawa Hospital), and, consequently, they benefited from resources and infrastructure associated with first-class academic health sciences centres.

In addition to the official regional forensic pathology units, the Children's Hospital of Eastern Ontario (CHEO) handled pediatric forensic cases in eastern Ontario, including Ottawa. The Ottawa Regional Forensic Pathology Unit dealt only with adult forensic cases. However, CHEO was not a regional forensic pathology unit, and there was no contractual agreement between CHEO and the OCCO.

By the mid-1990s, forensic pathology units at four institutions – SickKids, Hamilton, Ottawa, and the PFPU – performed about three-quarters of the criminally suspicious coroner's warrant cases in Ontario. In the 1990s, most criminally suspicious pediatric cases were performed at the OPFPU, the Hamilton unit, or CHEO.

In 2000, the Ministry of the Solicitor General entered into contractual arrangements establishing the London and the Kingston regional forensic pathology units. These units were located, respectively, at London Health Sciences Centre and Kingston General Hospital.

Each regional forensic pathology unit had a director. In every case, the director was also a pathologist who provided fee-for-service forensic autopsies at the unit.

Expertise of Pathologists

There is a good deal of variation in the qualifications of both directors and pathologists working within the regional forensic pathology units and performing criminally suspicious cases. Only one – Dr. Michael Shkrum, the director of the London unit – has formal training and certification in forensic pathology. A few pathologists – such as Dr. Chitra Rao and Dr. John Fernandes in Hamilton and Dr. Edward Tweedie in London – have specialized training through fellowships in forensic pathology, but lack certification. However, a number of pathologists working in the units have no fellowship training or certification in forensic pathology, including the current director of the Kingston unit and former directors of the Ottawa unit and the OPFPU.

Oversight and Accountability Relationships

Unfortunately, the 1991 Agreement establishing the OPFPU appears to have been used as something of a template for the Hamilton and Ottawa agreements in 1992. They, too, neither outlined an oversight structure for the work of the units nor specified the roles and responsibilities of the directors. They did not address the relationship of the units with the OCCO and the Chief Forensic Pathologist, nor did they provide for oversight of the pathology conducted by the directors. The agreements noted only that they did not alter the relationship between coro-

ners and individual pathologists. Therefore, as with the OPFPU, the creation of the specialized regional units in Hamilton and Ottawa failed to change in any significant way the relationship of fee-for-service pathologists with the OCCO or to create any additional mechanisms for meaningful oversight and quality control. In this respect, they did not create oversight structures that were significantly different from what had gone on before. The essential relationship remained that between the pathologist doing the autopsy and the requesting coroner.

In 1997, Schedule A to the Ottawa agreement was amended to clarify the administrative structure of the unit. This represented a significant step forward, at least in Ottawa. The amended agreement provided that the Ottawa unit was one of four forensic pathology units in the province, "under the general supervision of the Chief Forensic Pathologist and ultimately accountable to the Chief Coroner of Ontario." It specified that governance of the unit would be conducted by representatives of the OCCO and the Ottawa Hospital as well as by the administrative head of the unit, who was appointed by the Chief Coroner with the approval of the local hospital administration. Dr. Benoit Béchard, the regional coroner, was named as administrative head of the unit. The 1997 agreement also set out that a professional director would provide oversight of the substantive work of pathologists within the unit – reviewing autopsy reports, for example, and ensuring adequate consultation opportunities among peers. Although not explicitly stated in the agreement, the professional director was in practice a pathologist. Unfortunately, however, this director was given no role in the unit's governance. The agreement set out that the professional director reported to the administrative director on financial matters, and to the regional coroner or Chief Forensic Pathologist on professional matters.

The amended agreement also outlined the roles and responsibilities of the Chief Forensic Pathologist, the professional director, and the administrative director. The Chief Forensic Pathologist was responsible for providing direction and guidelines on standards of forensic pathology practice, ensuring appropriate quality control measures, and reviewing all autopsy reports in criminally suspicious cases. The professional director was responsible for day-to-day management of the unit, ensuring an appropriate early case review system, arranging regular case review of complex forensic issues, and reviewing all autopsy reports before they were released. The administrative director of the unit, who was not a pathologist, was responsible for financial management of the unit, ensuring appropriate staffing schedules, and monitoring turnaround times.

Schedule A to the 1997 Ottawa agreement also provided more details about the desired qualifications of pathologists within the unit. It would be staffed by dedicated pathologists acceptable to both the local hospital and the university

and possessing "appropriate training (American Board of Pathology accredited fellowship in forensic pathology or equivalent) and/or concentrated case experience in forensic pathology." It also required that new full-time staff pathologist appointments be made only after an interview process that included representatives from the OCCO, the university, and the Ottawa Hospital. In addition, the agreement usefully set out the role of the unit in providing education in forensic pathology to pathology residents, medical students, unit pathologists, and others, such as police officers and coroners.

The 2000 agreements for the London and Kingston regional forensic pathology units followed the model of the Ottawa unit's 1997 agreement, with detailed provisions for the oversight of, as well as the roles and responsibilities of, the various players within the unit and at the OCCO. The Kingston agreement was essentially identical to the one signed for the Ottawa unit. The London agreement was similar, with a few important differences. It set out that the unit director and the chief/chair of the department of pathology would sit on the executive team governing the unit. This was an improvement because it ensured pathology expertise on the governing body. In addition, the London agreement did not require an administrative director; rather, the unit director was responsible for both substantive and administrative management of the unit.

The arrangements in Ottawa, London, and Kingston were all manifestly superior to the OPFPU and Hamilton agreements. It is unfortunate that the 1997 changes to the Ottawa agreement were not implemented across the province. Since 2001, there have been significant amendments to the agreements regarding the regional forensic pathology units, as I describe in Chapter 9, Oversight of Pediatric Forensic Pathology.

Although the structural arrangements for the regional forensic pathology units lacked clarity for oversight and accountability, the concept of regionalizing the provision of forensic pathology services was a good one. It recognized the need to develop specialized expertise to serve the unique geographical demands of Ontario. Although most of the pathologists at the units did not have formal certification in forensic pathology, they did develop some considerable experience in performing coroner's autopsies. In all five units, they were also working within academic teaching hospitals with extensive resources for testing and consultation. Therefore, they were somewhat better equipped to perform the more complex forensic autopsies, such as criminally suspicious pediatric deaths, than pathologists working in community-based hospitals. Although inadequate oversight and quality control mechanisms within the units failed to detect problems with the work of pathologists such as Dr. Smith, the OCCO was correct in recognizing the need to develop and concentrate the number of professional experts

who were engaged in forensic pathology in centres of excellence across the province. The concept was a sound one, even if the oversight mechanisms for a number of the units were sorely lacking.

The Regional Coroner's Pathologist System

In the 1990s, autopsies in about three-quarters of the criminally suspicious cases were conducted by pathologists affiliated with four of the forensic pathology units – SickKids, Hamilton, Ottawa, and the PFPU. In many parts of the province, however, there was no specialized forensic pathology service, and pathologists in community-based hospitals continued to do the work. Inevitably, therefore, pathologists with very little experience were performing post-mortem examinations in some criminally suspicious deaths. This situation led Dr. Chiasson to become concerned that some pathologists were taking on cases that were beyond their capabilities.

In an attempt to address this problem, Dr. Chiasson introduced the Regional Coroner's Pathologist System in June 1996, by which he invited pathologists to apply for appointments as regional coroner's pathologists. The OCCO asked pathologists who were interested in performing post-mortem examinations in criminally suspicious cases to submit a curriculum vitae and to complete a questionnaire detailing their experience with homicide cases. The stated criteria included previous forensic training and/or experience, previous experience as an expert witness in court, interpersonal skills, and geographical location. Dr. Chiasson did not interview candidates or attempt to assess factors such as interpersonal skills. Based on the applications, the OCCO, through Dr. Chiasson, developed a list of regional coroner's pathologists. In addition, the OCCO named a group of associate regional coroner's pathologists – junior pathologists who were being developed to perform this work in the future. Altogether, some 90 to 95 pathologists were appointed to one or other of these positions.

Dr. Chiasson did not set a very high threshold for the number of homicide autopsies that were required for appointment as a regional coroner's pathologist. In considering applications from remote areas of the province, he considered the reality that pathologists in these areas who had no forensic training or experience were required, as a practical matter, to perform autopsies in criminally suspicious cases.

Dr. Cutz and Dr. Greg Wilson, both of whom worked in the OPFPU in 1996, applied to become regional coroner's pathologists. Dr. Chiasson rejected their applications because he wanted to have Dr. Smith or Dr. Taylor perform the autopsies in all the criminally suspicious pediatric deaths and homicides at the

OPFPU. Dr. Cutz and Dr. Wilson continued to do non-criminally suspicious coroner's warrant cases. On February 17, 1997, Dr. Chiasson wrote to Dr. Smith and outlined the OCCO's position: forensic cases should be triaged among pathologists at SickKids, with Dr. Smith performing the majority of the complex cases, including homicides and criminally suspicious deaths, and Dr. Taylor providing backup when Dr. Smith was not available.

Although well intentioned, the regional coroner's pathologist system was relatively ineffective. Given the very limited number of pathologists with formal training in forensic pathology, the designation was given to pathologists without any training or particular expertise in forensic pathology. It was also given to pathologists like Dr. Smith, whose significant weaknesses in forensic pathology skills and knowledge had gone undetected because of inadequate quality control mechanisms.

The regional coroner's pathologist designation still exists, but, over time, it has fallen into disuse as a way of coping with the challenges of criminally suspicious cases. As of 2008, all adult and pediatric post-mortem examinations in criminally suspicious cases are performed at "centres of excellence" at the regional units.

Lack of an Independent Complaints Mechanism

In the early 1990s, the Coroner's Council dealt with significant complaints about the work of coroners. The council was set up by legislation and provided an independent forum chaired by a judge for this purpose. It was disbanded on December 18, 1998, when the legislature repealed ss. 6 and 7 of the *Coroners Act*. Thereafter, the OCCO did not have any formal or well-understood system in place to investigate and respond to complaints about the work of pathologists or coroners. Instead, it was left to the Chief Coroner to respond on an ad hoc basis to complaints.

Steps Taken by Dr. Chiasson to Increase the Oversight of Pathologists' Work

When Dr. Chiasson was appointed Chief Forensic Pathologist in 1994, he faced a significant challenge to improve the quality of forensic pathology in Ontario. There were essentially no existing structures for oversight of the work of pathologists performing coroner's autopsies. Beyond the institutional changes already referred to, the particular oversight mechanisms that were put in place by Dr. Chiasson were well intentioned and certainly an improvement on the pre-1994

vacuum. However, as I suspect Dr. Chiasson would be the first to admit, they were inadequate in a number of critical ways.

In considering these weaknesses, I recognize that, even if Dr. Chiasson had put forward adequate oversight mechanisms, he had few means by which to enforce compliance with OCCO guidelines or to address concerns with the work of pathologists. He had no direct authority over pathologists at the regional forensic pathology units or over the directors of those units. His supervisory role over the units, if any, was ill defined. In addition, as a relatively junior pathologist, Dr. Chiasson was required to oversee more senior pathologists, such as Dr. Smith, who had existing relationships with the leadership of the OCCO. These factors, which are discussed in greater detail in Chapter 9, Oversight of Pediatric Forensic Pathology, remained significant barriers to effective oversight.

Review of Reports of Post-Mortem Examination within the Provincial Forensic Pathology Unit

One of Dr. Chiasson's first initiatives, beginning in 1994, was to review every report of post-mortem examination at the PFPU before its release to the OCCO and the investigating coroner. Every year, approximately 1,500 autopsies were performed at the unit, some 200 of which initially raised criminal suspicions, with approximately 100 cases ultimately considered homicides.

Dr. Chiasson wanted to ensure the reasonableness of each report's conclusions and assess, so far as he could, the forensic capabilities of the pathologists providing services for the PFPU. He hoped to identify any major forensic pathology issues before the release of the final report. He wanted to ensure that the injuries were properly documented, that there were no inconsistencies in the report, that the summary of abnormal findings was accurate, and that the given cause of death was supported by the findings. This process was, however, no more than a paper review. The numbers alone made impossible anything more substantial.

Review of Reports of Post-Mortem Examination in All Criminally Suspicious Cases

On September 1, 1995, the OCCO announced that, before release by the OCCO to the Crown, all reports of post-mortem examination from anywhere in the province would be reviewed by the Chief Forensic Pathologist in those cases where the manner of death was homicide or undetermined and possibly homicide. Across the province, approximately 400 coroner's autopsies per year raised some criminal suspicions, with 200 to 250 ultimately considered homicides. In May 2000, the OCCO issued a memorandum indicating that the review process for homicide deaths would be expanded to include deaths in custody, deaths

investigated by the police or the Special Investigations Unit, and all deaths categorized as SIDS or sudden unexplained death syndrome (SUDS).

In most cases, the regional coroners forwarded the reports of post-mortem examination to Dr. Chiasson for his review, and he completed his review before the reports were released to the Crown. If Dr. Chiasson identified no concerns, he forwarded a memorandum to the regional coroner stating that the review was completed. If he did have concerns, he expressed them to the pathologist either directly or through the regional coroner. Occasionally, he requested supporting materials before completing his review, but for the most part his examination was a paper review.

Dr. Chiasson's review of criminally suspicious cases, although an important advance from the complete lack of quality control in the 1980s and early 1990s, still had a number of significant limitations. Dr. Chiasson did not examine the photographs or the histology underlying a report unless he saw a problem and requested these items. His review would therefore not have identified misinterpretation of an injury or a pathology finding. For example, Dr. Smith's serious errors about the timing of the injuries in Jenna's case were not apparent in a paper assessment of the report of post-mortem examination. Consequently, Dr. Chiasson did not identify any concerns in his review of this case. The fact that the review could not pick up such significant errors demonstrates its limitations.

As Dr. Chiasson recognized during his testimony, he also did not have sufficient information about the circumstances of the deaths to identify a number of errors that occurred in Dr. Smith's reports. During his paper review of these cases, he noted no major concerns and certainly nothing that required a revised report.

At one stage, Dr. Chiasson conducted an audit and determined that, in the majority of criminally suspicious cases, he was receiving reports as part of his review process. However, because the process relied on individual pathologists forwarding reports through the regional coroner, it was not fully inclusive. When reports were very late, they were sometimes sent directly to Crown counsel and bypassed the review process. For example, in Sharon's case, after repeated requests and the issuance of a subpoena for Dr. Smith to attend in court, Dr. Smith provided his report of post-mortem examination to the Crown in March 1998 without sending it through the regional coroner or the OCCO for review. Dr. Chaisson did not have the opportunity to review the report, and he saw it for the first time only in March 1999, before the meeting in Kingston with the Crown and the police. On that occasion, he thought that Dr. Smith had not defined or described the injuries, particularly the internal wound tracks, well. Dr. Chiasson would likely have reached this conclusion much earlier if the report had been sent to him before being forwarded to Crown counsel, as it should have been.

Finally, Dr. Chiasson had no mechanism in place to review consultation reports or second opinions unless they were attached to the report of post-mortem examination. As a result, he did not review Dr. Smith's consultation work in cases such as Taylor's and Baby F's. To this extent as well, the review process was not inclusive enough.[1]

Spot Audit of Work of the OPFPU

In 1997 or thereabouts, Dr. Chiasson conducted a random audit of some 20 pediatric autopsies conducted at the OPFPU to review both the turnaround times for the reports and forensic pathology issues arising in the reports. Dr. Chiasson did not have any major concerns based on his review. In four of the cases, he identified minor concerns involving limited description of injuries and a lack of correlative comment or history, but they were similar to issues he had with pathologists outside the OPFPU. Dr. Chiasson did not conduct similar audits of the work conducted in the other regional forensic pathology units.

Failure to Track Timeliness

The OCCO had the primary obligation to ensure that all pathologists completed their post-mortem reports in a timely fashion, yet Dr. Chiasson's review process for these reports did not specifically track or evaluate the timing of their delivery. Indeed, the OCCO did not have any system or central mechanism to track either consultation or post-mortem reports. It therefore could not track the turnaround times for reports of post-mortem examination in particular cases.

In the 1990s, the OCCO had no policies with clear requirements for turnaround times. In April 1999, in Memorandum 99-02, "Forensic Pathology Pitfalls," sent to all coroners and pathologists, Dr. Chiasson and Dr. Young sought "the continued cooperation of all pathologists in minimizing autopsy report turnaround times" and stated that delays longer than three or four months created problems for coroners. However, this request was not framed as a requirement, and compliance was not specifically monitored.

Despite the lack of a tracking system, Dr. Chiasson heard a number of concerns from regional coroners and others about major delays in Dr. Smith's reports. Dr. Chiasson did try in a limited way to take a more active oversight role with regard to problems with Dr. Smith's significant delays in producing his reports. As noted above, in or around 1997 Dr. Chiasson conducted a random audit of 20 pediatric autopsies. In 1998, he met with Dr. Becker and Dr. Smith and proposed specific turnaround time goals for the unit's cases.

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[1] See Appendix 28 at the end of Volume 4 for summaries of the cases.

SickKids did, however, monitor the timeliness of pathologists' work, including the completion of their reports for coroner's cases. During his tenure as pathologist-in-chief there, Dr. Phillips initiated target turnaround times for all autopsy reports done for the OCCO or for the hospital. When Dr. Becker succeeded him in 1994, he formalized target turnaround times for all pathologists' work. SickKids tracked the times for all surgical pathology, hospital autopsies, and coroner's cases done at the hospital. At the end of each month, Dr. Paul Thorner, director of surgical pathology at SickKids from 1990 to 1996 and associate head of the pathology department at SickKids since 1996, produced a list of every pathologist's incomplete cases, and the results were delivered both to Dr. Becker and to the individual pathologist. However, remedial actions to address problems with timeliness generally focused on the pathologist's hospital work rather than coroner's work. Occasionally, the OCCO called the pathologist-in-chief if it had a concern about delayed coroner's reports, but the OCCO was not specifically informed when SickKids had concerns about delays in a pathologist's reports. SickKids did not share these incomplete case reports with the OCCO. Dr. Cairns, the Deputy Chief Coroner, was not even aware that SickKids had a system that tracked its pathologists' timeliness in completing reports.

Content of Reports of Post-Mortem Examination

In reviewing reports of post-mortem examination, Dr. Chiasson observed that, with regard to incorporating case histories into reports, the practices used varied across the province. He encouraged pathologists to include relevant history in their reports, but to exclude prejudicial or irrelevant information. Some pathologists thought they could not deviate from the form, prescribed by regulations to the *Coroners Act* (the Form 14), which included no space for comments on the history, while others included too much irrelevant information. In Dr. Chiasson's view, the goal was to include only the historical or circumstantial information that was relevant or important to the forensic pathology conclusions, but he was not able to make much progress on this front across the province.

Special Case Reviews

Dr. Chiasson implemented ad hoc reviews for select cases that were particularly complex or that raised a particular forensic pathology issue. In such cases, the post-mortem examination results were discussed in meetings that included coroners, investigating police officers, and Crown counsel. Special case reviews allowed for a "meeting of the minds" among the members of the death investigation team. The special case reviews were a predecessor of the more formalized case conferences later developed within the OCCO.

Consultative Support

Beginning in 1995, Dr. Chiasson contributed a regular column to the OCCO newsletter. In his first "Forensic Pathology Corner" article, he wrote that providing consultation opinions to pathologists, coroners, and police forces was one of his primary roles. He encouraged people to take advantage of his consultative support.

Pathologists did not immediately take up his offer. Eventually, some of them began to consult Dr. Chiasson about difficult cases. Other pathologists, often the more senior among them including Dr. Smith, were less likely to contact him. This represented a lost opportunity, particularly for Dr. Smith, who lacked a basic understanding of many aspects of forensic pathology.

Dr. Chiasson knew that some hospital pathologists were conducting forensic autopsies alone in small hospitals without many resources. In 1995, approximately 200 to 250 pathologists were performing some kind of autopsy work for the OCCO. In his "Forensic Pathology Corner" article in June that year, Dr. Chiasson emphasized the importance of consultation with other pathologists. He commented that, while a system of regular meetings was not practical for most pathologists performing coroner's autopsies, he would "heartily encourage all pathologists to regularly discuss cases with their local colleagues." In difficult cases, he urged pathologists to make use of the expertise of the regional forensic pathology units. Once again, this initiative was well intentioned, but, given the lack of any proper institutional framework for forensic pathology services across the province, it could have only a very modest impact.

Educational Activities

The OCCO's educational programs in forensic pathology had withered by the beginning of the 1990s. In the mid-1990s, Dr. Chiasson reinstituted annual training courses for pathologists which involved some joint education with coroners.

The OCCO also provided funding for pathologists to attend national and international educational conferences and even created a fund for the appointment of a fellow at the OCCO. But it could not attract anyone to accept the position, probably because of the poor levels of compensation received by pathologists doing forensic work.

Review of Participation in Criminal Proceedings

In the 1990s, the OCCO's involvement in criminally suspicious cases usually ended after the completion of the report of post-mortem examination and the coroner's report. In complicated cases, representatives of the OCCO might have participated in case conferences with Crown counsel to ensure that the neces-

sary experts were in place. However, the OCCO did not monitor the participation of pathologists with cases as they progressed through the criminal justice system. The relationship was entirely between the individual pathologist who conducted the autopsy and the Crown counsel who might wish to have the pathologist testify.

In practice, some of the most serious concerns about the work of pathologists in criminal proceedings from 1981 to 2001 arose after the report of postmortem examination was finalized. As described in Chapter 8, Dr. Smith and the Practice of Pediatric Forensic Pathology, in many of the cases examined at the Inquiry, significant problems occurred with Dr. Smith's communications with other participants in the criminal justice system and in his testimony in criminal proceedings.

In these circumstances, it was unfortunate that the OCCO had no system in place to review pathologists' court testimony. The OCCO conducted no review of judicial commentary about the work of its pathologists, nor did it review or monitor any opinions that pathologists expressed informally to police or counsel during the course of criminal proceedings. This breakdown in the monitoring process as complex cases went through the criminal justice system remained a significant oversight failing during Dr. Chiasson's tenure. As is discussed in Chapter 9, Oversight of Pediatric Forensic Pathology, this oversight difficulty continues today and is addressed by my recommendations.

Pediatric Forensic Hospital Rounds

When Dr. Chiasson was appointed Chief Forensic Pathologist in 1994, he expressed an interest in having a greater degree of interaction with the OPFPU than had his predecessor. At Dr. Chiasson's suggestion, commencing in January 1995, Dr. Smith arranged monthly pediatric forensic rounds at the OPFPU. Dr. Chiasson attended these rounds at SickKids so he could provide his experience in forensic matters and also learn more about pediatric pathology cases. In his forensic pathology training in Baltimore, he had observed the importance of hospital rounds in ensuring quality practice.

In the 1980s and early 1990s, coroner's cases were sometimes discussed at SickKids rounds, but criminally suspicious cases were not. In 1994, the OCCO expressly indicated that all coroner's autopsies, aside from those related to medical malpractice, could be presented at SickKids rounds. It appears that at least some criminally suspicious autopsies were discussed during these pediatric forensic rounds at the hospital, and, although they proved to be a helpful quality control device, they tapered off around 1997. They were discontinued for a variety of reasons, but primarily because of sporadic attendance by the pathology staff and

Dr. Smith's own pressured schedule and general lack of interest in keeping them up. The termination of these hospital rounds represented yet another lost opportunity to improve the quality of pediatric forensic pathology in Ontario.

In 1997, Dr. Chiasson tried to involve Dr. Smith in the work of the PFPU through participation in weekly and daily rounds at the unit. He recognized that Dr. Smith's cases were extremely challenging and thought Dr. Smith would benefit from discussions with colleagues with forensic experience. Although Dr. Smith initially came to some of these rounds, his attendance there soon dwindled, and that opportunity was lost as well.

Around 1999, Dr. Chiasson instituted a series of pediatric pathology rounds at the OCCO so that PFPU staff could gain exposure to pediatric cases. Dr. Smith presented the cases during these Wednesday afternoon rounds. He was usually the only pathologist from SickKids who attended. The pediatric pathology rounds at the PFPU focused more on criminally suspicious cases than did the SickKids rounds. These rounds continued at least through 2000, and possibly after 2001.

Resignation of Dr. Chiasson

In 1999, 2000, and 2001, Dr. Chiasson experienced a growing series of frustrations in his position as Chief Forensic Pathologist.

First came the resignations, in the spring and summer of 1999, of two of the full-time certified forensic pathologists at the PFPU, Dr. Bullock and Dr. Queen. This was followed, in mid-July 1999, by the departure of Dr. Deck on an extended medical leave of absence. Dr. Deck did not return and retired in 2002. When Dr. Chiasson conducted exit interviews with Dr. Queen and Dr. Bullock, they told him that they had wanted to be more involved in the death investigation team. They did not feel that their specialized expertise in forensic pathology and death investigation, gained through training in medical examiner's offices where pathologists determined both the cause and the manner of death, had been fully appreciated or used within the unit.

Before these departures, full-time staff pathologists had, for some years, conducted a large majority of the autopsies at the PFPU. Now, Dr. Chiasson once again had to recruit fee-for-service pathologists. He also had to conduct more autopsies himself, thereby reducing the amount of time he could devote to his managerial and educational functions. By the end of 1999, the only staff pathologists at the unit were Dr. Chiasson and Dr. Toby Rose.

In a June 16, 1999, memorandum to Dr. Young, Dr. Chiasson indicated his increasing frustration with the staffing situation at the PFPU and with his

dealings with the other regional forensic pathology units. The two doctors met to discuss Dr. Chiasson's concerns. Dr. Young was willing to support the appointment of Dr. Chiasson and the unit's other staff pathologists as coroners if that would keep them in their positions. He also agreed to have Dr. Chiasson assume a greater hands-on role in the administration of and budget relating to coroner's autopsy services. Dr. Young said he was committed to increasing significantly the salaries of both the Chief Forensic Pathologist and the staff forensic pathologists.

However, Dr. Chiasson was not successful in recruiting new staff forensic pathologists in 1999. He told Dr. Young that without a significant improvement in the salary structure at the unit, he would be unable to attract any suitable candidates. The job market was becoming even more difficult as many older pathologists retired and fewer residents entered training programs in pathology. Hospital pathologists were paid significantly more than the PFPU pathologists. Salaries for hospital pathologists at this time were increasing significantly, reaching $205,000 on average. In addition to their base hospital salaries, some pathologists received additional remuneration for their fee-for-service work for the OCCO. In contrast, as Chief Forensic Pathologist, Dr. Chiasson's starting salary was $156,000, and the other staff pathologists at the unit earned between $150,000 and $160,000 per year. The two forensic pathologists who left the unit took positions at hospitals for significantly more money, one being guaranteed at least a 50 per cent salary increase.

The compensation problem was not just about an inability to attract and keep properly trained and certified forensic pathologists. It also forced the OCCO back to a greater reliance on fee-for-service pathologists. Because these pathologists were not employed by the OCCO, the senior people there – Dr. Young, Dr. Cairns, and Dr. Chiasson – always felt it would be difficult for the OCCO to impose administrative or disciplinary sanctions on pathologists when they were warranted. They felt they had essentially only one very blunt tool – to stop sending cases to that pathologist. Given the shortage of pathologists capable of doing high-quality forensic work and the perceived need to get the work done at all costs, the OCCO considered that it had very little ability to hold a fee-for-service pathologist accountable.

In March 2000, Dr. Chiasson was dealing with the imminent retirement of Mr. Blenkinsop, the Chief Pathologist Assistant at the OCCO, and the loss of the three staff pathologists. He contemplated resigning because he no longer felt he could effectively carry out the responsibilities of his position. Issues with Dr. Smith were also a problem, although, from Dr. Chiasson's point of view, they were a minor part of the management issues he was facing.

In October 2000, Dr. Chiasson was appointed Deputy Chief Coroner, Pathology, at the OCCO, but neither his job responsibilities nor his salary changed. When these same frustrations continued in 2001, he expressed his concerns to Dr. Young, saying that he had expected to play a greater role in the management of issues related to death investigation. Still the job frustrations, mainly related to recruiting, continued. Dr. Chiasson did manage to hire another pathologist, but that person soon resigned to take a position for significantly more money. And, when hospital-based pathologists engaged in a strike over the remuneration for fee-for-service autopsies, even more referrals were made to the PFPU. In this environment, Dr. Chiasson concluded that he could not carry out his responsibilities as Chief Forensic Pathologist as they ought to be conducted. On June 29, 2001, he resigned. For reasons not of his own making, he had been unable to deliver on his hopes for the improvement of forensic pathology in Ontario.

Following his resignation, Dr. Chiasson continued to perform fee-for-service autopsy work for the OCCO. He also reviewed reports of post-mortem examination in criminally suspicious cases on a contract basis. After he resigned, there was no Chief Forensic Pathologist in Ontario for five years – until 2006 – when Dr. Michael Pollanen was appointed.

OCCO Response to Increasing Concerns about Child Abuse

In the late 1980s and early 1990s, the OCCO became increasingly concerned about child abuse. Similar concerns were growing around the world. In this context, the OCCO began to develop policies addressing pediatric death investigations. In addition, it created committees charged with the review of certain kinds of pediatric deaths.

Paediatric Death Review Committee

In 1989, the OCCO created the Paediatric Death Review Committee (PDRC) to assist the OCCO by reviewing the deaths of children, paying special attention to the pre-mortem medical care received by those children in medically complex cases. The PDRC's central concern was whether the medical care was reasonable and whether its quality raised any systemic issues. The committee did not focus on determining the cause of death. The early members of the PDRC included both Dr. Smith and Dr. Cairns, who became the chair of the PDRC in 1992.

In cases where local coroners could not answer some of the questions in diffi-

cult investigations of pediatric deaths, they referred them to their regional coroner. The regional coroner could then choose to refer the case to the PDRC. This referral did not occur until the report of post-mortem examination was finalized. One member of the PDRC was then assigned to review and summarize the file, which included the coroner's report, the final post-mortem report, and all the medical files. When the PDRC met, that member would present the case and the issues, and the committee as a whole would discuss the case and reach a consensus about it. If the case raised medical practice issues, the PDRC would make recommendations. The PDRC produced a report in each case reflecting the views and opinions of the entire committee.

In the 1990s, the OCCO expanded the scope of the PDRC's work. On January 24, 1994, the OCCO announced that the PDRC would review all SIDS and SUDS deaths with the intention of producing an annual report on these deaths to assist coroners and pathologists.

Nicholas' case was one of the first SIDS or SUDS cases referred to the PDRC, and Dr. Smith was assigned to review it. The committee discussed the case and agreed that it did not fit the SIDS category because Nicholas was awake and standing when he collapsed. The PDRC concluded that the case should be investigated further and be classified as SUDS pending that investigation. When Dr. Smith's consultation report concluded, "In the absence of an alternative explanation, the death of this young boy is attributed to blunt head injury," the case was not returned to the committee for further consideration. The PDRC was not designed to review criminally suspicious cases, although it did, at least initially, consider a number of them. That being said, in 1993 or 1994, because of its case reviews, the PDRC became concerned about undetected child abuse. As a result, subsequently it became involved in drafting a new protocol that, in part, addressed criminally suspicious pediatric deaths.

OCCO Policies and Pediatric Deaths

Memorandum 551(B)

Reflecting the growing concern about undetected child abuse, on December 19, 1990, Dr. Young circulated Memorandum 551(B) to all coroners, pathologists, and police forces. It set out that, in some recent cases, coroners and pathologists had found injuries highly suspicious for child abuse but had not immediately notified the police – a response that delayed the criminal investigation. The memorandum counselled that "[a]ll coroners investigating deaths of infants and small children, should entertain a very high level of suspicion. Deaths in this age group are relatively uncommon, and other than SIDS, the circumstances are usually

obvious. Police should be notified immediately when anything suspicious is encountered."

Memorandum 616

On July 23, 1993, Dr. Young issued Memorandum 616, regarding SIDS, to all coroners, pathologists, and police. The memorandum set out the universally accepted definition of SIDS.[2] It reminded its readers that a proper investigation of SIDS included a thorough police investigation, autopsy, and coroner's investigation. The memorandum also underscored that SIDS was a diagnosis of exclusion, one that could be made only where the police investigation, the coroner's investigation, and the autopsy were all negative. If there were any concerns, the death should be classified as SUDS.

The 1995 Infant Death Investigation Protocol

Through 1993 and 1994, the OCCO became increasingly concerned that members of the death investigation team were not sufficiently vigilant and were too quick to conclude that deaths were not criminally suspicious. In 1993, two such flawed death investigations came to the attention of the OCCO and contributed to the OCCO's emphasis on having a high level of suspicion in death investigations.

One of these cases was a pediatric death where unexplained fractures were initially missed. The other was a domestic homicide staged to look like a car accident. The death was initially treated as a motor vehicle accident, and a second autopsy was required. In 1994, the Coroner's Council issued a ruling in the case, making a number of systemic recommendations, including that new coroners "should be trained to have a high index of suspicion, to assume that all deaths are homicides until they are satisfied that they are not." The first OCCO policy to use the expression "thinking dirty" was drafted shortly after the Coroner's Council Report. It addressed the investigation of homicides committed by intimate partners.

In 1993 and 1994, the members of the PDRC determined that many death investigations were not following the existing guidelines for SIDS deaths. The police were often minimally involved, and many of the hospital pathologists performing autopsies had no pediatric pathology training. The PDRC encountered a number of cases of misdiagnosis by hospital pathologists and remained con-

[2] SIDS was defined in the memorandum as the "sudden death of an infant under one year of age which remains unexplained after a thorough case investigation, including performance of a complete autopsy (with X-rays), examination of the death scene and review of the clinical history."

cerned that child abuse was going undetected. As a result, the members of the PDRC investigated how these deaths were being handled in other parts of the world. They determined that the OCCO should issue a comprehensive new protocol for the investigation of the deaths of children under two years of age.

On April 10, 1995, the OCCO circulated Memorandum 631, attaching the Protocol for the Investigation of Sudden and Unexpected Deaths in Children under 2 Years of Age (the 1995 Infant Death Investigation Protocol), to all coroners, pathologists, and chiefs of police. Dr. Cairns drafted it in consultation with the PDRC, and Dr. Smith contributed to Appendix D, which described the steps to take when conducting pediatric forensic autopsies.

The 1995 Infant Death Investigation Protocol was one of the earliest efforts in any jurisdiction to deal with pediatric deaths in such an organized fashion. In many ways, it represented a significant advance in pediatric death investigations in Ontario. It emphasized the importance of teamwork, and reflected an early attempt to articulate an evidence-based approach. It required a complete autopsy, including X-rays and toxicology in all cases, and it also underlined the importance of radiology. It outlined the unique features of the autopsy in sudden and unexpected deaths of children under two. In fact, the foundations of a number of the current procedures in pediatric autopsies are found in this memorandum. However, as I discuss in Chapter 8, Dr. Smith and the Practice of Pediatric Forensic Pathology, the 1995 Infant Death Investigation Protocol and its appendices were in some ways underinclusive.

Regrettably, the Protocol also introduced the concept of "thinking dirty" into the investigation of infant deaths. The 1995 Infant Death Investigation Protocol was intended to ensure that children's deaths were investigated thoroughly and that deaths due to child abuse were not prematurely and incorrectly designated as SIDS. However, in attempting to accomplish this objective, it urged all members of the death investigation team – including coroners and pathologists – to "think dirty":

> Unfortunately, in this day and age CHILD ABUSE IS A REAL ISSUE and it is extremely important that all members of the investigative team "THINK DIRTY". They must actively investigate each case as potential child abuse and not come to a premature conclusion regarding the cause and manner of death until the complete investigation is finished and all members of the team are satisfied with the conclusion. [Emphasis in original.]

In the mid- to late 1990s, the OCCO met with chiefs of police, coroners, and pathologists to educate them about the 1995 Infant Death Investigation Protocol.

The "think dirty" message was a central part of this education campaign. Dr. Young adopted the expression and used it frequently in presentations.

At the Inquiry, a number of Ontario pathologists testified about their interpretation of the concept of "thinking dirty." Dr. Cutz believed that the use of the term was inappropriate. Dr. Chiasson interpreted the 1995 Infant Death Investigation Protocol as conveying the important reminder that homicide is always one of the diagnostic possibilities. To him, it did not mean that pathologists should continue to think dirty in the absence of evidence to support criminal suspicions. Dr. Taylor saw the phrase as a reminder to the pathologist to look for evidence of injury, along with all the other causes of sudden unexpected death in a child. Dr. Shkrum, Dr. Rao and Dr. David Dexter, the director of the Kingston Regional Forensic Pathology Unit, did not believe that the "think dirty" language influenced their approach or practice in pediatric deaths. They understood that the proper approach was to keep an objective and open mind.

In many ways, the 1995 Infant Death Investigation Protocol was a significant advance in the treatment of pediatric death investigations and in pediatric autopsies. However, its embrace of the "think dirty" philosophy was problematic. Dr. Cairns first heard the expression "thinking dirty" from Mr. Press, the former Toronto police officer who became Dr. Hillsdon Smith's executive assistant. Dr. Cairns testified that he took the expression to mean that one should not accept things at face value and should consider more sinister explanations. He did not believe that the expression "thinking dirty" suggested a lack of objectivity or indicated a presumption of guilt. However, in testimony, Dr. Cairns analogized the "think dirty" message to his experience in emergency medicine, in which physicians must assume that the presenting symptoms in their patients indicate the most critical health risk and act on that basis until it is proven otherwise. He used the example of a patient presenting with chest pain who is assumed to be suffering from a heart attack until that explanation could be ruled out. For him, the most critical health risk in this context was undetected child abuse.

Apart from the point raised by some witnesses that a wrongful conviction is also an unacceptable scenario, this analogy demonstrates a major flaw in the "think dirty" approach. Whereas clinical medicine properly approaches treatment by considering the worst possible explanation, forensic pathologists fulfill a very different role. They are providing information that may influence criminal proceedings. In this context, it is dangerous and inappropriate to leave any impression that forensic pathologists begin with a premise of foul play that must be disproved. Their objectivity requires that any such impression be avoided. They must "think truth," not "think dirty." They must also be seen to do so.

In circulating the 1995 Infant Death Investigation Protocol, Dr. Cairns and Dr. Young were motivated by legitimate concern about child abuse, backed up by their professional experience with pediatric death investigations. However, injecting a "think dirty" approach into pediatric death investigations was a serious error that created both an unfortunate perception and a risk of skewing outcomes.

SIDS/SUDS Committee

Once the 1995 Infant Death Investigation Protocol was established, additional cases were referred to the Paediatric Death Review Committee. The OCCO determined that a separate committee should be established to handle cases arising from this memorandum and to identify any controversial or problematic cases at an early stage. The committee would triage such cases and determine whether they required further investigation or review. This new committee was initially called the SIDS/SUDS Committee. It was composed of pathologists, coroners, and police officers, and it first met on June 27, 2000.

The committee reviewed every death of a child under two years of age to determine if members agreed with the coroner's determination of the cause and manner of death. The committee's decision overrode that of the pathologist, coroner, or regional coroner. The committee did not focus on issues of medical care; rather, it ensured that cases were investigated as directed by the 1995 Infant Death Investigation Protocol and that causes and manner of death classifications were consistent. On October 10, 2000, the SIDS/SUDS Committee was renamed the Deaths under Two Committee, but the mandate did not change. The committee is still in operation today, although its jurisdiction has since been extended to deaths of children under the age of five.

Summary

In this chapter, I have attempted to describe the institutional arrangements and organizational structures for forensic pathology as they existed and evolved through the 1980s and 1990s. I have considered the critical weaknesses of Dr. Chiasson's well-intentioned attempts to implement increased oversight and quality control of forensic pathology in the 1990s. Although gaps remained in the ability to oversee and ensure quality forensic pathology, the new structural arrangements for forensic pathology, including the regional forensic pathology units, were an improvement over previous arrangements. The OCCO's important recognition of the dangers of child abuse was, unfortunately, accompanied by the

"think dirty" approach advocated by its leadership. This is the background against which the flawed practices demonstrated by Dr. Smith's work and the failed oversight of that work must be assessed.

8

Dr. Smith and the Practice of Pediatric Forensic Pathology

As required by my terms of reference, I have conducted a systemic review of the policies, procedures, and practices of pediatric forensic pathology in Ontario from 1981 to 2001. In this chapter, I report on that review and assess the systemic failings it revealed. They provide the basis for the policy recommendations I make in Volume 3 to improve the practice of pediatric forensic pathology and to ensure, so far as possible, that history will not repeat itself.

This chapter examines the practices used in pediatric forensic pathology in individual cases, and how those practices could and did fall short of what is required. In Chapter 9, Oversight of Pediatric Forensic Pathology, I do the same when considering the mechanisms of oversight of that work, again to expose the failings that could and did occur. In both contexts, it must be remembered that what was happening with pediatric forensic pathology reflects in very large measure what was happening with forensic pathology generally. The practices used, the oversight mechanisms available, and the shortcomings were common to both. In this sense, pediatric forensic pathology is a subset of forensic pathology.

Before I turn to a detailed report on the troubling aspects of pediatric forensic pathology as practised in Ontario from 1981 to 2001, several things must be said. First, although the Inquiry heard considerable evidence of a general kind about the practice of pediatric forensic pathology in those years, our review for the most part focused on Dr. Charles Smith and the way he did his work. This focus reflects the reality that the errors he made were a primary cause of the significant loss of public confidence that made the review necessary. It is important that these errors be identified because my recommendations must address them if public confidence is to be restored.

Second, although much of what we heard dealt with Dr. Smith, the evidence also showed that, in a number of instances, other pathologists were involved as well. Some made the same errors he did. Many, and in some instances most, fol-

lowed some of the same practices. In all these instances, however, the serious errors that were made, whether by Dr. Smith or others, exemplify grave systemic problems with the practice of pediatric forensic pathology in Ontario at that time. The troubling problems were not confined to Dr. Smith. Without correction of these systemic failings, these errors could well occur again. These were not merely the isolated acts of a single pathologist that could be fixed by his removal.

Third, the evidence of Dr. Smith's mistakes in individual cases is derived largely from 18 of the cases that were the subject of the Chief Coroner's Review ordered by the Office of the Chief Coroner for Ontario (OCCO) and that were examined in detail in our hearings. These cases were selected for the Chief Coroner's Review because they involved Dr. Smith and they engaged the criminal justice system. Although the evidence about Dr. Smith's work in these cases paints a stark picture of the grave errors he made, it is not my role to determine whether or to what extent his mistakes might have led to a wrongful conviction. Whether or not that occurred, the errors were nonetheless serious. They represent ways in which the practice of pediatric forensic pathology in Ontario in Dr. Smith's time could and did go badly wrong.

Fourth, these cases were part of a complete review of Dr. Smith's work in criminally suspicious cases between 1991 and 2001. They provide little basis, however, on which firm conclusions can be drawn about his work in hospital pathology or his work for the OCCO in cases that were not criminally suspicious.

Finally, it is important to remember that the troubling aspects of the practice of pediatric forensic pathology that occurred in Ontario during this time took place within a setting larger than that of the individual pathologists. As my review of the oversight of pediatric forensic pathology in Ontario in these years later describes, the senior officials who oversaw the death investigation system must also be held responsible for the tragic events about which I have heard.

I turn then to the various aspects of Dr. Smith's work that I have found wanting and that demonstrate systemic failings in the practice of pediatric forensic pathology from 1981 to 2001. I will begin with the training and experience that Dr. Smith brought to his work.

Training and Experience

In this section I address three questions. First, what was Dr. Smith trained and certified to do, and what training did he lack? Second, how did he become the dominant figure in pediatric forensic pathology when he had no formal training or expertise in the core discipline, forensic pathology? And third, how did this deficiency affect his work in the cases before me?

Dr. Smith's Training

Dr. Smith is a pediatric pathologist, not a forensic pathologist. He has neither formal forensic pathology training nor board certification in that field. Nevertheless, the OCCO and the Hospital for Sick Children (SickKids) appointed him director of the Ontario Pediatric Forensic Pathology Unit (OPFPU) in 1992, and, with time, he came to be known as the province's leading expert in pediatric forensic pathology. Dr. Smith now acknowledges that his forensic pathology training was "woefully inadequate" and that this gap contributed significantly to his mistakes in the cases examined by the Commission.

In the 1980s and 1990s, no formal forensic pathology training or certification was offered in Canada. That remains the case today. The Royal College of Physicians and Surgeons of Canada (Royal College) does not yet offer specialty training or certification in forensic pathology. By contrast, the United States and the United Kingdom have offered specialty examinations in forensic pathology since the 1960s.

In the absence of well-defined postgraduate training programs, pathologists doing forensic work in Canada have traditionally been self-taught or have resorted to informal training networks. A small number have obtained qualifications outside Canada. Few of the pathologists who performed post-mortem examinations for the OCCO in the 1980s and 1990s were formally trained and certified in forensic pathology. Those who did receive formal training and certification did so in the United States or the United Kingdom.

Indeed, in the 1980s and 1990s, the prevailing Canadian view was that pediatric pathologists were best situated to perform forensic autopsies on infants and children. As a result, expertise in pediatric pathology was emphasized over training and qualifications in forensic pathology.

Dr. Smith graduated from the University of Saskatchewan medical school in 1975. He then spent the first two years of his anatomical pathology residency there, and his final two years with the University of Toronto. His fourth and final year was spent at SickKids in pediatric pathology. During his residency, he performed some coroner's autopsies; however, none was in a criminally suspicious case. After completing his residency in anatomical pathology, Dr. Smith remained at SickKids from July 1980 to July 1981 to train further as a Fellow in pediatric pathology. During his fellowship year, he performed some forensic autopsies, but, again, none were in criminally suspicious cases.

In November and December 1980, Dr. Smith passed the examinations in anatomical pathology offered by the American Board of Medical Specialties (American Board) and the Royal College, respectively, and was certified as an

anatomical pathologist. At that time, examinations in the subspecialty of pediatric pathology were not offered in either the United States or in Canada. Nineteen years later, however, that had changed in the United States, and in 1999, he passed the American Board examination and also became certified in pediatric pathology.

In 1981, after completing his fellowship, Dr. Smith started working full time at SickKids. He had no forensic pathology training, and only limited exposure to criminally suspicious cases and death investigations. Because of his strong interest in autopsies, however, he began to perform more of them than did his pathology colleagues at SickKids, who were primarily interested in clinical pathology. By the 1990s, most of his autopsy work was forensic pathology, that is, autopsies performed under coroner's warrant.

Despite his increasing concentration on forensic work, Dr. Smith did not take any forensic pathology training. His continuing medical education, which consisted of attending conferences and reviewing the available literature, focused primarily on pediatric pathology. He told us that at that time he did not view forensic pathology as a separate discipline that could inform his work. He received no training in either injury identification or the appropriate role of the forensic pathologist in the criminal justice system. He had no exposure to any certified forensic pathologists and did not appreciate that there was any value in obtaining knowledge about forensic pathology. As Dr. Smith admitted, "[t]hat thought didn't cross my mind, and certainly no one suggested it ..." Instead, he picked up his limited understanding of forensic pathology on the job.

Over time, however, Dr. Smith's reputation grew. In the mid-1980s, he began lecturing on pediatric forensic pathology, particularly about issues relating to the criminal justice system. By the 1990s, he was lecturing on the subject to Crown counsel and police officers and had become a regular participant at educational courses offered for coroners. There is no doubt that he became an effective speaker to these audiences. At the Inquiry, Dr. Smith testified that these speaking engagements helped to build his experience and comfort level in both pediatric pathology and forensic pathology. His growing reputation seems to have been based more on these speaking engagements than on his work in criminally suspicious cases. It certainly was not based on any formal training in forensic pathology.

Dr. Smith's Experience

In 1992, as mentioned above, the OCCO and SickKids agreed that Dr. Smith should become the first director of the OPFPU. The evidence at the Inquiry sug-

gests that the OCCO and SickKids did not select him on the basis of his forensic pathology expertise. He had only limited experience with criminally suspicious pediatric cases, which are often the most difficult in pediatric forensic pathology. To that point in his career, he had been involved in only 10 to 15 such cases, by his own estimate. Many of those did not involve giving evidence – another aspect of forensic pathology in which he had no training. Dr. M. James Phillips, the pathologist-in-chief at SickKids who formally appointed Dr. Smith to the director's position, was not a forensic pathologist and not in a position to evaluate Dr. Smith's forensic training, skills, or expertise. The OCCO wanted to have someone who would specialize in pediatric forensic pathology and appears to have been moved more by Dr. Smith's reputation and interest than concerned about his lack of training. Equally important, Dr. Smith was the only pathologist at SickKids who had the time and inclination to take on the role. He filled a void that no one else wanted to fill.

As director of the OPFPU and with the active support of the OCCO, Dr. Smith became the dominant pathologist for child abuse and homicide cases in Ontario. He brought with him an impressive title and a growing reputation and, relatively quickly, came to be perceived as the authority in pediatric forensic pathology. Dr. Smith also presented himself in this way. When he testified in September 1994 in Valin's case, for instance, Dr. Smith told the court that, as director of the OPFPU, a "unique" unit in Canada and indeed North America, he probably performed more pediatric forensic autopsies than anyone else in the country. In April 1998, he told the court in Sharon's case that, given his vast experience with pediatric cases, he was more qualified to assess a child's penetrating wounds than a forensically trained pathologist, whose primary experience would have been with adults.

We now know, as Dr. Smith himself admitted, that he was self-taught and his forensic pathology education and training were "minimal" and "woefully inadequate." He simply did not have the specialized professional skills necessary for the work. He acknowledged that his lack of training and expertise contributed significantly to the mistakes he made. This problem was especially true in criminally suspicious pediatric cases, particularly the more difficult ones involving, for example, identification of injury or the timing of the infliction of injury. The consequences are best illustrated in three cases – the cases of Valin, Sharon, and Jenna – where he committed basic forensic pathology errors, with tragic consequences.

Consequences in the Cases of Valin, Sharon, and Jenna[1]

In Valin's case, Dr. Smith did not perform the post-mortem examination but was consulted for a second opinion in August 1993 and testified in court in September 1994. Because he did not understand that normal post-mortem changes can include bruising of the neck and dilation of the anus, Dr. Smith wrongly concluded that Valin had died of manual strangulation and that she had been sexually assaulted. Other pathologists agreed with his opinion, to varying degrees. At the time he provided his consultation report and testified at the trial of Valin's uncle, William Mullins-Johnson, Dr. Smith had never before been involved in a post-mortem examination of a sexually abused child. Many years later, qualified forensic pathologists who reviewed the case, including those who conducted the Chief Coroner's Review, concluded that the cause of Valin's death was unascertained and that there was no evidence of sexual abuse. Dr. Smith's observations of "ulceration, laceration, and hemorrhage in the anus" were properly attributable to the dissection of tissue or its preparation for microscopic work. The dilation of the anus, and much of what Dr. Smith described as bruising to Valin's body, represented post-mortem artefacts – that is, post-death occurrences that have no pathological significance.

Dr. Smith's basic mistakes in interpreting the autopsy findings reflect his inadequate training in forensic pathology. However, he compounded them by failing to recognize the limits of his own expertise. When the pathologist who conducted the post-mortem examination consulted him on the case, Dr. Smith had neither the training nor the experience to provide that opinion. He ought to have recognized his limitations. Dr. Smith's lack of training and experience, and his failure to recognize his lack of experience, had serious consequences. The Court of Appeal for Ontario has concluded that Mr. Mullins-Johnson was wrongly convicted of first-degree murder, yet he spent more than 12 years in prison.

In Sharon's case, Dr. Smith performed the post-mortem examination in June 1997 and concluded that the cause of death was blood loss due to multiple stab wounds. He testified at the preliminary hearing that the wounds were consistent with having been caused by scissors. Dr. Smith was wrong. The stab wounds that Dr. Smith observed at the post-mortem examination were in fact dog bites. When Dr. Smith performed the autopsy, however, he had virtually no training or previous experience with either stab wounds or dog bites. His inexperience with wound interpretation led to this very significant misdiagnosis. At the Inquiry, Dr. Christopher Milroy, a forensically trained and certified pathologist with experi-

[1] See Appendix 28 at the end of Volume 4 for summaries of the cases.

ence in the area, pointed to several basic errors in Dr. Smith's interpretation of Sharon's wounds.

First, Dr. Smith misinterpreted the edges of the wounds, which displayed significant abrasion and contusion. According to Dr. Milroy, this condition indicated that the injuries were not caused by a sharp penetrating weapon, such as scissors or a knife. Contrary to Dr. Smith's testimony at the preliminary hearing, the appearance of the injuries was actually inconsistent with stab wounds.

Second, Dr. Smith failed to recognize that there was a canine bite mark pattern on some of the injuries and on the skull. At the preliminary hearing, Dr. Smith testified that Sharon's wounds and the marks on her skull did not reveal any dog teeth marks. According to Dr. Milroy, Dr. Smith was wrong on both counts. In at least one of the photographs, the injury displayed a patterned abrasion that was highly suspicious of the arch of a dog's teeth. And, on Sharon's skull, there was an almost circular area of indented penetrating fractures, a characteristic of animal tooth bite marks.

Third, Dr. Smith misinterpreted an injury to Sharon's scalp, part of which was torn off during the attack. Dr. Smith testified at the preliminary hearing that the scalp appeared to have been "cut or incised" with some crushing or tearing, indicative of the use of scissors. Dr. Milroy, however, found that the scalp had a lacerated wound edge suggesting that it had been torn or ripped away, not cut.

Fourth, Dr. Smith misinterpreted the wound tracks. He testified at the preliminary hearing that some of the injuries had a double-pointing mark and, in some instances, there were two tracks to the injury. In his view, both characteristics were consistent with the use of scissors. Dr. Milroy told us that one could not be sure that some of the wounds displayed double-pointing marks. In any event, scissors have two blades, with blunt outer edges. Thus, in a penetrating wound caused by scissors, one would typically observe two blunt edges to the wound, not two pointed edges.

Fifth, Dr. Smith failed to consider that the distribution of the injuries to Sharon's body weighed heavily in favour of a dog attack, not a stabbing. The wounds were largely to Sharon's upper arms and neck, with little injury to her trunk. According to Dr. Milroy, a dog would tend to clamp onto the neck and arms with its jaws, but not the trunk – the latter being more difficult to grip. In a stabbing, by contrast, the trunk is typically the target, and there are usually defensive wounds to the hands and forearms as the victim attempts to fend off the attacker. The injuries to Sharon's arms were not defensive wounds. The relative absence of injury to Sharon's trunk and the lack of defensive wounds were strong evidence that Sharon was not stabbed.

In his closing submissions at this Inquiry, Dr. Smith noted that other experts,

including a forensic odontologist, Dr. Robert Wood, also misinterpreted Sharon's wounds. This is true, but does not excuse Dr. Smith's errors in the case. Dr. Smith expressed his opinion that Sharon's injuries were stab wounds several months before Crown counsel consulted Dr. Wood. The reality is that each of the errors identified above contributed to Dr. Smith's misdiagnosis in the case. Had he properly interpreted the wounds, he would not have arrived at the conclusion that he did, regardless of Dr. Wood's opinion. In my view, with appropriate forensic pathology training and expertise, he likely would not have made the basic errors that he did.

Dr. Smith's mistake in Jenna's case was not with respect to the cause of death. Instead, he erred in his interpretation of the timing of Jenna's multiple abdominal injuries. Cases involving the timing of multiple injuries causing death are extremely difficult and require sound forensic pathology knowledge. It is evident from a review of the events of Jenna's case that Dr. Smith lacked the training and experience to take on such a difficult task.

Because the body reacts to injury over time, the forensic pathologist may assist in establishing when a child suffered an injury by examining the progress of the body's healing reaction to the injury at the time of death. For instance, once an injury is inflicted, inflammatory cells rush into the tissue to repair the damage. That process stops when the injured person dies. So, the level of inflammation in the tissue helps the forensic pathologist assess how long before death the damage was sustained.

Dr. Smith performed the post-mortem examination on Jenna's body in January 1997 and correctly determined that Jenna had suffered multiple abdominal injuries. Where Dr. Smith erred, however, was in his ultimate diagnosis of when Jenna suffered her injuries. His error was significant because timing was a central issue in the death investigation, since establishing the timing of the injuries had the potential to exclude one or the other of the two suspects: Jenna was in the care of her mother, Brenda Waudby, before 5 p.m. on the evening of her death, and with her babysitter after 5 p.m.

An added dimension of the problems caused by Dr. Smith in this case is that, over the course of his involvement, he provided several different opinions on the timing of Jenna's injuries. First, after the autopsy, he told the police that there was no evidence to suggest that the injuries to the duodenum, pancreas, and liver had begun to heal, indicating that they had occurred within a few hours of death. This suggested that Jenna's fatal injuries were inflicted while she was in the care of her babysitter.

Subsequently, however, Dr. Smith's opinion appeared to change. One month after the autopsy, in February 1997, Dr. Smith informed representatives of the

OCCO and the police that, although he could not determine the exact time of Jenna's fatal injuries, all injuries took place within 24 hours of death. The police understood Dr. Smith's opinion to mean that Jenna's fatal injuries had occurred approximately 24 hours before her death. Because Ms. Waudby was the only one who had care of her daughter during that time, the police charged her with second-degree murder.

In October 1998, Dr. Smith testified at the preliminary hearing in the case. His evidence on the timing of the injuries can only be described as extremely confusing. His testimony could be understood to say that the healing reactions to Jenna's abdominal injuries suggested that the injuries occurred at different times. However, in all the confusion and apparent discrepancies in timing, Dr. Smith appeared to arrive at a final conclusion by assuming that all Jenna's abdominal injuries occurred at the same time, which could have occurred some 24 or 28 hours before death. Ms. Waudby had care of her daughter during this window of time. The preliminary hearing judge thus committed Ms. Waudby to stand trial on the charge of second-degree murder.

After the preliminary hearing, Dr. Smith's opinion appeared to change once again in the face of contrary opinions. The defence retained a clinician, Dr. Sigmund Ein, a staff surgeon at the Division of General Surgery at SickKids, to examine the timing of Jenna's fatal injuries. In December 1998, Dr. Ein spoke to Dr. Smith about the issue. Both agreed that the fatal injuries occurred on the evening of Jenna's death, which was clearly contrary to the thrust of Dr. Smith's evidence at the preliminary hearing. Then, in April 1999, during a meeting with Dr. Ein, Crown counsel, defence counsel, and the police, Dr. Smith again agreed with Dr. Ein's opinion that Jenna sustained her fatal injuries after 5 p.m. on the evening of her death. Ms. Waudby did not have care of Jenna at that time. Instead, these opinions implicated Jenna's babysitter as the perpetrator.

At the April 1999 meeting, Dr. Smith and the other experts noted, however, that there were also healing rib fractures that happened earlier than the "after 5 p.m." time frame, likely in the days before death. Although they did not cause Jenna's death, they were relevant to the question of whether Jenna had previously been abused.

In June 1999, the Crown withdrew the second-degree murder charge against Ms. Waudby. Before that withdrawal, however, Ms. Waudby pleaded guilty to a charge of child abuse under the *Child and Family Services Act*, RSO 1990, c. C.11, in relation to an incident that occurred in the one to three weeks before Jenna's death. The healing rib fractures, which the experts opined were older than Jenna's fatal injuries, served as the pathology evidence that supported her plea. In other words, according to the factual basis for the plea, although Ms. Waudby was not responsible for the fatal blows, she had abused Jenna in the past.

Dr. Milroy and Dr. Michael Pollanen, Chief Forensic Pathologist, have since reviewed the case. At the Inquiry, Dr. Milroy testified that the pathology findings indicated that the fatal abdominal injuries were likely less than six hours old. There was no inflammation in Jenna's abdominal injuries, suggesting that they had just been inflicted and that a healing reaction had not yet commenced. In addition, the information that Jenna appeared fine when Ms. Waudby handed Jenna to her babysitter at 5 p.m. supported the conclusion. If Jenna had already sustained her injuries by that time, she would have been in obvious pain. Dr. Pollanen also noted, after a review of the histology, that none of the rib fractures that Dr. Smith observed at the autopsy showed a healing reaction. Instead, they occurred at or around the time of death. As a result, the pathology evidence that, along with Ms. Waudby's plea, formed the basis for the child abuse conviction also could not be confirmed on review.

According to the expert forensic pathologists who reviewed the case, there was actually no pathology evidence to support Dr. Smith's opinion at the preliminary hearing that Jenna's fatal injuries could have occurred some 24 or 28 hours before death. Although there was an older liver injury that could have occurred up to several days before Jenna's death, that was not the immediate cause of her death. In Dr. Pollanen's view, Dr. Smith erred by grouping the abdominal injuries together and finding that they all occurred in one period of time. Dr. Smith failed to recognize that the apparent discrepancies in timing suggested that the injuries were inflicted at two different times.

Dr. Smith's misdiagnosis of the timing in Jenna's case had significant consequences for the criminal and child protection proceedings. The criminal case against Ms. Waudby rested primarily on Dr. Smith's opinion. Once it became clear that Dr. Smith's opinion implicating Ms. Waudby was incorrect, and that Ms. Waudby did not have care of Jenna at the time of her fatal injuries, the Crown properly withdrew the second-degree murder charge.

At the Inquiry, Dr. Smith was asked to explain his various opinions on timing. He said that, after the autopsy, when he told the police that the injuries were only a few hours old, he had not yet conducted a microscopic examination of the wounds. Once he reviewed the histology, he reached the opinion that the injury to Jenna's liver had a more advanced healing reaction, suggesting that it occurred in the range of 24 to 48 hours before death. He said that he never believed that the fatal injuries were all 24 to 48 hours old but always recognized, based on the healing reactions he observed microscopically, that some of the injuries were much more recent than that. In his view, however, his opinion on the timing of the fatal injuries needed to take the older liver injury into account, as that could have contributed to Jenna's death. As a result, he extended the time period in

subsequent meetings and in his evidence at the preliminary hearing. In fact, in giving evidence before me, he stated that he continued to be of the opinion that it was possible that the older liver injury contributed to Jenna's death, and he therefore disagreed with Dr. Milroy's opinion that Jenna died within six hours of her fatal injuries.

However, there is no doubt that Dr. Smith agreed with Dr. Ein in December 1998 and April 1999 that Jenna died within six hours of her fatal injuries. At the Inquiry, Dr. Smith attempted to explain the contradiction. He testified that Dr. Ein's opinion was based on clinical information, such as Jenna's behaviour, which he, Dr. Smith, had no reason to question. He, however, had based his opinion on pathology information, including the microscopic analysis of the liver, with which he did not expect Dr. Ein to be familiar. Although he believed that the pathology evidence supported his view, he did not dispute the clinical evidence and, therefore, did not disagree with Dr. Ein at the 1998 and 1999 meetings.

Cases involving the timing of multiple injuries, as in Jenna's case, are some of the most difficult cases that forensic pathologists see. Dr. Smith's struggle in determining the timing of Jenna's abdominal injuries was therefore understandable. I also accept that, in cases involving multiple injuries, the pathologist might not decide which specific injury caused the child's death and instead consider all or several of them to be contributing factors to the death. However, I cannot accept Dr. Smith's explanation of his inconsistent positions. I have reviewed the transcript of Dr. Smith's evidence at the preliminary hearing. At no point in his evidence did Dr. Smith suggest that the liver injury was likely sustained at a different time than the other injuries. In fact, he asserted the opposite. Moreover, he placed more reliance on the liver injury than the others when arriving at an opinion on the timing of the fatal injuries.

In addition, there is nothing to suggest that, in December 1998 and April 1999, Dr. Smith did anything except agree with Dr. Ein's position that the injuries were only a few hours old by the time Jenna died. If Dr. Smith believed at that time that the older liver injury contributed to Jenna's death, I do not understand why he would have kept that belief to himself. In any event, if he had thought that, he certainly should have made it clear to the police, Crown counsel, and the court.

Instead, I agree with Dr. Pollanen's assessment of Dr. Smith's opinion. His fundamental error was in assuming that all the injuries took place within the same time frame. Recognizing that there were some discrepancies in the timing of the injuries, Dr. Smith should have questioned the basic assumption on which he operated – that the injuries were inflicted together – rather than try to fit those discrepancies into one period of time. Had Dr. Smith pushed that analysis a little further, he would have recognized that the pathology evidence supported the

view that Jenna had actually been injured on two occasions. Dr. Smith's lack of knowledge about the timing of fatal injuries caused him to make a significant error regarding the timing of Jenna's injuries.

I draw two main lessons from these episodes. First, Dr. Smith lacked basic knowledge about forensic pathology. It is true that few pathologists were trained in forensic pathology, and that, in several of these cases, other doctors made the same mistakes he did. It is clear, however, that many pathologists without proper forensic training shied away altogether from criminally suspicious cases or were careful to obtain the assistance of those few who had the requisite knowledge in forensic pathology. No other pathologists threw themselves into the challenging area of pediatric forensic pathology, untrained, quite the way Dr. Smith did. Moreover, Dr. Smith tended to work in isolation. He did not readily seek advice from or consult with colleagues about his difficult cases. Over the course of time, as we have seen, this behaviour exacted an unacceptable price in a sequence of cases.

Second, when Dr. Smith now says he was unaware of what he did not know and how damaging that lack of knowledge would be to the validity of his work, he violated a cardinal rule of scientific expertise, especially where it is engaged by the justice system. The expert must be aware of the limits of his or her expertise, stay within them, and not exaggerate them to the court. Dr. Smith did not observe this fundamental rule.

It is essential for a well-functioning pediatric forensic pathology system that criminally suspicious pediatric cases be handled by pathologists who are properly trained and experienced in forensic pathology. And, like all experts, these pathologists must know the limits of their knowledge and observe them.

The Post-Mortem Examination

Many of the pathology practices that Dr. Smith followed illustrate systemic failings that could and did occur in the practice of pediatric forensic pathology from 1981 to 2001. He almost never attended the death scene. He did not always ensure that he had all the relevant medical information before he conducted an autopsy. He was sloppy and inconsistent in documenting the information he did receive. He was indiscriminate in accepting and appearing to rely on information about the social history of those allegedly involved with the death. His reports were typically nothing more than a recitation of the findings at autopsy, and his conclusions typically gave no elaboration of either a reasoning process or supporting literature that might provide a persuasive connection between facts and conclusion. Finally, his reports were frequently very late.

These practices carried adverse consequences for both his work and its utility

to the criminal justice system. Autopsies were performed without the necessary relevant information, but with irrelevant information that left scientific conclusions skewed by unscientific considerations. Untimely post-mortem reports that contained bald conclusions were, at best, of little use to the criminal justice system and, at worst, misleading. Taken collectively, these practices confounded the independent reviewability of his work that is essential for sound practice.

Dr. Smith now says that, in engaging in these practices, he was merely doing what pathologists customarily did in those days. On the basis of the evidence I heard, I can agree that there were other pathologists who did what he did. Although I cannot say with certainty how widespread all of these practices were, they exemplify serious systemic problems.[2] Because of the difficulties they caused, they must be addressed if public confidence is to be restored.

Acquiring Information

It is essential that the pathologist receive and consider all relevant information when conducting a post-mortem examination. This will increase the likelihood of a thorough autopsy and a correct opinion regarding the cause of death. The pathologist must also record the information received and retain copies of those records. This is important to allow the post-mortem examination to be independently reviewed.

The forensic pathologist cannot and should not perform the post-mortem examination in a vacuum. Pathologists need as much relevant information as possible before entering the autopsy suite. The forensic pathologist may obtain information about the case from a variety of sources before the autopsy begins. These sources include the warrant for post-mortem examination, the coroner, the police, a visit to the scene, the treating physicians, and medical records. This information may be very important in two ways. First, it may guide the pathologist during the post-mortem examination. For example, medical records might direct a pathologist to sample and test for certain natural diseases or conditions. Consulting with physicians who cared for the child might point to the need for additional tests. Second, the information may assist the pathologist in interpreting properly the findings made during the post-mortem examination. For instance, medical records could indicate what steps emergency physicians took to resuscitate the child, ensuring that the pathologist does not misinterpret changes

[2] It is clear, however, that pathologists rarely attended the scene of death, and reports of post-mortem examination typically included nothing more than pathologists' autopsy findings and cause of death diagnosis. I discuss these practices in more detail below.

caused by those efforts. Similarly, information provided by the coroner or the police could lead the pathologist to consider other potential causes of death.

Obtaining Relevant Information

In the 1980s and 1990s, no formal systems were in place to ensure that the forensic pathologist obtained all the relevant information about a case. During that time, coroner's warrants for post-mortem examination usually provided little information and few details. Coroners did not always speak with the forensic pathologist before the post-mortem examination to supplement the information contained in the warrant. Instead, pathologists usually received information relating to the case from the forensic identification officer who attended the autopsy. This lack of communication narrowed the sources of information for the pathologist. Moreover, there were occasions when the police obtained additional information that was very relevant to the pathology opinions after the completion of the post-mortem examination, but did not provide that information to the pathologist.

The pathologist largely depends on others to collect and provide relevant information. For instance, the pathologist has no authority to obtain information directly from the hospital or the child's family practitioner. Pursuant to s. 16(2) of the *Coroners Act*, RSO 1990, c. C.37, that authority lies with the coroner. The pathologist can ask the coroner to obtain additional information, but only if the pathologist knows what to ask for.

Failing to obtain the necessary information about a case or to act on it may cause the pathologist to miss necessary tests or misinterpret the significance of a particular finding. Such mistakes increase the risk of misdiagnosis – as is readily seen in Amber's case and Jenna's case.

Amber was in the care of her babysitter when she sustained her head injury. The babysitter said that Amber had fallen. Before Amber died, she was transported to SickKids, where a pediatric radiologist reviewed her CT scan, and a pediatric neurosurgeon performed a craniotomy and removed a subdural hematoma. A physician with the Suspected Child Abuse and Neglect (SCAN) Program also became involved. Before conducting the post-mortem examination, however, Dr. Smith did not consult with the pediatric radiologist or the neurosurgeon. He concluded that a head injury caused Amber's death and that the babysitter had caused it by shaking Amber.

In his reasons for judgment acquitting Amber's babysitter of manslaughter, Justice Patrick Dunn of the Ontario Court (Provincial Division) rejected Dr. Smith's opinion that the cause of death was shaken baby syndrome and criticized him for failing to consult with the treating physicians. Had Dr. Smith consulted with the radiologist and the neurosurgeon, Justice Dunn wrote, he would have

learned that a full skeletal survey had not been performed and that the subdural hematoma had not been sent for analysis. Because he did not consult with the physicians, Dr. Smith did not order a full skeletal survey or a histological analysis of the subdural blood that could have shed light on the alleged fall. Moreover, had the SCAN physician obtained a better history of the alleged fall and had Dr. Smith obtained a more detailed history from her, he might have examined more closely several bruises that he dismissed as being trivial.

I agree with Justice Dunn's criticisms. Dr. Smith erred by not consulting with the relevant physicians. Although it is impossible to know if such a consultation would have affected Dr. Smith's diagnosis, a pathologist should always strive to perform as thorough a post-mortem examination as possible. Dr. Smith did not. Even if Dr. Smith did not have a chance to speak with the physicians before the autopsy, he certainly should have done so before completing his report.

In Jenna's case, Dr. Smith failed to use a sexual assault evidence kit and to take genital swabs during the post-mortem examination. At the Inquiry, he testified that his practice was only to take such samples when specifically requested to do so and in cases where there was some evidence suggesting that a sexual assault might have occurred. As far as he was aware, neither of those circumstances was present in Jenna's case. He testified that nothing in the information he received from the coroner and the police pointed to the possibility of sexual assault, and that he and a SCAN physician, Dr. Dirk Huyer, examined Jenna's anogenital area for signs of sexual abuse and apparently agreed that there were none. Dr. Smith was wrong. The evidence shows that, before the post-mortem examination, Dr. Smith was given a copy of the hospital emergency record, which contained an emergency physician's observation that there were numerous areas of bruising, possible rectal stretching, and tears in the vulva, and that a hair had been found in Jenna's genital region. Although the police and coroner certainly should have highlighted that information for him, Dr. Smith was responsible for carefully reviewing all the information provided to him. That information suggested that Jenna might have been sexually assaulted.

There was also physical evidence of a possible sexual assault that should have affected how Dr. Smith conducted the post-mortem examination. According to Dr. Milroy, reddening was visible in the photographs taken of the vagina. In addition, Dr. Smith found a hair in the genital region, which should have alerted him to the possibility that Jenna had been sexually assaulted. In my view, in light of the evidence suggesting a sexual assault, Dr. Smith's failure to conduct a detailed sexual assault examination, including the taking of genital swabs and the dissection and sampling of appropriate tissues, was inexcusable.

Visiting the Scene

Another source of information for pathologists is the scene itself. In some jurisdictions, forensic pathologists regularly visit the scene of death (or the scene of the incident that leads to death) in criminally suspicious cases. The experts who appeared at the Inquiry gave two reasons why such a visit can be important. First, the forensic pathologist can give early expert assistance to the police and ensure that appropriate trace evidence is properly collected at the scene. Second, and more important, visiting the scene can provide the pathologist with information not otherwise available that may assist the pathologist in analyzing the case. According to the experts, such information may be valuable even if the child's body is no longer at the scene when the pathologist attends.

In the 1980s and 1990s, pathologists in Ontario typically did not visit the scene of death. When a pathologist did visit the scene, it was at the invitation of the investigating coroner in consultation with the police. In most of Ontario, these invitations were extended infrequently. The exception was in Hamilton, where for some time pathologists have regularly visited the scene in criminally suspicious cases. Those pathologists advised the Inquiry that they have found the practice to be very valuable.

In keeping with the general practice, the pathologist did not visit the scene in any of the cases examined by the Commission. In several instances, a visit to the scene might have been of assistance. Two examples are Sharon's case and Joshua's case. Dr. Smith performed the post-mortem examination in both cases. No one asked him to go to the scene, and he did not do so. Visiting the scene in Sharon's case could have assisted Dr. Smith in better appreciating the evidence that supported the theory of a possible dog attack. Similarly, in Joshua's case, where Joshua's mother discovered him in bed with a mound of blankets around him, visiting the scene could have provided more evidence to Dr. Smith that Joshua's dangerous sleeping environment may have caused his death.

In light of the prevailing practice in Ontario in the 1980s and 1990s, I do not criticize Dr. Smith for failing to visit the scene in the cases examined by the Commission. However, as is now recognized, that practice represents a systemic failing in those years.

Disregarding Irrelevant and Prejudicial Information

As I have described above, it is essential that the forensic pathologist receive and consider all relevant information before performing the post-mortem examination. It is equally clear that the pathologist must disregard irrelevant and prejudicial information. Good science demands no less.

The coroner and the police often do not know what information the pathologist

will need. For this reason, there appeared to be a consensus among the experts who appeared at the Inquiry that the more information provided to the pathologist, the better.

Inevitably, some of the information will be irrelevant to the pathologist rendering a reasoned and objective pathology opinion. The justice system expects forensic pathologists to screen out irrelevant or prejudicial information and not be influenced by it when arriving at a diagnosis. Pathology opinions should be based primarily on the pathology evidence, not on irrelevant historical and circumstantial information.

This screening process depends on the pathologist's judgment. There is no list of types of information that the pathologist should automatically disregard. Dr. Pollanen explained that the best way to guard against relying on extraneous information is by emphasizing the importance of practising in an evidence-based framework. As will be discussed in detail in Volume 3, evidence that is relevant to an opinion should be included, and information that is not should be screened out. This approach is more likely to be taken when pathologists are required to explain how their opinions are derived from the evidence.

At the Inquiry, Dr. Smith denied that he ever allowed irrelevant or prejudicial information to affect his decision making in an individual case. It is clear, however, that in a number of cases he recorded irrelevant social history in his reports. For instance, in Kenneth's case, Dr. Smith recorded in the SickKids final autopsy report that Kenneth's mother's husband, who was not Kenneth's father, was not present when Kenneth's body was found because he was with his girlfriend, who was giving birth to his baby. The reason he was not there has no relevance to the pathology, but hints at an adverse moral judgment. In Tyrell's case, Dr. Smith recorded in the final autopsy report that Tyrell's mother had left him in Jamaica when he was young and that his father was in jail at the time, having killed a bystander during a shootout. In Joshua's case, Dr. Smith recorded in the final autopsy report that Joshua's mother was married, but did not officially live with her husband so she could continue to collect welfare.

None of this information is at all relevant to the pathology. Although there is nothing wrong with forensic pathologists recording all the social history provided to them, they must screen out the irrelevant information and ensure that it plays no part in their consideration of the case. If Dr. Smith relied on this type of information, he should not have done so. None of the information set out above should have been included in a final autopsy report because it leaves the impression that it somehow played a part in Dr. Smith's thinking.

In Jenna's case, there is convincing evidence that Dr. Smith indeed relied on such irrelevant information. Around the time of the autopsy, he was given

information that Jenna's mother had left home several hours before Jenna's death, that she was expected to return home within the hour, but that she actually returned much later. Dr. Smith recorded the information in his rough notes of the case. Several years after the autopsy, he repeated this same information to an assessor for the College of Physicians and Surgeons of Ontario (CPSO) and said that the real issue in the case was that Jenna's mother had not returned home until eight or nine hours later.

At the Inquiry, Dr. Smith explained that he considered this information important because it had to do with a critical issue that he might assist in answering – whether Jenna's mother had exclusive opportunity to cause Jenna's injuries. I do not accept that explanation. In this case, the pathologist's job was to determine the timing of the injuries based on the pathology evidence. Whether or not Jenna's mother came home later than she predicted was entirely irrelevant to that task. Dr. Smith should not have considered this aspect of the history in his analysis of the case, much less elevated its status to that of the real issue in the case. It allows the impression that Dr. Smith's opinion was reached in part because of his view that Jenna's mother was irresponsible.

Recording Information

It is difficult to overemphasize the importance of written documentation to the discipline of forensic pathology. The need for a written record permeates every stage of the process. Pathologists must make notes about all the information they receive verbally. They must make notes of what they do, observe, and collect during the post-mortem examination. They must retain these notes and any other material from the autopsy in an organized fashion and a secure place. Their opinions should be committed to writing and not just provided verbally. These basic principles of recording information support the independent reviewability of the work by other pathologists – something that is vital to quality assurance and essential to the criminal justice system. These principles must be seen as necessary to the work of a competent forensic pathologist.

Taking Notes of Information Provided Verbally

Some of the information provided to the pathologist before the post-mortem examination is already documented in some form: the coroner's warrant, medical records, and pictures of the scene. However, in the 1980s and 1990s, police officers and coroners passed on a substantial amount of information to pathologists verbally, either in person at the post-mortem examination or by telephone. At that time, many pathologists did not take extensive notes of these communications.

The forensic pathology experts who appeared at the Inquiry emphasized that pathologists must document the information they receive. This practice ensures that the pathologist has an accurate record of the evidence base, which can change as the death investigation progresses. Maintaining a record of the information as it is received helps a potential reviewer to understand what information pathologists had at all times during their involvement in the case, including at the time they arrived at the diagnosis. Failing to do so impairs a reviewer's ability to assess the basis for the pathologist's conclusions.

Like many pathologists, Dr. Smith did not consistently document the information he received verbally from the police and coroners. Although he sometimes took notes, in the majority of cases we examined he did not.

In Sharon's case, the notes written by the forensic identification officer reveal that two days after the autopsy, on June 17, 1997, he telephoned Dr. Smith regarding the markings on Sharon's back. Dr. Smith told the officer that they were not made by a "domestic or wild animal in any way." Dr. Smith testified at the preliminary hearing of Sharon's mother in April 1998 that he did not keep notes of his conversations with police officers or anyone else. Because Dr. Smith did not keep notes of the conversation, it is unclear precisely what the officer told him about the possibility of a domestic or wild animal's involvement. Moreover, by April 1998, when he was questioned on this conversation in court, he no longer had any recollection of what he had been told. It was, therefore, impossible to determine what Dr. Smith knew about the possibility of a dog attack and when he knew it.

In light of the way many pathologists practised in the 1980s and 1990s, I cannot single Dr. Smith out for criticism for failing to document communications with the coroner or the police. However, his failure to keep notes represents a systemic failing. A lack of notes creates significant difficulties for anyone trying to review the case, and for any pathologist trying to reconstruct later what was known and when it was known.

Recording the Pathologist's Actions

Pathologists must record what they did, saw, and collected during the post-mortem examination at the time these events took place. They can then refer to these notes when analyzing the evidence, writing the final report, or preparing to testify in court. Moreover, this record allows anyone reviewing the case to understand what procedures the pathologist employed, in what order, and what samples or exhibits were collected during the autopsy.

In the 1980s and 1990s, no formal systems were in place to ensure that pathologists kept contemporaneous records of their post-mortem examinations. With some exceptions, the OCCO left note-taking to the pathologist's

personal practices. In a commendable but seemingly unique exception to this practice, the Hamilton Regional Forensic Pathology Unit used a specific form to document all samples and exhibits taken at every post-mortem examination performed at the unit.

According to the forensic pathology experts I heard from, the method used by the pathologist – dictation, handwritten notes, or typed notes – is not important. What matters is that pathologists create and maintain a complete, contemporaneous record of their post-mortem examination, including observations of any pathology findings, the procedures used, and any samples or evidence collected.

Dr. Smith had no systematic way of recording what he did, observed, or collected during the post-mortem examination. He took notes in a variety of ways – sometimes on a laptop, sometimes on a piece of paper, and sometimes by dictation. He failed to keep an adequate record of the post-mortem examination in several of the cases examined by the Commission. His notes typically contained his observations but not the procedures followed or the samples taken. He testified that he took notes from the perspective of a pediatric pathologist. He focused on finding the correct diagnosis and completing the report of post-mortem examination, which did not require a list of the procedures performed or the samples collected.

For example, in Tiffani's case, Dr. Smith performed a second post-mortem examination after an exhumation, but it was unclear from the records who examined the microscopic slides and when – the pathologist who performed the first autopsy, or Dr. Smith who conducted the second. Similarly, in Sharon's case, where the autopsy took place over two days, Dr. Smith failed to document whether certain events happened on the first day or the second day. Moreover, before resuming the autopsy on the second day, Dr. Smith looked at photographs of the scene, and a pair of scissors seized from the scene, but did not record that he had viewed them. Given the lack of direction from the OCCO, I do not fault Dr. Smith for his failure in this respect. However, failing to keep a record of the steps taken at the initial or any subsequent post-mortem examination may leave doubt about what the pathologist did and hamper another pathologist's ability to review the case. Reviewers must know exactly what the initial pathologist did or failed to do at the post-mortem examination in order to review the case properly, and the pathologist must be able to tell the criminal justice system with certainty what was done (or not done) in reaching the opinion.

In other cases, Dr. Smith failed to document properly the samples he took and the exhibits he collected during the post-mortem examination. In Amber's case and Kasandra's case, the source of certain histology blocks was unclear. In Jenna's case, Dr. Smith collected a hair from Jenna's genital region but did not

record that he had done so. This omission left the police and the defence not knowing whether there was a hair and, if so, what happened to it. In fact, throughout the initial investigation into Jenna's death and the criminal proceedings against Jenna's mother, no one from the death investigation team was aware that Dr. Smith had collected the hair. It was not until several years later, after the Crown withdrew the charges against Jenna's mother, that the police discovered the existence and whereabouts of this piece of evidence. At the Inquiry, Dr. Smith acknowledged that his conduct in this respect was a mistake. He should have documented that he had collected the hair and ensured that investigators were aware of its existence.

In my view, Dr. Smith ought to have known of the importance of recording properly the samples and exhibits he collected. It is just common sense. Beyond that, his failure to do so represents another systemic failing. Particularly in criminally suspicious cases, failure to document the samples properly may not only hinder the reviewability of the case but also interfere with the ongoing death investigation and impair subsequent criminal proceedings.

Preserving Autopsy Records

Once pathologists have recorded both the information received verbally and what they did, observed, and collected during the post-mortem examination, these notes and materials must be carefully preserved for future use in the criminal justice system or for independent review. The duty is the same whether the pathologist performs the post-mortem examination or merely provides a consultation report.

Paper documents should be filed in clearly labelled files in a secure location. Tissue is stored in one of three ways: first, it may be fixed in liquid formalin; second, some fixed tissue is dehydrated and set in paraffin wax, which is known as a tissue block; and third, a section of the tissue block may be sliced and mounted onto a microscopic slide. The forensic pathologist is responsible for ensuring that the samples are properly preserved and that the wet tissue, blocks, and slides are labelled, indexed, and stored in a secure location.

In the 1980s and 1990s, the OCCO did not have any formal policies or procedures in place that addressed how pathologists should store materials from autopsies performed under coroner's warrant. Individual pathologists and hospitals had their own practices. Pathologists usually kept notes and draft reports in a working file on the case, typically in a filing cabinet in their office. Specimens taken from the post-mortem examination, such as wet tissues, tissue blocks, and microscopic slides, were usually kept in hospital storage facilities. At SickKids, for example, policies were in place in the 1990s requiring specimens to be stored in

specific locations within the hospital and signed out when removed. In addition, SickKids policy required pathologists receiving materials from outside the hospital for review to record that fact and assign a unique SickKids identification number to the materials – a process known as accessioning. After accessioning, it was common for the pathologists to keep case materials in their offices until they completed the consultation report, when the material would be returned to the referring institution.

In some of the cases examined by the Inquiry, Dr. Smith made serious errors in the preservation of autopsy materials. He lost his notes for years at a time. In some cases, he actually lost evidence, including X-rays, tissue blocks, slides, and a cast of a child's skull.

In Jenna's case, Dr. Smith failed to take proper care of the notes he made before and during the autopsy. During and after his involvement in the initial criminal proceedings, he indicated on at least three occasions that he had no such notes, including at the preliminary hearing in October 1998. However, in October 2004, his counsel provided seven pages of Dr. Smith's handwritten notes to the OCCO. At the Inquiry, Dr. Smith testified that he could not recall how the notes were discovered.

Dr. Smith's conduct in this aspect of Jenna's case is troubling. Pathologists are responsible for keeping their notes in a secure place and producing them when asked to do so by the criminal justice system. Dr. Smith did not. Crown or defence counsel, or another pathologist reviewing the case, all have a right to review those contemporaneous notes. It is equally problematic that Dr. Smith was unable to explain how his notes were eventually discovered. It appears that he did not know they even existed, let alone where they were. In Joshua's case and Sharon's case, Dr. Smith lost physical evidence during the criminal proceedings. In Joshua's case, Dr. Smith was asked to provide to the defence the microscopic slides and X-rays relating to the case before the preliminary hearing. Dr. Smith failed to deliver the material requested. In fact, he lost the slides for some time, although he eventually found them. The X-rays, however, were lost and never found. Similarly, in Sharon's case, Dr. Smith lost two pieces of evidence: a cast of Sharon's skull and a set of X-rays taken at the initial post-mortem examination. Neither has been found. Whether or not the loss of this evidence affected the outcome in either case, Dr. Smith's conduct is inexcusable. Evidence must be properly preserved.

Finally, in Valin's case, Dr. Smith said he was unable to find tissue blocks and slides that had been sent to him for review. Almost 18 months after he was initially requested to look for the materials, a diligent administrative assistant at SickKids located some of the slides in Dr. Smith's office. She found the rest of the materials about five months later.

Dr. Smith's failure to maintain proper care and control of the autopsy materials in Valin's case had dire consequences. Dr. Bhubendra Rasaiah performed the post-mortem examination on Valin's body on June 27, 1993. In August 1993, Dr. Rasaiah consulted a SCAN physician at SickKids and Dr. Smith. The two SickKids doctors authored a joint consultation report. In June 1994, Dr. Rasaiah sent the tissue blocks and slides to Dr. Smith so he could prepare to testify in September. At the trial, Dr. Smith expressed the opinion that Valin had died of manual strangulation and that she was the victim of a recent sexual assault. Mr. Mullins-Johnson was convicted of first-degree murder and sentenced to life in prison.

In February 2003, the Association in Defence of the Wrongly Convicted (AIDWYC) requested that the Ministry of the Attorney General provide it with the tissue blocks and slides so that another pathologist could review them. In May 2003, the police contacted Dr. Rasaiah about the autopsy materials. Dr. Rasaiah determined that Dr. Smith had not returned them. In June 2003, Dr. Rasaiah phoned Dr. Smith about the missing slides and tissue blocks. Dr. Smith told Dr. Rasaiah that he would look for the materials. Dr. Smith did not get back to Dr. Rasaiah and failed to return a follow-up call.

In October 2003, Crown counsel Philip Downes wrote to Dr. Smith and asked him about the material. Dr. Smith did not reply to the letter. Mr. Downes followed up by telephone in December. Dr. Smith informed him that he had asked his assistant to search the archives for the material, but that the search had proven fruitless. Dr. Smith indicated that he did not believe he still had the samples, but would take another look when his assistant returned that week. Mr. Downes asked Dr. Smith to confirm in writing his position on the whereabouts of the material, and Dr. Smith agreed. However, Dr. Smith did not get back to Mr. Downes and ignored two follow-up letters, one sent by registered mail.

Finally, in November 2004, Mr. Downes sought the assistance of the OCCO in his search for the materials. Shortly after receiving this request, Deputy Chief Coroner Dr. James Cairns and Dorothy Zwolakowski, the executive officer of investigations at the OCCO, met Dr. Smith at SickKids to discuss the missing slides and blocks. During the meeting, Dr. Smith told Dr. Cairns, first, that he did not remember the case and then, after Dr. Cairns reminded him of the case, that he had sent the slides back to Dr. Rasaiah in Sault Ste. Marie. Dr. Smith indicated that he had personally gone to the post office and returned the slides via registered mail. He said he did not have the file on the case, nor did he have the consultation report that he had prepared. Dr. Cairns asked Maxine Johnson, a senior administrative assistant at SickKids, and Ms. Zwolakowski to search Dr. Smith's office for the materials. The same day, a Friday, they located Dr. Smith's working file on the case in his filing cabinet and several slides from the case in his office.

The following Monday, Ms. Johnson found 20 additional slides on a shelf in Dr. Smith's office. At the Inquiry, Ms. Johnson testified that she found the slides quickly and easily that Monday morning, in a place she had already searched on the previous Friday. She therefore inferred that the slides had been placed there over the weekend. Despite the discovery of the additional slides, all the tissue blocks were still missing.

Dr. Pollanen then reviewed the slides to index them for the Crown and discovered Dr. Smith's diagnostic errors. In January 2005, he reported that he had found no evidence of sexual abuse and concluded that the cause of Valin's death was unascertained or undetermined.

Several months later, in May 2005, Ms. Johnson found an additional 10 slides and all of the tissue blocks on a shelf in Dr. Smith's office. Again, Ms. Johnson found the additional materials in locations she had previously searched. She inferred that the materials had been placed there sometime between the end of November 2004 and May 2005. At the Inquiry, Dr. Smith could not explain how this loss and later recovery could have happened.

Events unfolded quickly after the discovery of the tissue blocks and slides. On receipt of the additional materials, Dr. Pollanen issued a supplementary report in late May 2005. As in his first report, he found the cause of death to be undetermined. In September 2005, Mr. Mullins-Johnson filed an application for ministerial review of his conviction pursuant to Part XXI.1 of the *Criminal Code*. Later that month, he was granted bail pending his application. Ultimately, the federal minister of justice granted his application and referred the case to the Court of Appeal for Ontario, which acquitted Mr. Mullins-Johnson in October 2007.

Dr. Smith's handling of Valin's case reveals a troubling lack of competence and professionalism. He failed to store the slides and tissue blocks in a way that would permit them to be located easily. He did not accession the case to the SickKids record system. Almost 18 months elapsed from the initial request for the materials to their initial discovery (and 23 months passed before all of them were located). Mr. Mullins-Johnson spent those months in jail. Pathologists are responsible for properly preserving the autopsy materials in their cases and providing them when requested. Dr. Smith failed to do so.

Dr. Smith testified that he had searched his office for the autopsy materials and his file, to no avail. However, Ms. Johnson found the file, the tissue blocks, and the slides in Dr. Smith's office. Indeed, the file was in his filing cabinet. Dr. Smith testified at the Inquiry that he had searched the filing cabinets in his office but did not see the file. Equally troubling is Ms. Johnson's testimony, which I accept, that she ultimately found the materials in places that she had previously

searched unsuccessfully. I find Dr. Smith's lack of professionalism in this aspect of Valin's case to be disturbing.

Dr. Smith expressed regret at the Inquiry about his conduct in the case. He acknowledged that his office was disorganized and, as a result, that important materials could not readily be retrieved from his office. He also admitted that he did not keep a log of the materials he received or sent out. Dr. Smith's explanation was that he did not know any better. He said that, although he understood that continuity of evidence was a basic principle of the criminal justice system, he did not fully understand its implications.

I do not accept Dr. Smith's explanation. Someone with the expert witness experience he had by the time he became involved in Valin's case could not have been as unaware as he claims of the importance of this evidence in a serious criminal case. His behaviour here is an example of carelessness, not ignorance.

Other pathologists, many of whom also lacked formal forensic training, recognized the importance of preserving the integrity and continuity of the evidence, and of maintaining an accurate record of specimens sent and received. For instance, in May 2003, nine years after his involvement in the case, Dr. Rasaiah was able to refer to his own record and tell the police of the exact dates on which he sent the autopsy materials to the other pathologists involved in the case. Although Dr. Smith claims that he did not intend to hinder a review of the case, his conduct certainly had that effect.

Autopsy Practice

Every post-mortem examination consists of three steps: an external examination, an internal examination, and the performance of ancillary tests. Each step is distinct, but each depends and builds on the earlier steps. Each step must be completed before the pathologist has sufficient evidence on which to base an opinion. The various elements of the post-mortem examination are described in Chapter 4, Investigation of Suspicious Pediatric Deaths.

Until the mid-1990s, there were no standardized procedures in Ontario for the performance of pediatric forensic autopsies. On April 10, 1995, however, the OCCO distributed Memorandum 631, attaching the Protocol for the Investigation of Sudden and Unexpected Deaths of Children under 2 Years of Age (the 1995 Infant Death Investigation Protocol), to all coroners, pathologists, and chiefs of police in Ontario. For the first time, the Protocol and its accompanying appendices gave Ontario pathologists a standardized procedure to follow in all cases involving children under the age of two. Dr. Smith wrote Appendix D to the Protocol, which set out a standard approach for pathologists to follow.

An inadequate post-mortem examination can create at least two significant problems. First, because the forensic pathologist relies on the findings made at autopsy to arrive at his or her opinion in the case, a failure to conduct a proper post-mortem examination can lead to an incorrect diagnosis. Since each step feeds into the next, errors in one step may well contribute to errors in another. Second, inadequate dissections, sampling, and testing all prevent a thorough review of the pathologist's findings and opinion. Since the condition of the body changes significantly after the post-mortem examination, the pathologist must ensure that appropriate dissections, sampling, and testing are conducted at the autopsy. Moreover, they must be conducted in a way that preserves the ability of a reviewer to understand the initial pathologist's opinion and to assess the case. Both problems are exemplified in the cases we examined. The first is most evident in two cases: Sharon's case and Jenna's case. Significantly, the 1995 Infant Death Investigation Protocol, which was in place by the time Dr. Smith performed the autopsies in those cases, was of little assistance: Sharon was not under two years of age, and the memorandum did not speak to a critical aspect of Jenna's autopsy – the sexual assault examination.

Sharon's body had multiple penetrating injuries when the police brought her to Dr. Smith for autopsy. The forensic pathology experts found that Dr. Smith's post-mortem examination was inadequate in a number of respects. First, during the examination of Sharon's scalp injury, Dr. Smith did not shave the hair to conduct a detailed assessment of the wound margins. According to the experts, shaving the hair is a standard procedure when there are scalp injuries because hair hides the details of the wound. Second, Dr. Smith did not take swabs of the wounds to test for saliva. Although the experts acknowledged that swabbing is not routinely done on wounds and that Sharon's injuries were so clearly bite marks that they might not have thought it necessary, swabbing the wounds could have assisted Dr. Smith in determining whether Sharon's wounds were in fact stab wounds or if they were bite marks, as alleged by the defence in the case. Third, during the internal examination, Dr. Smith did not dissect the spinal canal and cord as he should have, given that the injuries went down to the spine; nor did he measure carefully the depth of key injuries, such as a penetrating wound in the neck. An accurate and precise measurement of the depth of that wound would have been significant evidence to help determine if a dog could have caused Sharon's injuries. Fourth, during the ancillary testing phase of the autopsy, Dr. Smith did not examine the scalp adequately under the microscope. At the Inquiry, he admitted that, as a result, the examination did not yield as much information as it could have. Ultimately, Dr. Smith wrongly concluded that Sharon had died of multiple stab wounds, not dog bites.

In Jenna's case, Dr. Smith also made serious errors during the post-mortem examination. Although he observed a possible bite mark on Jenna's knee, he did not swab the wound for saliva. A swab could have assisted in determining if the mark was actually a bite mark, and, if it was, the swab could have been analyzed for DNA. Dr. Smith also failed to perform an adequate sexual assault examination. Although he appears to have considered the possibility of sexual assault during his external examination of Jenna's body, he did not complete the examination. He did not use a sexual assault evidence kit; he did not take swabs; and he did not dissect Jenna's genitalia or anus to perform a histology examination of those areas. Finally, he took a hair from Jenna's genital region but failed to submit it to the Centre of Forensic Sciences for testing.

Ultimately, Dr. Smith concluded that there was no evidence of sexual abuse in the case. Several years later, however, Jenna's babysitter confessed to the police that he had sexually assaulted Jenna. Dr. Smith's errors amounted to a lost opportunity to collect evidence that might have identified Jenna's assailant or provided evidence of a sexual assault. Of importance is the fact that, although the 1995 Infant Death Investigation Protocol and its appendices were intended to ensure that pathologists performed complete post-mortem examinations, they failed to speak to a central aspect of Jenna's autopsy. They made no mention of when and how to conduct a complete sexual assault examination of a child, and the OCCO did not have any other protocol or guideline in place to deal with the issue.

In several other cases involving children under two years of age, the expert reviewers found failures on the part of other pathologists to undertake necessary ancillary investigations. There were cases in which ancillary investigations involving microbiology and biochemistry testing and metabolic studies were not done. Although such investigations were not specifically called for by the 1995 Infant Death Investigation Protocol, they were considered routine by the mid- to late 1990s. These investigations would have been significant to rule out the possibility of natural causes of death. The failure to perform a thorough and complete post-mortem examination was thus not limited to Dr. Smith.

In one case involving the death of a child under the age of two, the expert reviewers found that the pathologist who performed the post-mortem examination in August 1996 should have undertaken additional investigations, including microbiology, toxicology, and more extensive histology. The 1995 Infant Death Investigation Protocol, which was in place by 1996, dealt specifically with toxicology and histology. Pathologists were told to order toxicology tests in every case involving the sudden unexpected death of a child under the age of two. Appendix D to that Protocol also recommended that specific tissues be removed for microscopic examination. The pathologist's actions were thus inconsistent with the

OCCO's policy at the time. Moreover, microbiology, though not a part of the protocol, was by that time routinely ordered by pathologists. The pathologist's failure to order microbiology was therefore also a mistake even by the standards of the day.

Unfortunately, the 1995 Infant Death Investigation Protocol did not list the other ancillary tests, beyond toxicology and histology, that needed to be performed in cases involving the death of a child. Although biochemistry and microbiology tests were routinely conducted by 1995 when the OCCO developed the Protocol, they were not specifically included. Had the OCCO included such investigations in the Protocol or had Dr. Smith provided for them in Appendix D, pathologists across the province might have come closer to performing all requisite procedures and tests in all pediatric forensic cases.

Despite the advances it offered in the detection of child abuse, these examples demonstrate that the 1995 Infant Death Investigation Protocol covered too few pediatric deaths, provided for too few procedures and tests, and sometimes was not carefully followed. Partly as a result, inadequate autopsies were performed in several of the cases examined at the Inquiry. Significant opportunities to identify all of the existing pathology evidence or to help identify a possible perpetrator were lost.

Handling of Exhibits for Testing

During the autopsy, the forensic pathologist collects tissues and fluids and may collect other physical evidence, such as fibres and hairs. This material forms the basis for ancillary tests performed by either the forensic pathologist or a forensic testing laboratory – the Northern Forensic Laboratory for cases in Northern Ontario or the Centre of Forensic Sciences (CFS) for all other parts of the province.

It is important that the pathologist handle this material properly because it may significantly affect the opinion on cause of death and may also play an important part in any criminal trial. Toxicology can indicate the presence of alcohol or other toxins, for instance, and DNA analysis can help to identify who may have caused the deceased's injuries. Because forensic pathologists understand the value of such evidence, they are primarily responsible for determining if evidence ought to be collected from the body and tested. Of course, the police and coroner can also request that certain evidence be collected for testing. Either the pathologist or the investigating police force is charged with sending the samples to the laboratory for the ancillary tests.

In the 1980s and 1990s, the OCCO had no formal policies or procedures relating to the collection and submission of exhibits for testing. Pathologists generally developed their own procedures, which were designed to protect the integrity and

continuity of the evidence. After the evidence was collected, the pathologist usually assumed responsibility for the samples taken from within the body, such as bodily fluids, and the police were responsible for other types of evidence, such as clothing and fibres found on the body.

The importance of establishing proper procedures and following them is graphically illustrated by the serious error Dr. Smith made in Jenna's case. During the post-mortem examination, in January 1997, Dr. Smith identified a hair located in Jenna's genital area. He collected the hair, placed it in an envelope, labelled it "hair from pubic area," and applied a sequential seal to the evidence. However, he did not submit it to the CFS for analysis. Eventually, in 2001, four years after the post-mortem examination, the police learned that Dr. Smith had collected and kept the hair. The police obtained the hair and eventually submitted it for analysis to both the CFS and the Federal Bureau of Investigation (FBI) laboratory in Washington, DC. The CFS reported that it was not able to do a DNA analysis because the hair did not have a root. In addition, in part because of the length of time between Jenna's autopsy (when the hair was first collected) and the forensic analysis, microscopic comparison was of little or no value. The FBI laboratory was, however, able to rule out both Jenna's mother and her babysitter as the source of the hair based on a mitochondrial DNA analysis.

At the Inquiry, Dr. Smith gave varying accounts to explain his failure to submit the hair for testing immediately after the post-mortem examination. He testified that, at the time of the post-mortem examination, the police were not interested in the hair because they believed it to be a contaminant, which was left behind during resuscitation efforts. He provided a similar account to several other people in the early 2000s and added that the attending officer actively refused to take it. Dr. Smith also testified that he personally believed that the hair was a contaminant because contaminant hairs are often found on a child's body; the location of the hair indicated to him that it was left behind during or after resuscitation; the hair appeared to be a trunk or head hair, not a pubic hair; and, finally, anything that might have been in the pelvic region before the commencement of resuscitation would have been altered or displaced by the end of it. In addition, Dr. Smith testified that, by the completion of the autopsy, he believed that there were no other findings that suggested that Jenna had been sexually assaulted. Therefore, he said, he had no reason to submit the hair for analysis.

I do not accept Dr. Smith's assertion that the police refused to take the hair. Constable Scott Kirkland of the Peterborough Lakefield Community Police Service was the only police officer present at the post-mortem examination. He testified at the Inquiry that he did not know that the hair existed, and he certainly

did not refuse to take it. He explained that he would never make an independent decision not to submit a sample for analysis. As he put it, "it would be against all my training, all my experience, my personal ethics and it wouldn't even make any sense." I accept that. No forensic identification officer would refuse to take a hair that a pathologist seized from a dead child's genital area, where that child's body had suffered significant physical trauma.

Nor can I accept Dr. Smith's explanation that he believed the hair to be a contaminant and not relevant. The reason to submit the hair for testing is to answer the very question Dr. Smith assumed away – whether the hair was indeed relevant. It was not for Dr. Smith to answer that question based solely on a visual inspection and without the benefit of ancillary testing. At the time of the autopsy, Dr. Smith knew that Jenna was in the company of either her mother or a male babysitter when her injuries occurred. The identification of the owner of the hair could easily have been relevant to the investigation into Jenna's death. That is so regardless of whether the hair was a trunk or a pubic hair, whether it could have been altered or displaced during resuscitation, and whether there was other evidence of sexual abuse. If Dr. Smith had truly believed that the hair was a contaminant, I cannot understand why he would have seized it, placed it in an envelope, labelled the envelope, applied a seal, and offered it to the forensic identification officer.

Dr. Smith first offered his tortured explanation when Dr. Cairns confronted him about it. Dr. Cairns found it simply not credible. I agree. Whatever the explanation, and regardless of the fact that the hair proved to be unhelpful, Dr. Smith's failure to record and send this important exhibit for forensic testing represents a serious systemic failing in the practice of pediatric forensic pathology.

Even without formal policies or systems in place in the 1980s and 1990s with respect to the seizure and collection of exhibits, I find Dr. Smith's conduct in this case inexcusable. There is no evidence to suggest that other pathologists performing coroner's autopsies at the time made such grave mistakes. Instead, the evidence suggests the opposite. Most pathologists developed their own systems, understanding the importance of maintaining continuity and ensuring that such evidence is not compromised. Although far short of the protection that a uniform policy provides, leaving it to individual pathologists appears to have worked to some extent, but, given this example, obviously did not work well enough.

The Pathology Opinion

After completing the post-mortem examination, the forensic pathologist's task is to arrive at an opinion on the cause of death and any other issues relevant

to the death investigation that the pathology can assist in resolving. The latter can include, for instance, the timing of fatal injuries or the way in which injuries occurred.

In the course of our systemic review, the Inquiry heard detailed evidence from the expert reviewers, all renowned forensic pathologists, about the serious diagnostic errors Dr. Smith made in the 18 cases we examined in detail.

For several reasons, it is important that I report on these misdiagnoses. First, these errors and their tragic outcomes were in large measure responsible for the dramatic loss of public confidence in pediatric forensic pathology, and thus for the creation of this Inquiry. It is important that I report on the facts underlying these misdiagnoses. Second, understanding these errors in the context of how they came about is essential to determine what systemic changes must occur if similar mistakes are to be avoided in future.

Dr. Smith made a number of different diagnostic mistakes. I have grouped them into several categories.

Interpreting Artefacts

An artefact, in relation to the post-mortem examination, is a sign or finding that imitates pathology, disease, or injury occurring in life.[3] Artefacts can arise from treatment, resuscitation, or post-mortem phenomena. Aside from treatment or resuscitation, they are typically caused in one of two ways. They can occur naturally. For instance, gravity and the position of the body at death can cause blood to accumulate in certain areas of the body. This accumulation can appear indistinguishable from bruising, which by definition would have occurred before death. Similarly, a child's anus can relax and widen after death, which can be misinterpreted as evidence of a sexual assault. In addition, forensic pathologists can create artefacts when they dissect tissues at the post-mortem examination. For example, blood can leak out during dissection, which leaves the tissue appearing exactly as if there had been a hemorrhage.

Because post-mortem artefacts can appear at every autopsy, the pathologist must consider them as a possibility in every case. Recognizing a certain feature, whether it appears to be a bruise, hemorrhage, or some other kind of injury, is insufficient. If the body was found in a certain position, the pathologist should question if certain apparent bruises were actually inflicted before death. If microscopic hemorrhages were found in certain tissues in the absence of any other

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

findings, the pathologist should consider the possibility that they were caused during dissection.

Forensic pathology is described as an interpretive science because of this need to interpret the signs and findings apparent at autopsy. The pathologist's interpretation of a particular feature often determines its significance. Artefacts are a good example of the risk arising from the interpretive nature of the science. Without proper training and knowledge of the various changes that occur in the body after death, the danger of assigning significance to an insignificant finding is very real.

Unfortunately, the leading forensic pathology textbooks have historically contained relatively little information about post-mortem artefacts. The phenomenon has yet to be the subject of detailed research. As with other areas of forensic pathology, this body of knowledge has grown over time, and, in the 1980s and 1990s, the level of research on certain post-mortem changes was not as advanced as it is today. For example, although forensic pathologists in the 1990s were aware that dilation of the anus can occur after death, the definitive study on the issue, which confirmed and revealed the potential extent of the dilation, was not available until 1996.

Establishing diagnostic criteria for certain findings could enable a pathologist to avoid some of the pitfalls in the science. Diagnostic criteria could help the pathologist to determine, for instance, if microscopic hemorrhages in the neck indicate neck compression or manual strangulation, or if certain findings in the anus confirm penetrating anal trauma. Without diagnostic criteria, it can be difficult for a pathologist to determine what qualifies as sufficient evidence to make a diagnosis and what is an artefact. Unfortunately, in the 1990s, there were no universally accepted diagnostic criteria for either neck compression or anal trauma. This deficiency made the interpretation of findings associated with these diagnoses all the more difficult, and the risk posed by artefacts all the greater.

Dr. Smith misinterpreted both natural and pathologist-made post-mortem artefacts in several of the cases examined by the Commission. In some cases, he was not alone. Other pathologists made the same or similar mistakes. Three examples are provided by the cases of Valin, Nicholas, and Joshua.

In Valin's case, Dr. Smith made significant errors in his interpretation of the post-mortem findings. The Crown theory was that Valin was the victim of chronic sexual abuse and died during the course of a sexual assault by Mr. Mullins-Johnson. Two of the key pathology issues at trial were the cause of death and whether there was evidence of sexual assault.

Dr. Rasaiah conducted the autopsy. Upon a review of the autopsy materials, Dr. Smith found: petechiae and small bruises to the face and upper chest; bruising

to the inner thighs and anal area; dilation of the anus; and a laceration and fissures in the anus. Based on these findings, Dr. Smith testified at Mr. Mullins-Johnson's trial that the cause of death was asphyxia, possibly due to manual strangulation, and that there was evidence of recent sexual assault. Other pathologists, including those retained by defence counsel, agreed with him to varying degrees. As it turned out, however, the observations of laceration and fissures in the anus were properly attributable to the dissection of tissue or its preparation for microscopic work. The dilation of the anus was a natural post-mortem occurrence. Much of what was described as bruising represented artefacts relating to lividity. And, facial petechiae may also have been explained by lividity, particularly in light of the fact that Valin's body was found face down. In other words, the findings were attributable to insignificant artefact. The experts who later examined the case concluded that the cause of Valin's death was undetermined and that there was no evidence of sexual abuse.

In Nicholas' case, there was a first autopsy, and an exhumation and second autopsy 18 months after death. At the second post-mortem examination, Dr. Smith found some discolouration in the skull over the right parietal bone and along the sutures, which he suggested was consistent with blunt force injury. He concluded that the cause of death was cerebral edema, consistent with blunt force injury.

The expert reviewers who later examined Nicholas' case disagreed. Dr. Jack Crane, state pathologist for Northern Ireland, testified that this discolouration was a common finding visible whenever a body has been buried and subsequently exhumed. It was an artefact of no significance and did not indicate the presence of injury. In addition, the pathologist who performed the first autopsy found no evidence of scalp bruising that would suggest a blunt force injury.

Finally, in Joshua's case, Dr. Smith performed the post-mortem examination and found a microscopic hemorrhage in the connective tissues of Joshua's neck. He concluded that the cause of death was asphyxia, and testified at the preliminary hearing in the case that the hemorrhage was a "worrying" finding, suggesting that Joshua was suffocated. That diagnosis was wrong. The experts who examined the microscopic slides determined that the hemorrhage was likely caused during dissection at the autopsy. It likely was a post-mortem artefact and was therefore unrelated to Joshua's cause of death. Dr. Smith acknowledged his mistake at the Inquiry and explained that his error was in overestimating his own dissection skills.

In all three cases, Dr. Smith made misdiagnoses based on post-mortem artefacts. While this subject remains a challenge for forensic pathology, these cases exemplify the risks of inadequate forensic pathology training.

Diagnosing Asphyxia

Asphyxia can be a confusing term if it is used to describe a cause of death. Experts question whether, when, and how the term should be used. There are two problems associated with diagnosing asphyxia as the cause of death. First, there is a pure issue of terminology. At the Inquiry, the expert reviewers opined that asphyxia is not really a cause of death. At best, it describes a mode or mechanism by which a person has died – a lack of oxygen. The problem is that asphyxia fails to describe the cause of the lack of oxygen, and therefore is a markedly ambiguous diagnosis. This ambiguity is compounded further by the fact that different pathologists use the term in different ways. Some may use it to mean mechanical asphyxia that may be accidental. Others may mean that another person caused the lack of oxygen deliberately. Without some indication of how a particular pathologist uses the term in a particular case, it can easily be misunderstood. However, Ontario pathologists in the 1980s and 1990s often diagnosed "asphyxia" alone as the cause of death. Dr. Smith certainly did, as did other pathologists performing coroner's autopsies at the time.

Second, there is a problem with the basis on which asphyxia is diagnosed. Diagnostic criteria that were commonly used for establishing asphyxia – petechial hemorrhages in the thoracic viscera, congestion and edema of the lungs, cyanosis of the fingernails, and cerebral edema – are in fact non-specific findings. In other words, these findings can appear on a body for a variety of reasons, including, but in no way limited to, asphyxia. They are meaningless without more evidence and cannot properly be said to be diagnostic of asphyxia.

As early as 1974, forensic pathology textbooks were referring to those criteria as "obsolete," in recognition of the fact that they were non-specific and therefore non-diagnostic. As a result, in the 1980s and 1990s, forensic pathologists should have been aware that certain findings, such as intrathoracic petechiae and congestion of the lungs, were non-specific and were insufficient on their own to substantiate the diagnosis of asphyxia.

Nonetheless, Dr. Smith determined that asphyxia was the cause of death in nine of the 18 cases the Commission examined in detail. In several others, he found that there was an asphyxial component to the death, but that it was not the cause of death. At the Inquiry, Dr. Smith testified that he was aware that certain findings, like petechial hemorrhages in the thoracic viscera, were non-specific and therefore not diagnostic of asphyxia. As a result, he said he diagnosed asphyxia only when he observed these non-specific findings at autopsy and when there was some other evidence to suggest an asphyxial mechanism of death. The latter took two forms: specific pathology findings, or a history suggesting asphyxia.

I have reviewed all nine cases and find that Dr. Smith adopted the approach he described in some cases, but not others. In some instances, he appeared to do exactly the opposite – he diagnosed asphyxia based solely on the presence of non-specific findings.

In Tiffani's case, Dr. Smith concluded that the cause of death was asphyxia. He added a "notanda" to the report of post-mortem examination that the etiology of the asphyxia could not be determined. In that case, however, the only evidence to support the diagnosis of asphyxia was Dr. Smith's observations of petechial hemorrhages to the pulmonary pleura, pulmonary congestion, and cerebral edema. All these findings were non-specific and therefore non-diagnostic. There was nothing in the pathological or the circumstantial evidence to support Dr. Smith's diagnosis. At the Inquiry, Dr. Smith acknowledged this point and explained that he included that notanda in recognition of the fact that his diagnosis was based entirely on non-specific findings. I cannot accept his explanation. That is not what the notanda states, and, more important, the diagnosis of asphyxia was not available to him on the basis of the findings. They were non-specific.

In Taylor's case, Dr. Smith did not find asphyxia to be the cause of death but determined that there was an "asphyxial component" to the death. As in Tiffani's case, however, Dr. Smith based this conclusion entirely on non-specific findings – petechial hemorrhages of the thymus and the pulmonary pleura. There was no other evidence to suggest that asphyxia played a part in Taylor's death. Contrary to Dr. Smith's assertion that he did not diagnose asphyxia based on non-specific findings alone, he did exactly that in Taylor's case.

Now I turn to Dr. Smith's explanation that he diagnosed asphyxia when he observed the host of non-specific findings and "something else" – specific pathology findings or circumstantial information. I consider Delaney's case and Katharina's case to be the clearest examples of Dr. Smith's reliance on that "something else."

In Delaney's case, the coroner advised Dr. Smith that Delaney had been left alone at night with his mother and his two-year-old cousin. When family members discovered Delaney's body the following morning, they found his mother sitting in the same room, covered in blood, clutching a piece of broken glass. The police informed Dr. Smith that Delaney's mother had confessed to putting her fingers down Delaney's throat three times until he stopped breathing.

In his August 1994 report of post-mortem examination, Dr. Smith listed "Asphyxia (digital airway obstruction)" as an abnormal finding. At the Inquiry, Dr. Smith explained that he arrived at his conclusion on the basis of three findings: first, intrathoracic petechiae; second, hemorrhage in the upper laryngeal region, the epiglottic region, and the lower neck region; and third, a history that Delaney's mother had placed her finger in Delaney's airway on three occasions.

He believed that this history served as a sufficient basis for the diagnosis, and that, given the overwhelming circumstantial evidence, other pathologists would have concluded the same.

The expert reviewers did not agree. The primary reviewer assigned to the case, Dr. Pekka Saukko, a certified forensic pathologist, found no pathology evidence to support the suggestion that the mechanism of death involved a digital airway obstruction. According to Dr. Saukko, the toxicology, radiology, and histology examinations did not reveal any specific or significant findings that could explain Delaney's death. Although the circumstances suggested homicide, there were no pathology findings to substantiate it or to exclude it. Therefore, Dr. Smith, as the pathologist, should have classified the cause of death as undetermined.

Dr. Smith repeated the same kind of reasoning in Katharina's case, where he concluded that the cause of death was "Asphyxia (filicidal)." Again the expert reviewers disagreed with the diagnosis and found insufficient pathology evidence to support an asphyxial cause of death. In both Delaney's case and Katharina's case, the expert reviewers added that, if Dr. Smith had diagnosed asphyxia based on the circumstantial, rather than the pathology, evidence, he should at least have said so in his report. Instead, his reports were silent on the issue.

Delaney's case and Katharina's case raise two questions. First, should Dr. Smith have refrained from using the term "asphyxia" altogether? If so, second, did he properly diagnose "asphyxia" in each case?

Given the evidence that, in the 1980s and 1990s, many pathologists in Ontario listed "asphyxia" on its own as a cause of death, I do not criticize Dr. Smith for doing the same. Nevertheless, the problems associated with the term are very real. At the Inquiry, Dr. Smith gave his definition of the term: "a state of compromised supply or utilization of oxygen by the tissues of the body." He acknowledged that this definition was broader than one other pathologists might use. The lack of uniformity and specificity of the term is problematic. If one pathologist uses it to describe one condition and another pathologist uses it to describe another very different condition, how are the family, police, coroner, Crown counsel, court, or other persons supposed to know the difference? In my view, Dr. Smith's use of the term "asphyxia" by itself had the potential to cause confusion.

With respect to the second question, whether Dr. Smith properly diagnosed asphyxia in Delaney's case and Katharina's case, I return to Dr. Smith's evidence at the Inquiry. Dr. Smith testified that he was aware that certain findings were non-specific but believed that they, in conjunction with specific autopsy findings or a history suggesting asphyxia, would form a sufficient basis for the diagnosis. I agree with one-half of that statement. If there are specific pathology findings suggesting that a child has died of asphyxia resulting from strangulation, for

instance, then a pathologist can properly arrive at a diagnosis of strangulation. That makes perfect sense; as a general rule, the pathologist can arrive at an opinion if the pathology substantiates it. In Delaney's case and Katharina's case, however, there was no basis in the pathology evidence for Dr. Smith's diagnoses.

I disagree with the second half of Dr. Smith's assertion – that non-specific findings coupled with a history suggesting asphyxia are enough to ground the diagnosis. History and non-specific findings alone are insufficient to substantiate any pathology diagnosis. The forensic pathologist's task is to arrive at an opinion on the cause of death based on the pathology. In the absence of any specific pathology findings suggesting that a child has died of some form of asphyxia – for instance, strangulation – non-specific pathology findings are meaningless. The pathologist cannot resort to the history and circumstantial information to give meaning to non-specific findings. Instead, the pathologist should simply state that the cause of death is undetermined, but that the circumstantial information might suggest a cause.

Dr. Smith raised two important points at the Inquiry, however. Both have to do with the culture of pediatric forensic pathology in Ontario in the 1990s. First, in the early and mid-1990s, when he wrote the report of post-mortem examination in Delaney's case and Katharina's case, pathologists in Ontario did not have a practice of stating "undetermined" or "unascertained" as the cause of death. Terms like "undetermined," "unascertained," or "no anatomical cause of death" did not become a part of pathologists' lexicons until the late 1990s. Indeed, the expert reviewers themselves testified that they now use the term "undetermined" more than they did in the past. Second, in the 1980s and 1990s in Ontario, post-mortem reports prepared for the coroner generally did not include any reference to the history or circumstantial information of which the pathologist was aware or relied on in arriving at a diagnosis.

However, that still does not justify Dr. Smith's opinions in many of the "asphyxia cases." I can understand that, because the practice was to provide a cause of death and not to conclude that the cause of death was undetermined, a pathologist performing coroner's autopsies in the 1980s and early 1990s might have been inclined to arrive at a definite diagnosis despite tenuous pathology evidence supporting that diagnosis. I cannot understand, however, how a pathologist could arrive at such a diagnosis when there is no pathology evidence to support it. As I have said, in many of the "asphyxia cases," Dr. Smith arrived at a diagnosis on the basis of non-specific findings alone or in combination with the circumstantial information. Where there was no pathology evidence to support Dr. Smith's conclusions, his diagnosis was wrong.

Moreover, as I discuss later, Dr. Smith should, in any event, have made his reasoning transparent. As a general rule, whenever the pathologist relies in part on

the history or other circumstantial information to reach a conclusion, he or she must say so. This transparency enables others reviewing the opinion to understand the basis for the original pathologist's conclusions. However, the main systemic failing exemplified by these cases is that the use of the term "asphyxia" as a cause of death is problematic. If used at all, it has to be explained. I return to this issue in Volume 3.

Diagnosing Head Injury

As I describe in Chapter 6, The Science and Culture of Forensic Pathology, the understanding of head injury in infants and children has evolved from the 1980s until today. In the 1980s, many believed that three pathology findings, known as the "triad," were diagnostic of shaken baby syndrome (SBS): subdural hemorrhage, retinal hemorrhage, and hypoxic-ischemic encephalopathy. Over time, however, the mainstream opinion shifted. Many began to question whether the triad was indeed diagnostic of SBS, and whether that constellation of findings could be seen in other conditions, including an accidental fall.

As the knowledge on SBS grew, knowledge about another aspect of pediatric head injury did as well. In the 1980s, the mainstream view was that low-level falls in the home could not cause serious injury or death in infants and children. However, as time went on, anecdotal evidence began to suggest that small falls about the home could indeed kill, although rarely.

Dr. Smith made serious errors in his diagnosis of head injury in several of the cases before me. In some instances, his diagnosis, which today would be considered unreasonable, was acceptable given the state of the knowledge at the time. In others, however, Dr. Smith's diagnosis was unreasonable then and would be unreasonable now.

In Amber's case, the reported history was that Amber had fallen down some carpeted stairs. At the autopsy performed in 1988, Dr. Smith discovered subdural hemorrhage, retinal hemorrhages, and hypoxic-ischemic encephalopathy. He concluded that Amber had died of SBS. Although in the 1980s the diagnosis of SBS was often made on the basis of the triad alone, this was not a triad case. The autopsy findings, which included a forehead bruise and a unilateral space-occupying subdural hemorrhage, provided clear pathology evidence of a blunt-impact – not a shaking – head injury.[4] Dr. Smith's failure to account for these

[4] The triad, as traditionally understood, involves bilateral subdural hemorrhage, not unilateral and space-occupying subdural hemorrhage as seen in Amber's case.

findings is discussed in more detail below. The point here is that, although the criteria for diagnosing SBS has evolved significantly from the 1980s to today, that evolution does not explain Dr. Smith's misdiagnosis in all of the head injury cases reviewed in detail by the Commission. In Amber's case, the pathology findings and the circumstantial evidence, which included a history of a fall, suggested an accidental fall. Dr. Smith wrongly diagnosed SBS on the basis of the triad, when, in fact, the triad, as traditionally understood, was not present at all.

In Tyrell's case, Tyrell's caregiver reported that he had been jumping on the couch, had slipped, and had fallen backwards, hitting his head on the marble coffee table or the tiled floor. Dr. Smith rightly concluded that Tyrell had died of a head injury. However, he failed to recognize that the pathology findings supported the position that Tyrell had suffered a *contre coup* brain injury, which is classically associated with a backward fall. When people hit the back of their head, they may suffer some bruising to the scalp or a skull fracture at the point of impact. However, the brain damage is commonly on the opposite side (*contre coup*), since the impact drives the brain forward within the skull. Tyrell had bruising to the back-left side of his scalp and a contusion to the right frontal lobe of his brain. Dr. Smith failed to correlate these pathology findings with a *contre coup* injury, and he concluded incorrectly that Tyrell could not have fallen in the manner suggested by his caregiver.

Moreover, in 2000, when he testified for the Crown at the preliminary hearing of Tyrell's caregiver, Dr. Smith wrongly asserted that the caregiver's explanation could not possibly account for Tyrell's injuries. He went as far as telling the court that the literature suggested that children do not die from a fall of less than three or four storeys. This was clearly wrong. By 2000, there had already been a number of anecdotal reports of small household falls causing serious injury and even death in infants and children. Dr. Smith's unequivocal opinion failed to reflect the state of the knowledge in 2000.

Accounting for Contradictory Evidence

As the expert reviewers made clear, forensic pathologists must consider all relevant evidence in reaching an opinion on the cause of death – both evidence that supports a particular diagnosis and evidence that contradicts it. The pathologist must begin each autopsy without preconception and follow the evidence to a conclusion. Some findings might suggest one diagnosis, and other findings might suggest another. In those circumstances, the pathologist's task is to take account of all the evidence and determine if a diagnosis can be made in the circumstances. Where contradictory evidence continues to exist, the pathologist must consider how and to what extent that evidence undercuts any proposed conclusion.

Although the presence of contradictory evidence may not necessarily preclude a diagnosis, it requires the pathologist to consider whether the diagnosis is the correct one. In all cases, pathologists must determine whether the contradictory evidence affects their opinion, and why. Failing to do so risks overlooking important information and ultimately misdiagnosing the case.

Similarly, pathologists must take into account any evidence learned subsequent to completing the report of post-mortem examination. They must consider the new evidence in light of the old and determine if and how it affects the opinion already given. If it does, they must be willing to change that opinion accordingly.

In several cases, Dr. Smith failed either to account for contradictory evidence in arriving at his opinion or to consider adjusting his opinion to take new information into account. These failures contributed to misdiagnoses with significant consequences.

In Amber's case, Dr. Smith concluded that a short fall down the stairs could not account for her fatal head injury. Instead, he concluded that Amber had been shaken to death. As described above, Dr. Smith made three key observations at the autopsy that supported his conclusion: subdural hemorrhage, retinal hemorrhage, and hypoxic-ischemic encephalopathy. Many believed in the late 1980s that this triad of findings was diagnostic of shaken baby syndrome. There was, however, also evidence that was inconsistent with the diagnosis of shaken baby syndrome.

At the post-mortem examination, Dr. Smith observed several bruises to Amber's forehead, her cheek, her hip, and her legs. The expert reviewers found such bruising, particularly the forehead bruise, as indicating an impact, not a shaking, injury. Dr. Smith gave these findings little weight at the trial. He told the court that "very little bruising" was present and that the forehead bruise was in a location where one would expect to find a bruise in a child of Amber's age. He assumed, on the basis of a statement made by Amber's mother, that the forehead and cheek bruises were present before Amber's collapse. He also dismissed the bruises to her hip and legs as being trivial and independent of both each other and an alleged fall.

In fact, several defence experts testified at the trial that the forehead bruise that Dr. Smith dismissed as insignificant was actually a very significant subgaleal bruise. Moreover, it was something that one would expect to find after a fall. In his reasons for judgment acquitting Amber's babysitter, Justice Dunn criticized Dr. Smith for assuming that the forehead and cheek bruises predated Amber's collapse. Justice Dunn found that Dr. Smith did not know enough about the case to justify his assumption.

Further, the subdural hemorrhage was unilateral – that is, it was more on one side than the other. In the majority of shaken baby syndrome cases, however, there is hemorrhage on both sides of the brain. The finding of unilateral subdural hemorrhage undercut the shaking diagnosis and supported the conclusion that Amber had suffered an impact injury, perhaps from a fall.

A surgeon operated on Amber's brain and removed a subdural hematoma (blood resulting from the subdural hemorrhage). The surgeon described the removed hematoma as "very large" and "very extensive." He did not send it for pathological testing, however, so he did not have the hematoma's exact measurements. The international experts told me that, typically, in shaking cases, the blood resulting from the subdural hemorrhage forms a thin film over the brain's hemispheres. The surgeon's observation of a very large and extensive hematoma was, therefore, atypical of a shaking case. When confronted with this contradictory evidence during the trial, Dr. Smith pointed to the absence of an exact measurement of the hematoma and countered that a seemingly large blood clot is sometimes not really so large when examined "in the relaxed light of day." In my view, his response was inadequate. Dr. Smith was asked to consider and explain how a finding of a large subdural hematoma would affect his analysis. Instead, he attacked the accuracy of the surgeon's observation although there was nothing to suggest that the surgeon had described the hematoma incorrectly.

Finally, there was additional evidence that Dr. Smith should also have considered in arriving at his diagnosis. A pathologist must consider the victim's physical attributes in a shaking case. At trial, however, Dr. Smith testified that he diagnosed shaken baby syndrome before he knew Amber's size and weight. Although he acknowledged that it would be more difficult to injure a child of Amber's age (16 months) than a younger child, he told the court that Amber's age did not cause him to rethink his diagnosis. At the Inquiry, Dr. Helen Whitwell, a widely respected forensic neuropathologist, gave her opinion that Dr. Smith should have considered Amber's physical attributes before diagnosing shaken baby syndrome, and that Amber's age should have caused him to reconsider whether she had been shaken to death.

I accept that the presence of the triad was considered by some to be diagnostic of shaken baby syndrome in the 1980s. However, Dr. Smith failed to consider seriously all the available evidence, particularly evidence that was inconsistent with his opinion.

In Nicholas' case, Dr. Smith failed to reconsider his initial diagnosis despite the discovery of new information. He prepared a consultation report in January 1997, after he reviewed the initial autopsy findings, and concluded that Nicholas' death was attributable to blunt head injury. He did so based on five main find-

ings: cerebral edema, increased head circumference, a scalp injury, splitting skull sutures, and a left-sided mandibular fracture.

At the Inquiry, Acting Inspector Robert Keetch of the Greater Sudbury Police Service testified that he provided Nicholas' medical records to Dr. Smith in May 1997. These records demonstrated that Nicholas had a large head throughout his life and that his post-mortem head circumference was what one would expect. It was not "increased." Moreover, when Dr. Smith examined Nicholas' body after exhumation, he confirmed that there was no mandibular fracture. As a result, the five findings on which Dr. Smith relied in arriving at his original diagnosis were reduced to three. This new information did not appear to alter Dr. Smith's thinking, however.

In his report of post-mortem examination, dated August 1997, Dr. Smith gave his opinion as before – that the cause of death was cerebral edema, consistent with a blunt head injury – despite elimination of two of the factual underpinnings of the diagnosis. Indeed, Dr. Smith continued to refer to his original finding of an "increased" head circumference in his August 1997 report and wrote that the exhumation was due in part to that very finding.

In my view, Dr. Smith's failure to reconsider his initial opinion in light of the new and contradictory information was problematic. Indeed, his reaction to Nicholas' medical records, which demonstrated that Nicholas' head circumference had always been large, was similar to his reaction in Amber's case. He continued to maintain, as late as March 2001 in a letter to the CPSO, that Nicholas' head circumference was "clearly abnormal." When pathologists arrive at a diagnosis on the basis of the autopsy findings, they must be willing to revisit that diagnosis when those findings are challenged by other evidence. In several cases, Dr. Smith did not.

The failure to seriously consider additional evidence that contradicts an initial diagnosis is symptomatic of what is known as confirmation bias. This bias must be avoided at all costs. At no time is it the task of the forensic pathologist to find evidence to confirm or deny a theory. Rather, it is to approach a case with an open mind and to let the evidence lead the way. As I discuss in Volume 3, the profession must guard against confirmation bias in forensic pathology.

Use of Default Diagnosis

A default diagnosis is one that is assumed to be correct because the evidence does not exclude it. It must not be confused with diagnosis by exclusion, a traditional method of medical reasoning, which arrives at a diagnosis by using the evidence to eliminate the other diagnostic possibilities. For example, assume a case where

the only medical findings are X, Y, and Z, and the only possible diagnoses are 1, 2, and 3. A doctor using diagnosis by exclusion would reason as follows: findings X, Y, and Z exclude 2 and 3, but do not exclude 1. Therefore, the diagnosis is 1. A doctor using a default diagnosis would say simply: X, Y, and Z do not exclude 1. Therefore, the diagnosis is 1. In the latter circumstances, concluding that 1 is the correct diagnosis would be arbitrary and misleading. This form of reasoning has no basis in science.

As the expert reviewers made clear to me, it is problematic for a forensic pathologist to use a default diagnosis approach. Just because there is no evidence to exclude a diagnosis does not mean that it is the only possible conclusion. Relying on a default opinion is therefore unscientific.

In cases like Valin's and Nicholas', Dr. Smith concluded that his post-mortem findings were the result of non-accidental injury because there was no explanation of accidental injury that he regarded as credible. His reasoning in these cases is one variant of the default diagnosis approach. It makes non-accidental injury the pathologist's default position and puts the onus on others to exclude it. This approach becomes even more troubling when transposed into the criminal justice system.

In Valin's case, Dr. Smith and a SCAN physician reviewed the autopsy photographs and wrote a joint consultation report, dated August 6, 1993. In their report, they noted that Valin's anus was gaping with a large opening and that there appeared to be fissures inside. They wrote, "In the absence of a history of severe constipation, these findings would be suggestive of anal penetration, likely forceful, by a round blunt object." The SickKids doctors also noticed bruising to Valin's face and upper chest and concluded: "In the absence of a reasonable explanation by history, [the findings] indicate non-accidental trauma, including sexual abuse."

In Nicholas' case, Dr. Smith initially wrote a consultation report, finding that Nicholas had cerebral edema, an increased head circumference, splitting skull sutures, a fracture to the left side of his mandible, and a scalp injury. He concluded: "In the absence of an alternate explanation, the death of this young boy is attributed to blunt head injury." After Nicholas was exhumed, Dr. Smith performed a second post-mortem examination. In his report of post-mortem examination, he wrote that there was discolouration along Nicholas' skull sutures. He concluded: "In the absence of a credible explanation, in my opinion, the post-mortem findings are regarded as resulting from non-accidental injury." Dr. Smith employed similar reasoning in the cases of Amber, Tiffani, and Tyrell. His reasoning is contrary to the evidence-based approach to forensic pathology. Under an evidence-based framework, forensic pathologists begin from a position of objec-

tivity, have an open mind, and consider all the possibilities before arriving at a conclusion. They do not assume a diagnosis in the absence of another explanation and do not place the onus on others to locate contradictory evidence. The use of the default diagnosis is another systemic failing that must be guarded against in the future.

The Report of Post-Mortem Examination

Forensic pathologists prepare a report of post-mortem examination for every coroner's autopsy they perform. The purpose of the report is to convey, in writing, what they found at the autopsy and their opinion as to the cause of death. Pursuant to s. 28(2) of the *Coroners Act*, pathologists must report their findings in writing only to specific individuals: the coroner who issued the warrant for post-mortem examination, the regional coroner, the Chief Coroner, and the Crown attorney. However, other persons or institutions, including family members, the investigating police force, defence counsel, and child protection agencies, may eventually receive and rely on the pathologist's report.

The reports prepared by many Ontario pathologists had a number of serious shortcomings in the 1980s and 1990s. In this section, I consider those shortcomings by looking at the reports prepared by Dr. Smith in the cases we examined. I want to emphasize that, for the most part, those shortcomings were not limited to Dr. Smith. Many of the problems associated with his reports were symptomatic of a much larger systemic problem. In many respects, Dr. Smith's reports were not unique and were, instead, indicative of how inadequate post-mortem report-writing practices were in Ontario at the time.

The Limitations of Form 12 and Form 14

Until 1999, the format for the report of post-mortem examination was prescribed by the regulations to the *Coroners Act*. In the 1970s, the prescribed form was called a Form 12. Throughout the 1980s and 1990s, it was a Form 14. The two forms were virtually identical. Both required the pathologist to fill out the following sections: who identified the body and who was present at the autopsy; the observations made during the external and internal examinations; the X-ray, microscopic, and laboratory findings; and a summary of the pathologist's abnormal findings. The forms concluded with a final statement setting out the pathologist's opinion on the cause of death. Because they were virtually identical, in this discussion I will simply call them the Form.

In the 1980s and 1990s, pathologists tended to follow the template set out in

the Form. As a result, reports of post-mortem examination typically included a list of the pathologist's observations, a final conclusion on the cause of death, and nothing else. In 1999, the regulation requiring a form was repealed, and the legislature has not replaced it. As a result, since 1999, the *Coroners Act* has not specified the contents of the report of post-mortem examination. Up to that time, however, the Form was used and was the source of problems.

Limitations Related to History and Explanation

The Form did not require pathologists to include the history and circumstantial information on which they may have relied to form a diagnosis or to explain their reasoning process. Dr. Smith's reports followed this approach. The failure to include such information is inconsistent with an evidence-based approach to forensic pathology, which requires a consideration of the history and the autopsy findings as well as the research and literature published on the topic. The pathologist essentially reasons from that evidence base to a conclusion. A report of post-mortem examination that includes only a recitation of the autopsy findings and a concluding statement as to the cause of death fails to set out those two important elements of the evidence-based approach to forensic pathology.

This approach is exemplified by the report of post-mortem examination completed by Dr. Smith in Baby M's case. Dr. Smith presented a summary of abnormal findings, which listed:

1. Asphyxia (infanticide), with
   - 1.1 Body found in toilet (full term pregnancy)
   - 1.2 Air in lungs and stomach
   - 1.3 Focal hemorrhage, soft tissues of neck
   - 1.4 Petechial hemorrhages of
     - 1.4.1. Thymus
     - 1.4.2. Pulmonary pleura
     - 1.4.3. Epicardium
   - 1.5 Cerebral edema, minimal

The cause of death was identified as "Asphyxia (Infanticide)." Dr. Smith did not include an explanation or reasoning for his findings. Such a minimalist report limits the ability of another person to review the pathologist's opinion. The reviewer would not know what information the pathologist relied on, nor would a reviewer know how the pathologist reasoned from the observations and findings listed to the ultimate conclusion. Indeed, one of the difficulties that the expert reviewers encountered with Dr. Smith's reports was in determin-

ing whether and how specific autopsy findings affected his diagnosis of the cause of death.

That said, I do not fault Dr. Smith for failing to incorporate the relevant history and for not explaining his reasoning process. Given that the Form did not request such information and that the practice of pathologists in Ontario was not to incorporate it, Dr. Smith's reports were in keeping with the practice at the time. This inadequate reporting was clearly a systemic failing.

Limitations Related to Opinions

The Form did not require pathologists to include an opinion on any issue other than the cause of death – such as the timing or mechanism of the injuries – even if it was central to the case. Despite the fact that the police often asked Dr. Smith to provide his opinion on such important issues, his post-mortem reports in the cases before me did not contain these opinions.

The timing of the fatal injuries was of critical importance to the investigation in Jenna's death. If Jenna was injured before 5 p.m. on the day before she died, her mother was implicated. If she was injured after 5 p.m., her babysitter was implicated. The police, Crown counsel, and defence counsel repeatedly asked Dr. Smith for his opinion on the timing of Jenna's injuries. However, his report of post-mortem examination, the only time he offered his opinion in writing, did not address this issue.

In my view, the pathologist's opinion on important issues other than the cause of death should be incorporated into the post-mortem report or set out in a supplementary report. Opinions must be committed to writing to crystallize the diagnosis and ensure that all those involved, including defence counsel, are aware of the pathologist's opinion on the issue. Defence counsel must be provided with this significant information well in advance of the preliminary hearing or the trial.

Again, I want to emphasize that Dr. Smith was not alone in his approach. The Form did not request information relating to issues other than the cause of death, and pathologists typically did not volunteer such information in their reports.

Limitations Related to Consultations with Other Experts

The Form did not require the pathologist to include a description of the procedures followed, the material collected, or any consultation opinions obtained from other experts. Dr. Smith rarely recorded such information in his reports of post-mortem examination. The evidence suggests that pathologists typically engaged in corridor conversations and informal consultations with other experts. Those conversations and consultations were rarely, if ever, recorded in

the pathologist's report. Dr. Smith's inadequate reports were, once again, in keeping with the typical practice at the time and exemplified a systemic failing.

Several cases illustrate the importance of recording consultation opinions obtained by the pathologist in the report of post-mortem examination. In Nicholas' case and Jenna's case, an issue arose as to whether Dr. Smith had in fact obtained the opinion of another expert. In both cases, he did not record the purported consultation in his report, and the expert consulted could not specifically recollect her or his involvement in the case.

In Nicholas' case, Dr. Smith performed the second autopsy in August 1997. A pathologist retained by Nicholas' mother and grandfather alleged that Dr. Smith should have consulted with a neuropathologist but failed to do so. In June 1998, Dr. Smith responded that Dr. Venita Jay, a neuropathologist at SickKids, reviewed the case and gave her opinion to him verbally. She did not issue a written report on the case. Dr. Smith did not document the consultation in his own report or notes. When asked about her involvement, Dr. Jay acknowledged that she may have been involved in Nicholas' case in a peripheral, incidental way, but had no specific recollection of it or of any opinion she offered.

Similarly, in Jenna's case, Dr. Smith alleged that he had consulted Dr. Huyer of the SCAN team during the autopsy, performed in January 1997, to consider if there was evidence of sexual abuse. Dr. Smith did not document the consultation in his report, and, when asked about the case, Dr. Huyer had no specific recollection of being involved.

In Amber's case, the failure to record a consultation caused a related problem. Dr. Smith performed the autopsy in August 1988 and testified at the trial of Amber's babysitter in February 1990. The trial judge acquitted the babysitter in July 1991. Six months later, the SCAN team at SickKids held a meeting to review and discuss the decision. During this meeting, Dr. Smith claimed, for the first time, that he had consulted with an expert in the United States. He did not record that fact in his report of post-mortem examination and did not inform Crown counsel of the consultation. Terri Regimbal, the lead prosecutor in the case, learned of this alleged consultation for the first time at that meeting. At the Inquiry, Ms. Regimbal testified that, had she been aware of the consultation before the trial, she likely would have spoken with the consulting expert and considered calling her or him as a witness at the trial.

It is essential that pathologists indicate if they have consulted with any other experts. If the consultation opinion informs their diagnosis, they must say so. Such acknowledgment permits a reviewer to know the entire evidence base on which the pathologist relied. Without it, the ability to review the case is significantly undermined. Such acknowledgment also permits the Crown and defence

counsel to learn that another expert has provided an opinion and to speak with him or her directly, to determine how that expert's opinion affects the case.

The Use of Parentheses

In several cases, Dr. Smith's reports of post-mortem examination contained findings listed in parentheses. He appeared to use parentheses in two ways. First, he sometimes included medical observations in parentheses. For example, in his report on Kasandra's case, he listed "(Status epilepticus)," "(Retinal detachment, bilateral)," and "(Cerebral atrophy)" as abnormal findings. Second, he sometimes included legal conclusions within parentheses. For example, in Baby M's case he included "Asphyxia (infanticide)" as an abnormal finding. Although both usages lack transparency, the second usage is much more problematic.

At the Inquiry, Dr. Smith explained that he used parentheses to denote information that he could not prove or verify by post-mortem examination but that could serve to explain some of the anatomical findings observed at autopsy. He said he learned the convention as a pathology resident at the University of Saskatchewan but also saw it in practice when he was at the University of Toronto. Dr. Pollanen told us that, for hospital autopsies, University of Toronto residents were taught to list in parentheses information communicated to them – for instance, from the hospital chart – that could not be independently verified at autopsy.

None of the expert reviewers was aware of the convention, and all disapproved of the practice. To include pure speculation in the form of apparent findings is inappropriate, even if the pathologist encloses them in parentheses. Someone reviewing Dr. Smith's report in Tiffani's case, for instance, would not have known that the finding of malnutrition was not substantiated. Instead, a reviewer would likely conclude that malnutrition was just like the other findings listed in the report, or at the least, an opinion based on the pathology findings made at autopsy.

It is true that pathologists may consider and rely on information communicated to them by others. Sometimes, pathologists have to consider and rely on information that they did not personally observe. This may be particularly true where the pathologist is performing a second post-mortem examination following exhumation or is providing a consultation opinion. However, placing such observations in parentheses does not communicate this limitation to a reader. It can be misleading for readers of the post-mortem report, who include physicians, police officers, lawyers, judges, and family members. Without an indication of what the pathologist meant by placing certain terms and phrases in parentheses,

readers will not understand that the "findings" contained in parentheses actually were not made by the pathologist during the autopsy, and the risk of misinterpretation is significantly increased.

Dr. Smith's use of parentheses to surround legal conclusions, however, is much more problematic. In Baby M's case, Dr. Smith listed the cause of death as "Asphyxia (infanticide)." Similarly, in his report in Katharina's case, Dr. Smith listed "Asphyxia (filicidal)" as an abnormal finding. Dr. Smith's use of parentheses in these cases went well beyond his own explanation because infanticide and filicide are not medical findings, but legal conclusions. There are at least three objections to this practice.

First, pathologists should never include a legal conclusion in a report of post-mortem examination. Legal conclusions are outside of their expertise. There is no convention to support the inclusion of legal conclusions in parentheses, and doing so has the potential of interfering with the proper functioning of the criminal justice system.

Second, when using those terms, Dr. Smith was simply speculating about who may have caused the death of the infant or child. Dr. Crane and Dr. Milroy testified that the pathologist's duty is to consider and document the objective findings made at autopsy in his or her report. To include pure speculation in the form of findings that cannot be substantiated is inappropriate, even if the pathologist encloses them in parentheses.

Third, there is the same issue of transparency described above. When terms are placed in parentheses, the pathologist must communicate to the reader what those parentheses mean. Otherwise, readers unfamiliar with the convention risk misinterpreting the pathologist's opinion and the level of certainty with which the opinion is held. The placement in parentheses of legal conclusions and speculative "findings" – which have no place in a report of post-mortem examination – only compounds the problem and adds to the potential confusion.

Although I accept that some medical schools teach their pathology residents to use parentheses for clinical cases in the manner described by Dr. Pollanen, the convention is taught in the context of hospital autopsies, not coroner's autopsies. In my view, such a convention should not be used in the forensic context.

Inclusion of an Opinion on the Manner of Death

In Ontario, the pathologist opines on the cause of death, while the coroner is responsible for determining both the cause and the manner of death. The five categories of manner of death used by the OCCO are natural, accident, suicide, homicide, and undetermined.

Despite this division of responsibility between the pathologist and the coroner, Dr. Smith occasionally provided an opinion on the manner of death in his reports of post-mortem examination. He did so in Baby M's case, opining that "Asphyxia (infanticide)" was an abnormal finding. Similarly, in Baby F's case, Dr. Smith attributed the death to "infanticide" in his consultation report. And, in his report in Katharina's case, Dr. Smith listed "Asphyxia (filicidal)" as an abnormal finding. These terms, infanticide and filicide, point to a manner of death – homicide. Indeed, infanticide, which is a legal term, implies the wilful killing of a newborn child by his or her mother. Filicide also points to the perpetrator of the homicide – a parent.

At the Inquiry, Dr. Pollanen pointed out that, although an opinion on the manner of death is not officially within the scope of the pathologist's task, pathologists are often asked to address the manner of death in some way, since that is what interests the criminal justice system. Indeed, the pathologist might give an opinion on the manner of death indirectly in the interpretation of the findings – for instance, by suggesting that the distribution and extent of the injuries indicates that they are non-accidental. In some circumstances, the cause of death might point necessarily to a manner of death. For example, a medical cause of death might lead inevitably to a conclusion that the manner of death was natural. Or a diagnosis of manual strangulation might direct the coroner to a conclusion of homicide.

All the experts agree that, in no circumstances, should pathologists express a conclusion as to the manner of death in the form of a finding in their post-mortem report. To do so would clearly go beyond the boundaries of the pathologist's duty – to consider primarily the pathology evidence and to arrive at a pathology opinion on the cause of death. In my view, Dr. Smith's inclusion of an opinion on the manner of death in the cases listed above was wrong and beyond his professional competence. At no time should a pathologist make a "finding" that the death was due to homicide, no matter how overwhelming the circumstantial evidence.

Reporting in a Timely Fashion

Subsection 28(2) of the *Coroners Act* requires the forensic pathologist to deliver the post-mortem report in a coroner's case "forthwith." In reality, however, the importance of producing the report forthwith varies, depending on the case. In criminally suspicious cases, timely reporting is critical because members of the death investigation team may need the pathologist's written opinion in order to make important decisions, such as whether to lay criminal charges. In cases where

charges have been laid before the pathologist's report is finalized, the Crown must receive the report in a timely manner to provide disclosure to the defence.

Of course, the significance of timely reporting is not limited to its effect on the death investigation and on any criminal proceedings. Family members will normally be anxious to receive the pathologist's report to understand the cause of a loved one's death. Addressing those anxieties in a timely fashion is also an important goal. However, in cases that raise no criminal suspicions, the receipt of the post-mortem report may be less time sensitive, particularly where the pathologist has already provided an opinion verbally to the coroner and the police, and the coroner has passed that opinion on to the family.

The report of post-mortem examination is not the only report that pathologists are responsible for producing. In some cases, after the pathologist has completed the report of post-mortem examination, Crown counsel may request an additional opinion in writing. There may be several reasons for this request. Crown counsel may seek clarification of the pathologist's opinion. Or Crown counsel may want an opinion on an issue not addressed in the report of post-mortem examination. Alternatively, the pathologist may receive or discover important information after the report has been completed that may affect the opinion expressed in the report. The pathologist should provide any supplementary report to the Crown in writing and in a timely manner for the reasons I have identified above: it avoids misinterpretation, enables independent review, allows the death investigation team to make important decisions, and permits disclosure.

In the 1980s and 1990s, delays in the production of pathologists' post-mortem reports represented a system-wide problem in Ontario. Typically, post-mortem reports took several months to complete. In the mid-1990s, the average turnaround time for post-mortem reports at the OPFPU ranged from four to five months. Two common sources of delay were the time required for ancillary testing that must precede report preparation and the heavy workloads of pathologists performing coroner's autopsies at the time. In 1995, the OCCO issued the 1995 Infant Death Investigation Protocol under which toxicology testing became mandatory in all pediatric autopsies where an anatomical cause of death could not be clearly established. In the 1990s, toxicology tests typically took between nine and 16 weeks to complete, and the OCCO's policy was that the pathologist could not complete the post-mortem report until the toxicology test results were received. Delays due to toxicology testing were largely outside the pathologists' control, but they added to the turnaround times.

Most pathologists in those years attempted to manage their delays by dealing with things within their control. They prioritized criminally suspicious and

homicide cases, and tried to respond promptly to requests made for a specific report. In this way, pathologists dealt with the system-wide problem on an ad hoc basis. Although their approach did not resolve the problem, for the most part it was a satisfactory solution. Coroners, police officers, and Crown and defence counsel received the post-mortem reports they needed when those needs became most urgent.

Dr. Smith, however, failed to produce his post-mortem reports or supplementary reports in a timely manner in many of his coroner's cases. In some instances, his delays reached between eight and 10 months, double the average turnaround time at the OPFPU. In contrast to most pathologists, Dr. Smith did not deal with his delays in a satisfactory way. He continued to delay despite numerous and repeated requests for his reports, even when the urgency of the need was clear.

At the Inquiry, Dr. Smith acknowledged his numerous delays and attributed them to his disorganization and his tendency to procrastinate, together with his unpredictable and at times onerous workload. However, this explanation cannot be the full story. Unlike other pathologists, Dr. Smith ignored repeated requests for his reports even when he knew they were needed urgently by the criminal justice system. He frequently blamed others for his delays. In three cases, Dr. Smith produced his report of post-mortem examination only after the police had obtained a subpoena requiring him to bring his report with him to court. In another case, he produced a report only after a judge had made an order compelling him to do so. In my view, this record simply demonstrates a complete disregard for the needs of the death investigation team and of the criminal justice system.

In Tiffani's case, Dr. Smith ignored the requests for both his report of post-mortem examination and a supplementary report. He performed the second autopsy in the case on July 13, 1993. Throughout November 1993, the police repeatedly requested his report, to no avail. Eventually, in January 1994, the police obtained a subpoena requiring him to appear in court two weeks later. Dr. Smith finally produced his report of post-mortem examination to the police almost a month after receiving the subpoena. That was six-and-a-half months after he performed the autopsy, and three months after the police initially requested his report.

In his report of post-mortem examination Dr. Smith concluded only that Tiffani had died of asphyxia. He spoke with Crown counsel several times before and after the release of this report. During those conversations, he provided a more detailed opinion on what had caused Tiffani's death. In April 1994, in preparation for the preliminary hearing in the case, Crown counsel Sheila Walsh wrote to Dr. Smith and requested a supplementary opinion in writing. She set out

her understanding of his new conclusions and requested that he address these issues in a supplementary report. Dr. Smith did not reply to that letter or a follow-up letter. Then, at some later point, Ms. Walsh reached him by phone. He informed her that he had consulted counsel at the coroner's office, and that he was under no obligation to provide anything in writing other than the report of post-mortem examination that he had already prepared.

Four weeks after receiving Ms. Walsh's request, Dr. Smith finally responded in writing. He wrote that Tiffani had suffered an asphyxial mode of death, but that asphyxia on its own did not necessarily indicate that the death was accidental or non-accidental, as it could also result from natural disease. According to Dr. Smith, the autopsy findings did not indicate the cause of the asphyxia. Although the findings "were consistent with" a non-accidental event, such as suffocation, they did not rule out the possibility of a natural cause.

In my view, Dr. Smith's delay in producing his report of post-mortem examination and his further delay in clarifying his opinion in writing exemplify systemic problems that must be fixed. The police should not have to resort to a subpoena to get a pathologist to produce a report on the case. In addition, when Crown counsel specifically requests a clarification of a pathologist's opinion in writing, the pathologist must, acting professionally, comply promptly with the request. It is unacceptable for pathologists to be the cause of further delay in the criminal justice system.

In Taylor's case, Dr. Smith also caused inexcusable delays. Dr. Smith was consulted for a second opinion in August 1996. The police and Crown counsel repeatedly and unsuccessfully asked him to provide his report. Eventually, nine-and-a-half months later, on the eve of the preliminary hearing, the judge ordered the Crown to produce Dr. Smith's report. Faced with the judge's order, Dr. Smith finally responded. He signed his consultation report three days later and sent an unsigned copy of it to the police the next day.

Similarly, in Sharon's case, Dr. Smith did not produce his report of post-mortem examination until he received a subpoena to bring it to court. He performed the autopsy in June 1997. By December 1997, the police and regional coroner had made several unsuccessful requests for the report. In December and January, Dr. Smith failed to acknowledge letters from defence counsel requesting the report. At the end of January 1998, Crown counsel Jack McKenna also wrote to Dr. Smith, stating: "We have been delaying defence counsel for some time. Indeed, he threatened to subpoena you at an earlier date to get the report. It has now become a bit of an embarrassment for my office." Dr. Smith did not reply to Mr. McKenna either. In the second week of February 1998, the police delivered a subpoena to Dr. Smith, requiring him to attend court with his report in early

March. Two days before his scheduled court date, Dr. Smith completed his report of post-mortem examination and faxed it to the Crown.

Finally, Athena's case provides the starkest example of both Dr. Smith's failure to complete his reports in a timely fashion and his refusal to cooperate with the police and Crown counsel. In this case, there were two reports at issue: the report of post-mortem examination and a supplementary report.

Dr. Smith performed the autopsy on Athena in March 1998. Six weeks later, he submitted samples of Athena's blood, liver, and stomach contents to the CFS for analysis. It is not clear why Dr. Smith waited this long to submit the samples, and he should not have done so. The CFS toxicologist then took five months to complete the requisite testing and to produce the toxicology report. That length of time is also too long. Dr. Smith completed his post-mortem report one month after receiving the toxicology report. There was a seven-and-a-half-month delay between the autopsy and the production of Dr. Smith's post-mortem report.

Many months later, in July 1999, Dr. Smith met with the police and Crown counsel. During the meeting, Dr. Smith provided an overview of the timing of Athena's injuries, including an acute injury to the liver. Dr. Smith told the police and Crown counsel that the liver injury likely took place within 12 hours of Athena's death. Athena's parents had told the police that they were with Athena during the entire 24-hour period before her death. In light of Dr. Smith's opinion on the timing of the liver injury, the police believed they had reasonable and probable grounds to charge both parents with second-degree murder. But they wanted Dr. Smith's opinion in writing. Shortly after the meeting, Detective Sergeant Matthew Crone of the Toronto Police Service asked Dr. Smith to prepare an addendum to his initial report, outlining his opinion on the timing of Athena's injuries.

Thereafter, Detective Sergeant Crone contacted Dr. Smith numerous times, both by phone and in writing. At the end of October 1999, Detective Sergeant Crone phoned Dr. Smith, who said he would have the addendum ready that evening. Dr. Smith did not produce it that evening. The next week, Detective Sergeant Crone phoned Dr. Smith again and left him a message. Dr. Smith did not return the call. Four weeks later, Detective Sergeant Crone phoned Dr. Smith one more time. Dr. Smith advised that he would have the addendum ready the next day. He did not.

In February 2000, Detective Sergeant Crone sent a letter to Dr. Smith to formally request the addendum. He indicated that proceedings against Athena's father had been delayed because of Dr. Smith's failure to produce an addendum: "[T]he situation is now critical and I must formally request, in the strongest possible terms, that the additional information I have requested be forwarded to

me as soon as possible." Even faced with such a strongly worded letter, Dr. Smith did not respond.

In the middle of March 2000, Crown counsel wrote to Dr. Smith. She told him that, unless the Crown provided Dr. Smith's addendum, the defence would bring a motion to stay a previously laid charge of manslaughter against Athena's father on the basis of the delay. The matter was to be dealt with in the court in early April 2000. Again, Dr. Smith did not respond. A week before the April court date, Detective Sergeant Crone asked a member of the police service to deliver a subpoena to Dr. Smith, requiring him to appear in court. Later that day, Dr. Smith finally faxed his one-and-a-half-page addendum to Detective Sergeant Crone.

In May 2002, Dr. Smith spoke with a police officer about the reasons for the eight-and-a-half-month delay in producing this addendum. He told the officer that the request for the addendum was inappropriate because the cause of death was the only opinion that he was obliged to provide. He said that he had wanted legal advice before responding, which, he said, explained in part the delay.

Ultimately, on June 23, 2003, the trial judge, Justice W. Brian Trafford, stayed the proceedings against Athena's parents on the basis that the delay violated their *Charter* right to be tried within a reasonable time. On April 15, 2005, the Court of Appeal for Ontario dismissed the Crown's appeal from Justice Trafford's order. In its reasons for judgment, the Court found that the matter was delayed for the better part of two years because of Dr. Smith's failings. It found no justification for the eight-and-a-half months it took Dr. Smith to prepare the one-and-a-half-page addendum. Indeed, there was no reason why Dr. Smith could not have completed the addendum within a few days of the July 20, 1999 meeting.

At the Inquiry, Dr. Smith offered two explanations for his delay. In his written evidence, he stated that he lacked an appreciation of the rules of disclosure of evidence in criminal proceedings, and that he was under the impression he was not obliged to provide written reports on any matters other than the cause of death. He acknowledged that he might have been wrong, and that he ought to have clarified the expectations of him immediately and promptly prepared an addendum, whether or not it was his usual practice. In his oral testimony, Dr. Smith said that, by the time he was involved in Athena's case in 1998, he was aware that he should provide written supplementary opinions when requested. He conceded that, contrary to what he told the officer in May 2002, he did not seek a legal opinion on whether he had to complete a supplementary report in Athena's case. The problem in Athena's case, he said, was that he failed to make the addendum a priority.

I accept Dr. Smith's second explanation. By 1998, Dr. Smith knew the importance of complying with requests from the police and Crown counsel for a written opinion. Although I accept Dr. Smith's evidence that he found it a burden to

prepare a supplementary report, his failure to respond promptly to the requests made by the police and Crown counsel was inexcusable. His opinion on the timing of Athena's injury directly affected the police investigation and the Crown's prosecution of the case. As a professional, the pathologist has a duty to ensure that any reasonable requests from the police and the Crown are answered in a timely manner, regardless of how burdensome the requests may be.

Considered in isolation, Dr. Smith's delay and inaction in each of the cases of Tiffani, Taylor, Sharon, and Athena are troubling. Considered together, they demonstrate a pattern incompatible with the needs of the criminal justice system. The need to prevent this kind of conduct could not be clearer.

The evidence also shows that rather than candidly admitting the reasons for his delay, Dr. Smith unfortunately also often blamed others for his own failings. In Kenneth's case, Dr. Smith produced his report of post-mortem examination in April 1994, six months after the autopsy. In September 1994, he testified at the preliminary hearing in the case. Defence counsel questioned him about that six-month delay. Dr. Smith told the court that the main reason for the delay was a lack of administrative support at SickKids. He said, "thanks to the government cutbacks, I no longer have a secretary, so I have to actually type my own reports, and any report that gets out is because I have sat there at eight o'clock at night typing it myself." He testified that "I have to do all the work myself."

This explanation was simply not true. Dr. Smith never lost an assistant due to "government cutbacks" or otherwise. At no time was he required to type his post-mortem reports himself. Throughout the 1990s, he had administrative assistants available to him. They were diligent and more than willing to do the work assigned to them. In fact, Dr. Smith preferred to type his own reports.

Dr. Smith provided a similar account in Joshua's case. He performed the autopsy in January 1996. In the latter part of March, he told Sergeant Greg MacLellan of the Ontario Provincial Police (OPP) that he had completed his final post-mortem report, but it was waiting to be typed. He indicated that he had no administrative assistant, and that he was the only pathologist on the schedule for the next few days, so he was typing the report himself at home at night. This was untrue. Dr. Smith had access to an administrative assistant, and the 1996 schedule for pathologists showed that Dr. Smith was not the only pathologist on rotation for the few days following his conversation with Sergeant MacLellan. Despite this, when Sergeant MacLellan advised that he needed the report by the following Tuesday because court proceedings were scheduled for Wednesday, Dr. Smith responded that he did not think the report would be ready by then.

More generally, when senior members of the OCCO asked him about the reasons for his chronic delays, Dr. Smith told them the same story: he was very busy

and did not have sufficient administrative support at SickKids. Dr. Smith's statements about the insufficiency of administrative help were all untrue.

At the Inquiry, Dr. Smith acknowledged that there were occasions when he blamed others, particularly the support staff at SickKids, for this lack of timeliness and that he was wrong to have done so. He apologized to his assistants for implicating them. He admitted that he failed to make use of the administrative support available to him at SickKids. Moreover, because Dr. Smith had indicated that administrative support was an issue at SickKids, senior members of the OCCO spent time trying to remedy that situation, when they could have spent time addressing the real reasons behind his delays. This sorry problem of delay speaks to a troubling aspect of Dr. Smith's complex personality.

Pathologists' Interactions with Other Participants in the Criminal Justice System

Pathologists' interactions with other participants in the criminal justice system – police, Crown counsel, and coroners – are crucial to the smooth functioning of that system. Dr. Smith's interactions with these participants displayed another series of systemic problems in the practice of pediatric forensic pathology. In a number of cases, his early informal expressions of opinions to the police were too categorical, potentially skewing the criminal investigation. His recording of these interchanges was as haphazard as his note-taking at autopsy. Requests for timely responses to questions or for supplementary opinions were frequently met with procrastination or were ignored. These cases exemplify practices that can and did cause great difficulties for the criminal justice system. The systemic challenge is to ensure that they not continue.

Interaction with the Police at Autopsy

As described in Chapter 4, Investigation of Suspicious Pediatric Deaths, a forensic identification officer often attended the autopsy in a criminally suspicious infant death and briefed the pathologist on the available history and what the police had uncovered in the early stages of their investigation. Although there was a continuous exchange of information between the pathologist and the police, pathologists typically preferred to limit the police officer's involvement during the autopsy itself to taking photographs and collecting exhibits. Pathologists usually did not communicate their findings to the police during the external and internal examinations. Instead, they waited until after the autopsy, when they had a clearer, if preliminary, picture, before providing the police with their findings and opinion.

At the conclusion of the autopsy, the pathologist usually provided a preliminary opinion on the cause of death to the police and the coroner. When no cause of death was apparent, the OCCO expected pathologists simply to tell the police that the cause of death was "pending further tests." Unfortunately, not all pathologists followed this approach. Sometimes, rather than inform the police that they did not yet know what caused the child's death, pathologists gave speculative and unsubstantiated preliminary opinions.

In the 1980s and 1990s, pathologists tended to provide their preliminary opinions to the police verbally. However, some pathologists, like those at the Hamilton Regional Forensic Pathology Unit, had a tradition of also recording their preliminary opinions in writing. When the pathologist provided a verbal opinion to the police, the attending police officer usually tried to record exactly what the pathologist said about the cause of death to minimize the potential for misinterpretation. In several cases, Dr. Smith's interactions with the police at the autopsy caused difficulties.

In Joshua's case, Dr. Smith instructed Sergeant MacLellan not to take any notes during the autopsy. Because he saw note-taking as part of his job, Sergeant MacLellan ignored Dr. Smith's objection. He did not attempt to record precisely what was said. He simply recorded the names of the people who participated in the examination, the fact that both a police officer and a member of the SickKids team took photographs, the various times that events were taking place, the times that participants entered and left the autopsy room, and some of the basic activity that took place during the autopsy, such as the removal of the skull. At the Inquiry, Sergeant MacLellan testified that he believed it was important to record such information for continuity of evidence purposes. Since the participants at the autopsy were handling the body, he believed he should at least keep a record of their names. His notes were never intended to record what was said during the post-mortem examination.

In February 1997, during a meeting with Crown counsel, Sergeant MacLellan, and Dr. Smith, Crown counsel asked Dr. Smith about photographs taken by the SickKids staff person during the autopsy. Dr. Smith seemed unaware that photographs had been taken. Crown counsel then referred Dr. Smith to Sergeant MacLellan's notes on the point. At the Inquiry, Sergeant MacLellan recalled: "[Dr. Smith] turned to me, and you know, he was quite upset. He pointed his finger at me [and said], I told you not to take notes."

Dr. Smith's practice of discouraging police officers from taking extensive notes during the post-mortem examination was not unique. In the 1980s and 1990s, pathologists tended to discourage the police from taking notes of what was said during the autopsy. While they did not object to an officer making notes on

certain general matters, they disapproved of note-taking of the pathologist's comments during the examination.

I accept the rationale behind discouraging police officers from recording verbatim what the pathologist says during the autopsy – having someone who is not accustomed to post-mortem examinations and the pathology terms used during those examinations create a verbatim record of the autopsy could be the source of misunderstanding. To ensure that findings are not misunderstood and pathology terms are not misinterpreted, the pathologist should tell the police officers what to write down about the substantive findings made at the autopsy. Officers should not simply record everything they believe they hear.

That restriction does not apply to other, more generic features of the post-mortem examination. Certain information – who was present, when they came and went, whether photographs were taken and by whom, and what exhibits were collected, and so on – is vital to a police officer's function. Sergeant MacLellan is correct in pointing out that continuity is imperative, and that one way of preserving it is by recording properly who handled the body and when.

A second area of concern is that, on occasion, Dr. Smith expressed early informal opinions to the police in far too categorical terms. These errors had the effect of skewing the police investigation. In Kasandra's case, Dr. Smith performed the post-mortem examination and discovered a "donut-shaped" hemorrhage on Kasandra's scalp. After observing the shape of the injury, Dr. Smith told the police to search Kasandra's home for rounded items, such as a knob on a cupboard or something with a distinctive geometric shape that could have either a flat surface or a ring-shaped feature. The police took a woman's wristwatch from Kasandra's home to Dr. Smith, who found it to be a good match for the injury.

At the preliminary hearing in the case, Dr. Smith told the court that the configuration of the wristwatch was consistent with the configuration of the area of hemorrhage. It was therefore reasonable to conclude that the watch was responsible for the fatal blow to Kasandra's head.

This method of interpretation was wrong. At the Inquiry, Dr. Whitwell and Dr. Pollanen testified that Dr. Smith's overlay of the watch onto the scalp contusion was an incorrect and misleading approach to the interpretation of that wound. Although overlaying an object onto an injury might be useful in some circumstances – for example, where there is a patterned object and an external injury – it was inappropriate in this case because of the depth and location of the injury. The scalp contusion was not an external injury – it was in the deep tissues of the scalp, rather than the surface – and the presence of thick hair and scalp tissues altered the appearance of the injury, making such a technique useless. According to Dr. Pollanen, Dr. Smith's interpretation was really "a pseudoscientific wound-weapon

matching analysis." In this case, all that could be said from the scalp injury was that there was an impact of some sort. To suggest that a particular object caused the injury was misleading. Dr. Smith's suggestion to the police, made on superficial analysis, led to an improper, inaccurate, and misleading interpretation of the evidence. The suggestion should not have been given at all.

There is nothing necessarily wrong with providing information to the police, such as a suggestion for investigation or a preliminary opinion. Indeed, when appropriate, such an opinion can be of great assistance, but pathologists must speak cautiously. They must ensure that they have sufficient basis for their preliminary opinions and that they qualify those opinions appropriately. A failure to do so can cause lasting harm by skewing the police investigation.

Finally, Dr. Smith failed to document the preliminary opinions that he provided to the police. Again, he was not alone in doing so. In the 1980s and 1990s, many pathologists provided a preliminary opinion verbally rather than in writing. Although I understand that police officers were usually meticulous about recording a pathologist's preliminary opinion, the pathologist should also be. Such a record avoids confusion about what was in the pathologist's mind at the end of the post-mortem examination. Proper documentation of what the pathologist told the police after the autopsy ensures transparency. A resort to only verbal opinions, by contrast, makes a complete and comprehensive review of the case impossible.

Ongoing Communication with the Police

The exchange of information between the forensic pathologist and the police does not end at the post-mortem examination. In a case where criminal charges are laid, this communication will continue from the commencement of the post-mortem examination until the moment the pathologist testifies in court. Typically, when the pathologist performs the autopsy, the police investigation is still in its early stages. As that investigation unfolds, the police may uncover evidence that is relevant to the pathologist's opinion. Similarly, as the results of ancillary testing arrive following the autopsy, the pathologist may discover something that affects the initial opinion. The police want to know about any changes to that opinion, as they can affect the conduct of the investigation. It is imperative that the pathologist consider all the available evidence and provide a balanced and reasoned opinion that accurately reflects the current state of the evidence. Ongoing communication between the police and the pathologist is therefore critical.

Despite the importance of communication between the pathologist and the police, the reality was that such communication did not always take place in the

1980s and 1990s. In some cases, months went by without any exchange between them. At the Inquiry, several pathologists testified that, although the pathologist and the police exchanged a significant amount of information around the time of the autopsy, that communication tended to drop off rather sharply afterwards. In cases where the pathologist provided a preliminary opinion following the completion of the autopsy, the pathologist tended not to hear from the police until shortly before the preliminary hearing.

The cases examined by the Commission reveal two main issues with the ongoing exchange. First, when the pathologist does not provide the preliminary opinion to the police in writing, it becomes susceptible to misinterpretation. Without some documentation of the opinion, a review of the case becomes all the more difficult because the reviewer cannot tell what the pathologist or the police believed and when.

Second, pathologists must ensure that their opinions are soundly based at all times on the available pathology evidence. In some cases, Dr. Smith provided inappropriate preliminary opinions to the police. In others, he failed to assimilate important information garnered from the police investigation into his opinion, or provided opinions that were unsubstantiated on the pathology evidence. And, in one instance, he went well beyond the pathology evidence to say that certain characteristics indicated that the child's mother was a killer. Not only were these opinions wrong, they were also irresponsible. Pathologists must understand that their opinions can lead to significant consequences. Taking time to reflect and being cautious in the meantime are essential.

Both difficulties are exemplified in Tiffani's case and Joshua's case. In Tiffani's case, Dr. Smith performed the second post-mortem examination on July 13, 1993, after an exhumation. At the autopsy, he told the police that he had found some fractured ribs that were likely the result of direct blunt impact and that Tiffani had failed to thrive. However, further microscopic examinations were necessary before Dr. Smith could give an opinion as to the cause of death. The police charged Tiffani's parents with failure to provide the necessaries of life and aggravated assault.

After the autopsy, Dr. Smith spoke with the police and the Crown counsel on several occasions. A month after the autopsy, he told the police that he believed that the cause of death was "asphyxia," but more work would be required before he could determine how the asphyxia occurred. On January 17, 1994, before he had completed his report of post-mortem examination, Dr. Smith met with the regional coroner, the police, and Crown counsel. According to the statement of the police officer who was present at the meeting, Dr. Smith indicated that Tiffani had died of asphyxia, and that he suspected strangulation.

On February 25, 1994, after he had completed his post-mortem report, Dr. Smith met with the police, Crown counsel, and representatives of the OCCO. During that meeting, Dr. Smith indicated that he could not give a definite mechanism of death because insufficient material was available from the first autopsy. According to the notes of the police officer who was in attendance: "Suspects homicide but cannot absolutely scientific [sic] determination." Similarly, Crown counsel understood Dr. Smith's opinion to be that his findings "were consistent with" Tiffani having been intentionally suffocated, but that he could not rule out certain extremely rare diseases or disorders. One month later, the police arrested and charged Tiffani's parents with manslaughter, in addition to the earlier charges.

Just before the preliminary hearing, Crown counsel understood that Dr. Smith's opinion had changed. According to a memorandum to file prepared by the Crown counsel, Dr. Smith informed him in February 1995 that Tiffani's death could have been caused by a natural disease, but that it was difficult to tell because the initial autopsy had been inadequate. Although the death was consistent with suffocation, Dr. Smith could not prove on the pathology evidence alone that a crime had been committed. Crown counsel believed that Dr. Smith was "severely backtracking" from his original opinion.

On March 1, 1995, Dr. Smith testified at the preliminary hearing that Tiffani had suffered an asphyxial mode of death, but he did not know what caused the asphyxia. Tiffani's death could have been natural, accidental, or non-accidental. Tiffani's parents pleaded guilty to the charge of failure to provide the necessaries of life. The preliminary hearing judge discharged them on the manslaughter and aggravated assault charges.

The events in Tiffani's case reveal several problems with Dr. Smith's communications with the police and Crown counsel. As with the initial opinions that he offered in the autopsy room, Dr. Smith provided subsequent opinions verbally and did not keep a record of his communications. This conduct had the potential to create confusion. During the January 17, 1994, meeting, the police understood that Dr. Smith suspected that Tiffani had died of strangulation. However, in his written evidence at the Inquiry, Dr. Smith stated that he likely would not have said that, as there was no evidence to suggest that Tiffani had been strangled to death.

This case highlights the importance of providing opinions in writing to the police and Crown counsel. Significant problems can arise if the police or Crown counsel misunderstand the pathologist's opinion. The misunderstood opinion may lead the investigation in the wrong direction, or it may lead the police and Crown counsel to make incorrect decisions. In my view, had Dr. Smith provided

his January 17, 1994, opinion to the police in writing, the risk of misinterpretation would have been significantly reduced. The unfortunate reality is that Dr. Smith was not alone in his approach. In the 1980s and 1990s, pathologists tended not to provide such opinions to the police in writing, nor did they tend to document what they said to the police in their own records.

Moreover, to the extent that the police officers' and Crown counsel's notes accurately reflected Dr. Smith's opinions, the opinions were wrong. Dr. Milroy opined that there was never any evidence to support a reasonable suspicion of strangulation or suffocation. Dr. Smith's comments at the January and February 1994 meetings were therefore incorrect. His unsubstantiated opinions had important consequences, however. They led, at least in part, to the police arresting and charging Tiffani's parents with manslaughter.

In Joshua's case, Sherry Sherret, Joshua's mother, told her mother that she thought she might hurt Joshua because of the bond between Joshua and his father, which she did not share. Joshua died one month later, on January 23, 1996. Dr. Smith performed the post-mortem examination. After the autopsy, he advised the police that Joshua had suffered an asphyxial mode of death; however, he was uncertain as to the cause of the asphyxia. He opined that the findings were consistent with smothering, but that he could not rule out natural causes.

On February 8, 1996, Dr. Smith attended a meeting with the police. When asked, he told the police that he believed that Ms. Sherret had killed Joshua. He said that mothers who kill their babies share certain characteristics. For example, they usually talk about it ahead of time, or they might be involved in relationship fights or custody battles, as a result of which they may be trying to get back at the baby's father.

On April 11, 1996, Dr. Smith attended another meeting, this time with the police, Crown counsel, and representatives of the OCCO. Sergeant MacLellan recorded in his notes that someone stated at the meeting that the autopsy findings were "consistent with someone right handed pushing baby's head down." At the Inquiry, Sergeant MacLellan testified that he could not recall exactly who had said that.

In my view, the two issues raised in Tiffani's case are also exemplified here. First, without some documentation of Dr. Smith's opinion, it is unclear if he was the one who told the police that the findings were consistent with a right-handed perpetrator. The provision of a written opinion to the police would have clearly indicated whether it was the pathologist's opinion that Sergeant MacLellan recorded and would have minimized the risk that Sergeant MacLellan had simply misunderstood what was said at the meeting. Second, the opinions expressed at the meetings were problematic. At the Inquiry, Dr. Crane testified that the com-

ment about an alleged right-handed perpetrator was wrong and misleading and that there was no science to support it. Dr. Smith's remarks about the characteristics of mothers who kill their children were also inappropriate, since they were beyond his expertise.

At the Inquiry, Dr. Smith explained that, although the indicators about mothers who kill their babies did not relate to the pathology evidence, he provided them to the police in an attempt to be helpful and to turn their attention to the recognized risk factors with which they might not have been familiar. He acknowledged, however, that his listing of what he called the "hallmark characteristics of a mother who kills" was misguided. I agree. While I accept that pathologists want to be helpful and might direct the police to certain information, Dr. Smith went well beyond that boundary. To say that he believed that Ms. Sherret killed her son on the basis of the "hallmark characteristics" was inappropriate. He had no expertise to say so.

Participation in the Justice System

Providing Evidence in Court

An infant or child death that results in a criminal charge is as difficult and challenging as any faced by the criminal justice system. The charge is normally serious, and the stakes are high. Where the cause of death is an issue, the expert testimony of the pathologist is often critical. The pathologist's role as an expert witness is to remain impartial and not to act as an advocate for either the Crown or the defence. In keeping with that role, pathologists must ensure that the evidence they present to the court is understandable, reasonable, balanced, and substantiated by the pathology evidence. For pathologists doing forensic work, the ability to do the job required in the courtroom is as essential as the ability to do the job in the autopsy suite.

There were very serious failings in the way Dr. Smith performed this important aspect of his role as a pathologist doing forensic work. Problems with his testimony permeated many of the cases examined by the Commission. They ranged from his misunderstanding of his role, to his inadequate preparation, to the erroneous or unscientific opinions he offered, and, perhaps most important, to the manner in which he testified, which ranged from confusing to dogmatic.

Although his evidence was not invariably deficient, there were many troubling examples. They clearly demonstrated ways in which the practice of pediatric forensic pathology in Ontario in those years went badly wrong. In cases like those at issue here, where the expert's opinion is critical and the charges are so serious,

tragic outcomes in the criminal justice system are hardly surprising. While Dr. Smith, as the pathologist giving expert evidence, must bear primary responsibility for these deficiencies, those charged with overseeing his performance cannot escape responsibility. Indeed, neither can other participants in the criminal justice system – Crown, defence, and the court. Each had an important role to play in ensuring, so far as possible, that results in the criminal justice system were not affected by flawed expert testimony, including that of forensic pathologists.

The systemic challenge for the future is to ensure that forensic pathologists provide the criminal justice system with soundly formed opinions that conform to the pathology evidence and are communicated in a clear and objective fashion. It is important, however, to understand the various ways in which Dr. Smith failed in his role as an expert witness. I will discuss the 10 that are most important.

The Expert as Advocate

Dr. Smith failed to understand that his role as an expert witness was not to support the Crown. At the Inquiry, he was candid on this point. He had never received any formal instruction in giving expert evidence. He acknowledged that, when he first began his career in the 1980s, he believed that his role was to act as an advocate for the Crown and to "make a case look good." He explained that the perception originated, in some measure, from the culture of advocacy that he said prevailed at SickKids at the time. In the early 1980s, there was a legitimate concern at SickKids that child abuse was under-reported, under-detected, and under-prosecuted. Dr. Smith was a part of that advocacy culture and perceived that his job, at least in part, was to reverse those trends.

Dr. Smith testified that, by the mid-1990s, he had come to recognize that his role was not to make out the Crown's case but rather to be impartial. Despite recognizing this boundary, he sometimes failed to respect it. In Sharon's case, Dr. Smith said that he felt pressure by Crown counsel to act as an advocate and, contrary to the independence required of him, he did exactly that. Before the preliminary hearing, he said that Crown counsel, Mr. McKenna, told him that the Crown would not be calling another expert, Dr. Wood, as a witness because it did not want to give credibility to the defence's dog-bite theory by calling a forensic odontologist to refute it. Dr. Smith understood from this conversation that Mr. McKenna wanted him to convey to the court the categorical opinion, without having to call Dr. Wood to the stand, that Sharon's wounds were not dog bites.

That is indeed what Dr. Smith did when he testified at the preliminary hearing, although he now says he was not so certain in his own mind. When asked about the possibility of a dog attack, he told the court unequivocally that Sharon

had not died of dog bites. He went so far as to say: "As absurd as it is to think that a polar bear attacked Sharon, so is it equally absurd that it's a dog wound." The preliminary hearing judge committed Sharon's mother to stand trial on the charge of second-degree murder. Of course, we now know that Dr. Smith's unequivocal opinion was wrong. At the Inquiry, Dr. Smith acknowledged that most, if not all, of Sharon's wounds were caused by a dog.

Dr. Smith admitted that he was misguided and too dogmatic in his testimony in Sharon's case. He said that three factors played into his dogmatism. First, he stated that, rather than communicating his own level of certainty about the nature of the wounds, he communicated the certainty of other experts who had reviewed the case, in particular Dr. Wood. Second, he believed that it was his job to dismiss the dog-attack theory on behalf of the Crown. Third, he became defensive when faced with the possibility that he could have missed such a glaring diagnosis. In retrospect, Dr. Smith acknowledged that he should have told Mr. McKenna to call another expert if the Crown wanted to dismiss the dog-bite theory once and for all, as he was not as certain about the nature of the wounds as others. I note that, before the preliminary hearing, there is no evidence that Dr. Smith ever indicated to anyone that he was uncertain about his diagnosis or that he was relying on the opinions of others. I do not find that Mr. McKenna did what Dr. Smith suggests. In any event, if Dr. Smith was relying on Dr. Wood for his unequivocal opinion about the defence's dog-bite theory, he should have said so.

Dr. Smith certainly was misguided in Sharon's case. The pathologist's role does not include advocacy. Although the Crown, not the defence, called Dr. Smith as a witness at the preliminary hearing, at no point was he supposed to be an expert witness advocating for the Crown. He was an expert witness, period. His task was to convey to the court his autopsy findings, his opinion, and the level of certainty with which he held his opinion, not to discredit the defence theory. And his task was not to convey to the court what another expert believed about the case.

The Inadequately Prepared Expert

Dr. Smith also failed to prepare adequately for court. He did not review his file or the autopsy materials before attending court. Instead, his preparation consisted of printing his report of post-mortem examination from his computer and reading it over before court to remind himself of the case. This preparation was insufficient and, not surprisingly, caused difficulties. As expert witnesses, pathologists must prepare for their testimony. After all, they can be of assistance to the court only when they have a complete understanding of the case and the basis of their expert opinion. They can have such an understanding only with proper preparation.

Perhaps the worst example of poor preparation is seen in Jenna's case. Dr. Smith testified at the preliminary hearing in October 1998, almost two years after undertaking the autopsy. During cross-examination, defence counsel asked him if he had taken notes at the post-mortem examination. Dr. Smith told the court that he did not have any notes in the case. This was incorrect. Had Dr. Smith reviewed his file before attending the preliminary hearing, he likely would have realized that he had kept notes. Because of Dr. Smith's inadequate preparation, however, defence counsel never had an opportunity to review his notes before the conclusion of the criminal proceedings.

Dr. Smith attempted to explain his lack of preparation on the basis that he did not know any better, that he did not know he was expected to review all the materials relating to a case before testifying in court about it, or that he was expected to bring his file with him to court. By the date of this preliminary hearing, however, Dr. Smith was an experienced expert witness and surely knew that at preliminary hearings and trials he had to be able to give detailed evidence on the pathology findings and that this could have significant consequences. He surely knew that proper preparation was essential if he was to do this part of his job properly and serve the criminal justice system.

The Overstated Expertise of the Expert

The evidence also showed that, rather than acknowledging the limits to his expertise, Dr. Smith sometimes misled the court by overstating his knowledge in a particular area. When Dr. Smith performed the post-mortem examination in Sharon's case, he had little experience with either stab wounds or dog bites. He had only ever seen one or two cases of each kind. At the preliminary hearing, however, Dr. Smith left the impression that he had significant expertise with both. Dr. Smith told the court: "I've seen dog wounds, I've seen coyote wounds, I've seen wolf wounds. I recently went to an archipelago of islands owned by another country up near the North Pole and had occasion to study osteology and look at patterns of wounding from polar bears." His attempt to so exaggerate his abilities disguised his lack of relevant expertise.

Similarly, when defence counsel asked Dr. Smith about his qualification to offer an opinion on the source of wounding, Dr. Smith failed to mention that he had seen only one or two cases involving penetrating injuries or stab wounds. Instead, he did the opposite. He conveyed the impression that he had significant expertise in the area. He told the court that certified forensic pathologists tended to steer away from pediatric cases and that, since the pattern of wounding is different in children than in adults, he was more qualified than a certified forensic pathologist to assess the source of wounds on a child. Although he acknowledged

that stab wounds were more common in adults than in children, he told the court: "I have had perhaps more experience with stab wounds in the young than others who have experience in adults."

At the Inquiry, Dr. Smith conceded that he should have informed the court that he had seen only one or two cases involving the stabbing of a child. He said that his remarks were a reflection of his overconfidence and his defensiveness in the face of defence counsel's questions. Dr. Smith should not have given this evidence. It was misleading, and wrong. As Dr. Milroy told the Inquiry, stab wounds are much more common in adults than in children, and there is absolutely no difference between a stab wound in an adult and one in a child.

I find Dr. Smith's overstatement of his expertise with penetrating wounds highly problematic. When expert witnesses testify, they have a responsibility to make the court aware of the limits of their expertise. A failure to do so prevents the court from fully assessing whether the person should be permitted to give the opinion evidence. Expert witnesses are not expected to be knowledgeable in every substantive area. When they lack knowledge or experience in an area that informs their analysis, they are expected to be candid about it.

The Expert and Unscientific Evidence

Several times Dr. Smith gave inappropriately unscientific evidence by resorting to his own experiences as a parent. This is seen in two cases: Amber's case and Kenneth's case. In Amber's case, Dr. Smith testified that short household falls by children are not fatal. In support of his conclusion, he told the court that he was a father of a young girl and a young boy. He had watched his children "tumble" down the stairs. What his children needed after such a fall was "a little cuddling, a little loving, kissing whatever part of [his] son or daughter's body may have been injured, looking for a bruise which may show up with time or swelling which may occur." According to Dr. Smith, "My children have fallen from, and … unfortunately bounced down more steps than those and they are still happy and healthy children and that's personal, you can discard that if you want." At the Inquiry, Dr. Smith acknowledged that the reference to his experience as a parent was unscientific and inappropriate. I agree.

I note that Dr. Smith was not the only expert at the trial to refer to his personal experience as a parent in his evidence. Two of the defence experts also referred to their anecdotal experiences as parents.

In my view, all the references to the experts' personal experiences were inappropriate. Expert witnesses are retained to provide opinions because they are experts in a particular area. While reference to personal anecdotal evidence might assist the court in understanding a particular point, it should not form the basis

of the opinion on a particular matter. I find Dr. Smith's reference to his children's "tumbles" down the stairs particularly problematic. His suggestion that low-level falls cannot be fatal because his own children were "happy and healthy" was not only unscientific, but illogical. Simply because his own children had not died from a fall down the stairs does not mean that no child could die from such a fall.

In Kenneth's case, Dr. Smith also relied in his evidence on his personal experience as a father. Again, Dr. Smith acknowledged at the Inquiry that the reference to his personal experience was unscientific and inappropriate.

The Expert and Unbalanced Evidence

Sometimes, Dr. Smith failed to provide a balanced view of the evidence and to acknowledge the existence of a controversy. He presented his opinion in a dogmatic and certain manner when the evidence was far from certain.

As I discuss in Chapter 6, The Science and Culture of Forensic Pathology, forensic pathology is an interpretive science. Some areas are more uncertain than others. In the 1980s and 1990s, there was already considerable controversy surrounding the diagnosis of shaken baby syndrome and whether low-level falls could kill. Dr. Smith faced these controversies in Amber's case and Tyrell's case. Rather than inform the court that the cases touched on controversial and uncertain areas within pediatric forensic pathology, he offered dogmatic and unequivocal opinions.

Dr. Smith testified at the trial in Amber's case in February 1990. At no time during his five days of evidence did he mention the controversy about whether low-level falls could be fatal. Instead, his evidence was unequivocal: children cannot die from such falls. According to him, "You have to drop [children] from three storeys in order to kill half of them. You have to drop them from more than three storeys in order to kill more than half of them." He told the court that there was "no possibility what-so-ever" that a short fall down the stairs, as alleged by Amber's babysitter, could account for her death.

The defence called several of its own experts to refute Dr. Smith's opinion. Several experts testified at the trial that, although the literature suggested otherwise, there was anecdotal evidence to suggest that a low-level fall could lead to death. Ultimately, the trial judge, Justice Dunn, was persuaded by the defence experts. He found Amber's babysitter's story to be credible and acquitted her of manslaughter.

At the Inquiry, Dr. Smith acknowledged that his testimony in Amber's case was "perhaps more black and white than it should have been." He conceded that, on the pathology evidence, he could not definitely exclude a fall in Amber's case. However, that was exactly what he did at the trial.

Dr. Smith did the same thing 10 years later in Tyrell's case. In that case, the caregiver reported that Tyrell had been jumping on the couch, had slipped, and hit his head on either a marble coffee table or the tile floor. Dr. Smith performed the post-mortem examination and concluded that Tyrell had died of a head injury. However, he did not believe that the injury could be accounted for by the low-level fall described by Tyrell's caregiver. The police charged Tyrell's caregiver with second-degree murder.

In January 2000, Dr. Smith testified at the preliminary hearing. As in Amber's case, his testimony was unequivocal: Tyrell's head injury could not be explained by the low-level fall described by his caregiver. Dr. Smith told the court that research studies had shown that, unless there is an unusual finding, such as epidural hemorrhage, which Tyrell did not have, "children do not die from a fall of less than 15 feet." He went as far as saying that, "in order for there to be a reasonable likelihood of death occurring from a fall, a child has to fall not 15 feet, but at least three storeys, if not four storeys." And, even then, according to Dr. Smith, the child has a 50 per cent chance of survival.

Defence counsel cross-examined Dr. Smith about Amber's case. Although this gave him the opportunity to mention the controversy behind the fatality of low-level falls, he did not. Instead, he told the court that, since Amber's case, "the literature [was] on [his] side."

This aspect of Dr. Smith's evidence in Amber's case and Tyrell's case raises difficulties. An expert must ensure that the controversies in the discipline are understood by the trier of fact. In these two cases, Dr. Smith failed to inform the court that, despite his own black and white view that low-level falls cannot result in death, experts disagreed with him. Indeed, according to Dr. Crane, there are too many parameters and variables – for example, how the child falls and what part of the body hits the ground first – to make blanket statements about whether low-level falls can kill. As I have discussed above, Dr. Smith's role as an expert witness was to provide an objective and balanced opinion on the basis of the pathology evidence. This duty should have required him to locate his opinion explicitly within the existing area of controversy. He did not do so.

Dr. Smith's explanation for his overly categorical opinions was that he did not know any better. At the Inquiry, he testified that, in 1990, when he gave evidence in Amber's case, he did not realize that he had an obligation to inform the court of the controversies in the literature: "No one had ever told me. It had not crossed my mind at all." His understanding was that his role was simply to provide an opinion based on his interpretation of the autopsy findings and the literature. This approach makes a proper assessment of the opinion very difficult and leaves the criminal justice system ill served.

The Expert's Attacks on Colleagues

Dr. Smith's sixth error was in his unprofessional and unwarranted criticism of other professionals. In several cases, Dr. Smith expressed opinions in court regarding other experts that were disparaging, arrogant, and, most important, unjustified.

In Dustin's case, a local pathologist performed the first autopsy. The regional coroner consulted Dr. Smith for a second opinion. In March 1994, Dr. Smith testified at the preliminary hearing that the local pathologist had performed "a botched autopsy." He stated, with respect to the pathologist's report: "[T]he paper [the report] is written on is not worthy of filing as an exhibit. It should be filed in the garbage can."

Defence counsel then challenged Dr. Smith with Amber's case and the defence experts who had criticized his work, in particular an expert from Winnipeg. Dr. Smith responded to that line of questioning by saying: "The paid mouth. There's an expert from Winnipeg who's regarded as a paid mouth."

At the Inquiry, Dr. Smith acknowledged that the language he used to describe the local pathologist's work in Dustin's case was very strong. He admitted that his criticisms of her autopsy were inappropriately harsh. He also acknowledged that his comment that an expert was a "paid mouth" was uncharitable. However, he maintained that, at the time of the preliminary hearing, he and others held that view of that expert.

In my opinion, these criticisms expressed by Dr. Smith were not only uncharitable but also unprofessional, arrogant, and unjustified. Although an expert may criticize the work of another expert, a reason must be given for the criticism. Language to the effect that the autopsy in Dustin's case was "botched" and that the report should be "filed in the garbage can" should never be used. Instead, Dr. Smith should have explained to the court what in his view was inadequate about the autopsy and the post-mortem report. If the local pathologist failed to perform certain examinations during the autopsy, or the report failed to describe adequately the autopsy findings, for instance, Dr. Smith should have said so. Moreover, even if Dr. Smith and other pathologists believed that an expert was a "paid mouth," the opinion should not have been given without offering some basis for discrediting that expert's work. Name calling is unprofessional and of no help to the task the court must perform.

Dr. Smith offered similarly uncharitable evidence in Athena's case. During his evidence at the preliminary hearing in November 2001, counsel questioned him on his opinion of several experts, including Dr. James (Rex) Ferris, a forensic pathologist. When asked if he respected Dr. Ferris' work, Dr. Smith testified that he did not respect Dr. Ferris' opinions in pediatric forensic pathology and did not

know anyone in the field who did. According to Dr. Smith, Dr. Ferris did not have any special expertise in the area and his opinions were often "misleading"; Dr. Smith had never seen one that was "close to reasonable." Dr. Smith also told the court that Dr. Ferris was "excluded" from practising pediatric forensic pathology in British Columbia for many years before he lost his position altogether.

At the Inquiry, Dr. Smith explained that he had answered the questions truthfully, though uncharitably and unkindly. In my view, Dr. Smith's comments about Dr. Ferris were not only uncharitable and unkind but also untrue. In fact, Dr. Smith had previously testified under oath that he found Dr. Ferris' opinion to be reasonable. In September 1994, at the trial of Mr. Mullins-Johnson, Dr. Smith told the court that Dr. Ferris' opinion that Valin could have died as a result of manual strangulation was a reasonable conclusion. In addition, there was nothing to suggest that Dr. Ferris was anything but a well-respected expert in British Columbia.

I accept that lawyers often ask experts about the strengths and weaknesses of other experts and their opinions, and it is appropriate to respond to such requests. Nevertheless, Dr. Smith's testimony in Athena's case was unacceptable. If Dr. Smith did not respect Dr. Ferris' work, he should have explained precisely why. He offered no support for his disparaging comments about Dr. Ferris in his evidence. It was unprofessional and entirely unhelpful to the court.

The Expert and Evidence beyond His Expertise

On occasion, Dr. Smith testified on matters well outside his area of expertise. In two cases, Amber and Tyrell, he provided opinions to the court on the "profile" or characteristics of the perpetrator of shaking and blunt head injuries.

During the trial in Amber's case, Dr. Smith testified about the features of a typical shaken baby syndrome case. He described the victim as an infant of up to two years of age with no other evidence of injury, the perpetrator as the child's caregiver or "babysitter" (but not the child's biological father or mother), and the events as occurring in the later part of the afternoon – the "poison hours" – when the child is irritable, the caregiver is alone with the child, and the caregiver "simply loses control" and violently shakes the child in an attempt to stop the crying.

In Tyrell's case, Dr. Smith performed the post-mortem examination and concluded that the child had died from a head injury. During his cross-examination, Dr. Smith offered his opinion on the likely perpetrators of various types of injuries. He told the court that blunt force, shaking, and abdominal injuries were more likely inflicted by men, whereas asphyxial deaths were more likely caused by women. He provided a very specific "profile" of the perpetrator of blunt force, shaking, and abdominal injuries. He told the court that the perpetrator likely was a male (but not the biological father of the child) who had a criminal record, a

violent background, no high school diploma, no steady job, and collected welfare.

At the Inquiry, Dr. Smith acknowledged that such evidence was inappropriate and should not have been offered. I agree. In my view, Dr. Smith's evidence in Amber's case and Tyrell's case went well beyond the scope of his expertise. Dr. Smith was a pathologist. His expertise was in the interpretation of pathology evidence, and his role as an expert witness was to convey that interpretation to the court. Expert witnesses are called to the court to speak to the issues that involve their expertise. They are not given free rein to discuss other matters on which they happen to have an opinion.

I note, however, that in both Amber's case and Tyrell's case, Dr. Smith offered the inappropriate evidence in response to questions from the court and counsel. At no time did the court or counsel object to his testimony. As a result, Dr. Smith is not solely responsible for his inappropriate testimony. Although experts must always recognize the limits of their expertise and stay within those limits, judges and counsel also play an important role in ensuring that those boundaries are respected.

The Speculating Expert

There were instances where Dr. Smith offered opinions that were speculative, unsubstantiated, and not based on the pathology findings. Dr. Smith gave speculative evidence in Joshua's case. In that case, he performed the post-mortem examination and concluded that the cause of death was asphyxia. At the preliminary hearing, he testified that he was "highly suspicious" that suffocation caused the asphyxia. Dr. Smith should not have given this evidence because there was no pathology evidence to support the opinion. Although suffocation can sometimes leave no pathology findings, to say that he was "highly suspicious" of it because there were no pathology findings was simply to speculate.

At the Inquiry, Dr. Smith acknowledged that he should not have given the evidence that he did in Joshua's case. He admitted that his speculation was both unhelpful and prejudicial. However, he explained that, at the time, it did not occur to him that he should not speculate when giving his evidence. He believed that, when he was asked a question, and it was not objected to by either the court or counsel, he should answer it.

I find it hard to accept Dr. Smith's explanation that he did not know that he ought not to speculate. Pathologists provide pathology opinions. I do not see how pathologists can believe that, when there is no pathology evidence, it is open to them to speculate on what could have happened. Although I appreciate that pathologists want to be helpful to the court, speculating about the various possibilities without any pathology evidence is unhelpful and potentially prejudicial. I

also accept that the court and counsel have a duty to ensure that the pathologist does not give inappropriate evidence. When the court or counsel realizes that the pathologist is speculating, either one should object and put an end to that line of questioning. Pathologists, however, are in the best position to ensure that the evidence that they provide is not speculative and is substantiated by the necessary evidence. The pathologist must be responsible for doing just that.

The Expert and Casual Language

Dr. Smith also from time to time used language in his testimony that was loose and unscientific. Certain inappropriate expressions are found throughout his testimony. The language of "betting" is one of them. In Kenneth's case, Dr. Smith testified that suffocation can occur without leaving any marks and that, if he were a "betting man," he would say that suffocation was a better explanation for Kenneth's death than manual or ligature strangulation. In Taylor's case, Dr. Smith testified that, "if you want to play a betting game," the impact to Taylor's head was more likely right- than left-sided. In Joshua's case, Dr. Smith testified that, if he were a "betting man," he would say that Joshua's death was non-accidental.

At the Inquiry, Dr. Smith admitted that his attempt to communicate the level of certainty with which he held his opinion was at times too casual. His effort to convey technical concepts in non-technical terminology resulted in an appearance of casualness that was inappropriate in the circumstances. I agree. Although I understand that it can be very difficult for experts to express the degree of certainty with which they hold their opinions, it is unscientific and inappropriately inexact for an expert witness to use betting terminology. In many of these instances, the language masked the real problem with the testimony – it was speculative.

At the Inquiry, Dr. Smith admitted that he used colloquialisms that were inappropriately casual. Again, I agree. Expert witnesses' use of language is an important part of their role. How the expert communicates an expert opinion to the court affects how the court will perceive and weigh the opinion. Dr. Smith's use of casual language to convey important pathology opinions was inappropriate and, rather than producing greater understanding, likely led to confusion.

The Expert Who Misleads

Finally, Dr. Smith did not always testify with the candour required of an expert witness. In some cases, he made false and misleading statements to the court.

In Dustin's case, in March 1994, during the preliminary hearing, defence counsel asked Dr. Smith about Justice Dunn's criticisms of him in Amber's case. Dr. Smith responded by telling the court, first, that he did not know what Justice

Dunn had written, and second, that "Justice Dunn … prior to hearing the defence experts, in fact, told [Dr. Smith] on more than one occasion [in] private conversations how hasty he was with the work [Dr. Smith] had done and others had done at the hospital." Both statements were not true. Dr. Smith admitted at the Inquiry that he had certainly read Justice Dunn's decision by March 1992, when he wrote to the CPSO about the case. In addition, as I discuss below, Dr. Smith's claim that he had private conversations with Justice Dunn about his evidence in the case was untrue.

Dr. Smith also made misleading statements to the court in Sharon's case. At the preliminary hearing of Sharon's mother, Dr. Smith told the court that he asked Dr. Wood to review the material. Although Dr. Wood did review the autopsy photographs in Sharon's case, it was not at Dr. Smith's request. Crown counsel, through the regional coroner, requested and obtained Dr. Wood's consultation.

These examples are troubling. It goes without saying that an expert witness giving evidence under oath should do so with complete candour and honesty. False and misleading statements should form no part of an expert witness's evidence.

The Role of an Expert in the Criminal Justice System before the Trial

Often, the pathologist assists with the police investigation and the criminal proceedings by helping the police and Crown counsel to understand the pathology evidence and its limits. Sometimes, the defence will retain a pathologist to assist defence counsel. Regardless of who retains her or him, the pathologist's task is not to take a side in the criminal justice system. The role is a neutral one, at all stages of involvement, not just when testifying.

Despite this duty, the reality is that pathologists performing coroner's autopsies may find themselves more familiar with police officers and Crown counsel, increasing the risk that, consciously or not, they will align themselves with the police and the Crown. This temptation must be avoided. Pathologists must understand that their role as experts in the criminal justice system is to provide the police, the Crown, the defence, and the court with a reasonable and balanced opinion, and to remain independent in doing so. The expert cannot become a partisan.

Dr. Smith failed to understand that his role as an expert in the criminal justice system required independence and objectivity. In the case known as Baby X, Dr. Smith became directly involved in the police investigation into Baby X's mother, contrary to his required independence. Baby X died in the spring of

1996. Dr. Smith performed the post-mortem examination and concluded that Baby X's injuries were caused by blunt force trauma, consistent with non-accidental or inflicted injury. Dr. Smith was aware that the police considered the case a homicide and that Baby X's mother was one of the suspects.

Approximately six months after the autopsy, Baby X's mother contacted Dr. Cairns about the results. Dr. Cairns in turn requested that Dr. Smith meet with Baby X's mother to discuss the autopsy results. Dr. Smith agreed, and Dr. Cairns asked Dr. Smith to travel to Barrie to meet with her. On September 4, 1996, Baby X's mother phoned Dr. Smith and they agreed to meet at her home in Barrie the following day. The OPP, which had lawfully installed listening devices in Baby X's mother's home, intercepted the telephone conversation. After learning that Dr. Smith would be meeting Baby X's mother in her home, Detective Inspector Don MacNeil of the OPP contacted him. The officer advised Dr. Smith that listening devices had been installed in the house and would likely intercept Dr. Smith's conversation with Baby X's mother. That day, Dr. Cairns also learned of the listening devices. Nevertheless, Dr. Smith agreed to go through with the meeting, and Dr. Cairns did not stop him.

The next day, September 5, 1996, Dr. Smith met with members of the Barrie Police Service and Detective Inspector MacNeil at the Barrie police station before his scheduled meeting with Baby X's mother. Dr. Smith and the officers discussed the case generally. The officers did not tell Dr. Smith how to conduct his meeting with Baby X's mother, nor did they ask him to solicit any information from her. But it was clear that Dr. Smith would provide an occasion for her to talk about how her baby died.

Dr. Smith then proceeded to the house and spoke with Baby X's mother about the post-mortem examination, his conclusions, and the various possibilities for how Baby X could have sustained his injuries. After leaving Baby X's house, Dr. Smith met again with members of the Barrie Police Service and Detective Inspector MacNeil. Dr. Smith told the officers what he and Baby X's mother had discussed, and also expressed a view on Baby X's mother's demeanour when she was discussing her child's death. Dr. Smith reportedly said: "It was like talking to her about a load of gravel." The officers understood this to be a comment on the inappropriate and flat affect he felt Baby X's mother had displayed during their conversation. Dr. Smith did not, however, express a position on whether or not the pathology evidence supported Baby X's mother's culpability.

At the Inquiry, Dr. Smith testified that he thought it unusual for Dr. Cairns to ask him to speak with Baby X's mother for two reasons. First, he was aware that he would be speaking with a suspect in a homicide investigation, and, second, he would be meeting Baby X's mother at her home, rather than at the OCCO or at

SickKids. Despite the unusual circumstances, he agreed to meet with Baby X's mother because he wanted to accommodate Dr. Cairns' request. Even after he learned of the listening devices, he did not think that the meeting was inappropriate, particularly given that Dr. Cairns also knew of the devices and did not object to his going ahead with the meeting.

In retrospect, however, Dr. Smith acknowledged that his conduct in this aspect of Baby X's case was inappropriate. I agree. The forensic pathologist's role is to perform a post-mortem examination, consider the autopsy findings, and provide an opinion on the cause of death and any other pathology issues. While the pathologist may be requested to speak with a family member about the findings, in no circumstances should the job include having a surreptitiously recorded conversation with a homicide suspect during an ongoing police investigation. Nor should the pathologist express an opinion on the suspect's demeanour during that conversation. This behaviour is simply inconsistent with the principle of independence that is so important to the integrity of expert evidence in a death investigation.

Cooperating with Other Experts

In several cases, Dr. Smith was asked to locate autopsy materials to allow another pathologist to review the case. Dr. Smith did not respond to those requests. In Dustin's case, a local pathologist performed the initial post-mortem examination. The regional coroner consulted Dr. Smith for a second opinion and provided him with the tissue blocks and slides taken from the autopsy.

On March 2, 1994, the local pathologist testified at the preliminary hearing in the case. Before attending court that day, she tried to locate some of the autopsy materials, including the microscopic slides, to refresh her memory about the case. She contacted Dr. Smith, who informed her that he had returned them. He had not. During her evidence at the preliminary hearing, the pathologist told the court that, because she was unable to locate the slides before attending court, she did not have a chance to review them prior to her testimony. At the request of defence counsel, the court adjourned the pathologist's testimony to March 30, 1994, to give her time to review the autopsy materials.

The next day, on March 3, 1994, Dr. Smith informed the regional coroner that he still had the slides. On March 10, 1994, Crown counsel Ms. Walsh wrote to Dr. Smith asking him to send the local pathologist the slides, his consultation report, and the factual synopsis he was given when the regional coroner initially consulted him. Dr. Smith did not respond to Ms. Walsh. Despite further requests, he did not send the material in advance of the continuation of the preliminary

hearing on March 30, 1994. By the time Dr. Smith eventually sent the materials to the pathologist, it was too late for her to continue her evidence before the preliminary hearing concluded on May 25, 1994.

At the Inquiry, Dr. Smith acknowledged that he had an obligation to ensure that the local pathologist had access to the materials and that, by not doing so, he inadvertently delayed the administration of justice, as well as frustrated a fellow pathologist. His failure to provide the requested materials to the pathologist in a timely fashion prevented a witness at the preliminary hearing from continuing with her evidence, a result he surely anticipated. It was an unprofessional way to treat a colleague.

In Joshua's case, Dr. Smith did not respond to requests to locate and forward autopsy materials to another pathologist for review as well. This failure again resulted in the postponement of evidence.

Dr. Smith stated that he did not intend to hinder or obstruct the defence from reviewing his findings. He testified that he did not respond because of his overall disorganization and failure to appreciate the workings of the justice system. I do not accept Dr. Smith's explanation that he did not understand the importance of his cooperation because of naivety about the justice system. He repeatedly portrayed himself publicly as a knowledgeable and experienced participant in that forum.

Finally, as discussed earlier, Dr. Smith did not cooperate with attempts to locate materials from Valin's case so that they could be reviewed by another pathologist. Dr. Smith's actions in that case represent one of the starkest examples of his complete disregard for reasonable requests made by Crown counsel and another pathologist. Given that I describe this unfortunate incident earlier, I will not repeat what I said there. Suffice it to say that there was absolutely no justification for Dr. Smith's callous disregard for the requests made by Dr. Rasaiah and Crown counsel.

Frustrating the Oversight Process

As I will describe in the next chapter, the oversight mechanisms that existed for forensic pathology in the 1980s and 1990s were in many ways ill defined, inadequate, and ultimately ineffective. Nonetheless, those who were charged with oversight responsibility all depended, as they had to, on the pathologists' dealing with them in a candid and forthright manner. Unfortunately, the way that Dr. Smith interacted with them impeded that oversight. There are systemic lessons to be learned from this.

Simply put, Dr. Smith actively misled those who might have engaged in mean-

ingful oversight of his work. When senior officials at the OCCO raised concerns about his conduct in several of the cases examined by the Commission, Dr. Smith did not respond candidly. Similarly, when the CPSO investigated complaints about his conduct in the cases of Amber, Nicholas, and Jenna, he made false and misleading statements. Dr. Smith's misrepresentations frustrated any meaningful oversight that the two institutions might have offered. His attempts to mislead spanned his entire career as director of the OPFPU and continued even after he had resigned from the position.

Misrepresentations about Justice Dunn

As early as 1992, Dr. Smith responded to concerns about his conduct in Amber's case with a story that was simply false. Dr. Smith and several other physicians from SickKids testified at the trial of Amber's babysitter, S.M. On July 25, 1991, the trial judge, Justice Dunn, acquitted the babysitter. In his reasons for judgment, Justice Dunn was highly critical of Dr. Smith and the other SickKids physicians. Specifically, Justice Dunn criticized Dr. Smith for his lack of objectivity, skill, and familiarity with the most recent literature.

Shortly after the acquittal, S.M.'s father, D.M., filed a complaint with the CPSO regarding the conduct of Dr. Smith and several other SickKids physicians who testified at the trial. On May 4, 1992, Dr. Smith sent a written response to the CPSO in which he stated that he "remained as convinced as ever" that Amber had suffered a non-accidental head injury. In addition, he wrote, "on two occasions during my week of testimony, the Judge, Patrick Dunn, discussed my evidence with me at length. He repeatedly indicated to me that he believed [S.M.] to be guilty, and that he believed the opinions provided by [the SickKids doctors] and me."

At the Inquiry, Dr. Smith admitted that his statement to the CPSO about Justice Dunn was not true. He acknowledged that at no time during the trial did Justice Dunn discuss the evidence with him, indicate that he believed S.M. to be guilty, or say that he believed the evidence of Dr. Smith and the other SickKids physicians. However, Dr. Smith said that he did speak with Justice Dunn twice during the course of the trial. First, he and Justice Dunn were seated together on an airplane returning to Toronto from Timmins on a Friday after Dr. Smith's testimony. During that conversation, he said that he and Justice Dunn discussed the backgrounds of the SickKids physicians who testified at the trial, as well as a well-known and unrelated case involving nurse Susan Nelles at SickKids. Second, the following Sunday afternoon, Dr. Smith and Justice Dunn happened to be on the same flight returning to Timmins from Toronto, but were not seated side by side.

On this occasion, Dr. Smith acknowledged at the Inquiry that they simply exchanged pleasantries at the airport.

Justice Dunn provided an affidavit for the Inquiry on December 19, 2007, the contents of which Dr. Smith did not dispute. It was thus unnecessary for Justice Dunn to attend the Inquiry to give evidence. In his affidavit, Justice Dunn wrote that, although he and Dr. Smith were on the same flight during the trial, they simply exchanged pleasantries and did not discuss the case. While he did not have a specific recollection of his conversation with Dr. Smith, Justice Dunn swore: "I am certain that I did not discuss the merits of the case or the evidence with Dr. Smith. I may have commented on the Susan Nelles case because I understood Dr. Smith had some involvement in that case." According to Justice Dunn, "[a]t no point during the course of the trial did I discuss Dr. Smith's evidence with him or indicate to Dr. Smith that I believed [S.M.] to be guilty. I also did not indicate to Dr. Smith that I believed the opinions provided by [the SickKids doctors], as alleged in Dr. Smith's letter to the CPSO."

At the Inquiry, Dr. Smith attempted to explain his false statement to the CPSO. According to Dr. Smith, during the first conversation, the judge "made statements that were very complimentary" of the SickKids witnesses. Dr. Smith testified at the Inquiry that he misinterpreted those complimentary statements to mean that Justice Dunn agreed with their opinion: "I interpreted those statements to mean that not only was he impressed with the witnesses, with sort of their professional qualities, but I also interpreted that to mean he accepted [their] opinion. Because certainly by the time I got off the aircraft, I was absolutely convinced that, based on what he said, that he agreed with the opinion that had been presented." According to Dr. Smith, "I believe that I heard what I wanted to hear as opposed to what he actually said."

I reject Dr. Smith's explanation. Dr. Smith admitted at the Inquiry that Justice Dunn never discussed with him the evidence of any of the experts who testified at the trial. In fact, they did not discuss anything related to Amber's case at all, with the possible exception of some conversation about the SickKids witnesses who testified at the trial. In my view, there was nothing for Dr. Smith to misinterpret in the fashion he claims he did. Instead, I find Dr. Smith's statement to the CPSO that Justice Dunn "repeatedly indicated" to him that Amber's babysitter was guilty entirely self-serving and intended to mislead. I find that the explanation he provided at the Inquiry was an attempt to defend the indefensible: that he had fabricated the content of a conversation with the trial judge.

Unfortunately, this was not an isolated incident. Although Dr. Smith failed to bring Justice Dunn's decision to the attention of the senior officials at the OCCO, Chief Coroner Dr. James Young and his deputy Dr. Cairns eventually learned of

S.M.'s acquittal. When they did, Dr. Smith hid the nature of Justice Dunn's criticisms, concocting yet another story about the trial judge. In particular, sometime in the early or mid-1990s, both Dr. Young and Dr. Cairns spoke with Dr. Smith about Justice Dunn's decision. During those conversations, Dr. Smith not only rejected Justice Dunn's criticisms but actively misled the Chief Coroner and the Deputy Chief Coroner, convincing them that there were no problems with his work and that Justice Dunn had simply got the case wrong. Dr. Smith told Dr. Young that Amber's case was complicated, but that the basis for the acquittal was one defence expert's evidence that there was no such thing as shaken baby syndrome. Dr. Smith also indicated to Dr. Young that Justice Dunn's criticism of his work concerned a lost X-ray.

Dr. Smith's statements to Dr. Young misrepresented the nature and extent of Justice Dunn's criticisms. The reality was that numerous defence experts gave lengthy evidence at the trial that low-level falls, like the one described by Amber's babysitter, could be fatal. Justice Dunn's criticisms of Dr. Smith did not involve just an X-ray; they struck at the heart of his role as a pathologist performing autopsies under coroner's warrant and criticized his lack of objectivity and skill.

Dr. Smith also told Dr. Young and Dr. Cairns that some time after the trial had concluded, he ran into Justice Dunn, and the judge told him that he had changed his mind about the medical evidence presented at the trial. According to Dr. Smith, Justice Dunn told him that he did not properly understand shaken baby syndrome when he presided over the trial and, had his understanding of the concept been more complete at the time, he would have convicted S.M. of manslaughter.

At the Inquiry, Dr. Smith admitted that this claim regarding a subsequent encounter with Justice Dunn was also not true. According to him, likely in January 1998, he spoke to the judge at a judges' conference. During their brief conversation, Dr. Smith purportedly told Justice Dunn that there had been advances in the diagnosis of shaken baby syndrome since the 1990 trial and suggested that there would be a different outcome if some older cases, such as Amber's case, had been tried at that later time.

In his affidavit, Justice Dunn recalled speaking with Dr. Smith at a family law conference. Justice Dunn did not have a specific recollection of the conversation but swore: "I have no recollection of discussing the [Amber] case with Dr. Smith at the family law conference or at any other time. I would not have discussed the case with Dr. Smith. I would let the written judgement speak for itself."

At the Inquiry, Dr. Smith claimed that he misinterpreted this conversation with Justice Dunn because he understood that the judge accepted his statements about the advances in diagnosing shaken baby syndrome: "I heard what I wanted

to hear. I was embarrassed by what had gone on in the past, and I came to believe what I wanted to hear was true, and that was wrong." Dr. Smith acknowledged that at no time did Justice Dunn actually say that he had changed his mind about the medical evidence or that, if he had tried Amber's case then, he would have convicted Amber's babysitter.

Here, too, I do not accept Dr. Smith's explanation of "I heard what I wanted to hear." I accept Justice Dunn's statement that he would not have discussed the case with Dr. Smith, a witness in the case, at any time. There was thus nothing for Dr. Smith to misinterpret. I conclude that Dr. Smith knowingly fabricated two stories about a provincial court judge in an attempt to mislead the CPSO and the OCCO and protect himself and his reputation. This sorry episode offers a very unflattering insight into Dr. Smith's integrity.

When Dr. Smith responded to the CPSO, and when he spoke to the Chief Coroner and the Deputy Chief Coroner about the case, he should have spoken candidly about the criticisms made against him. His failure to do that, and his resort to fabricating statements purportedly made by a provincial court judge about a case, was inexcusable. His statements played an obvious role in the lack of effective oversight of his work by the CPSO and the OCCO. The CPSO did not question or investigate Dr. Smith's allegation about Justice Dunn's repeated assertions of Amber's babysitter's guilt. And both Dr. Young and Dr. Cairns accepted Dr. Smith's comments about Justice Dunn at face value. However unlikely Dr. Smith's story, neither Dr. Young nor Dr. Cairns pursued a more thorough review of Justice Dunn's decision.

Misrepresentations about Report Delays

Throughout the 1990s, Dr. Smith's attempts to mislead the OCCO were not limited to statements made in response to criticisms of his work. As I discuss above, Dr. Smith had serious difficulty completing his reports of post-mortem examination in a timely fashion. Senior officials at the OCCO discussed the reasons for these delays with Dr. Smith on several occasions. In the 1990s, rather than admit that his problems with timeliness were due to his own disorganization and procrastination, as he did at the Inquiry, Dr. Smith blamed others for his failures. He told Dr. Cairns and Chief Forensic Pathologist Dr. David Chiasson that his delays were caused by a lack of administrative support at SickKids.

As I discuss above, this was not true. In fact, Dr. Smith had sufficient administrative support staff at SickKids; he just chose not to use them. Dr. Smith candidly admitted at the Inquiry that he wrongly blamed the support staff at SickKids for his own failings and apologized for doing so.

By blaming his delays on a lack of administrative support at SickKids, Dr. Smith diverted the OCCO's attention from his own failings. From 1994 to 2002, the OCCO attempted to solve a problem that did not exist: insufficient administrative support for Dr. Smith. Had Dr. Smith admitted his own failures to the OCCO in the 1990s, the OCCO could have engaged in a more meaningful attempt to address those failures.

Misrepresentations in Response to Growing Concerns

In the early 2000s, as more concerns about his work and his professionalism surfaced, Dr. Smith continued to react by misleading the OCCO and the CPSO. In 1998 and 1999, Nicholas' grandfather filed two complaints with the CPSO about Dr. Smith's conduct in Nicholas' case. In May 2001, Jenna's mother filed a complaint against Dr. Smith with the CPSO. Dr. Smith's response to both complaints was misleading.

In November 1999, Nicholas' grandfather, Maurice Gagnon, filed a complaint about Dr. Smith with the CPSO. Among other things, Mr. Gagnon alleged that Dr. Smith failed to investigate Nicholas' previous medical records, including his head circumference in life. Dr. Smith replied to Mr. Gagnon's complaint on March 2, 2001. In his letter to the CPSO in response to Mr. Gagnon's complaint, he stated that he was not provided with the measurements of Nicholas' head circumference during life.

That statement was wrong. The lead investigating officer, Sergeant Keetch, gave Dr. Smith those very records during a meeting in May 1997.

On March 12, 2001, Mr. Gagnon responded to Dr. Smith's letter of March 2, 2001. He alleged, that, even after Dr. Smith admitted the weaknesses of his evidence, he continued to assert to the children's aid society (CAS) that he was 99 per cent certain that Ms. Gagnon had killed Nicholas, "fuelling" the CAS proceedings in the case. Dr. Smith responded on April 20, 2001, informing the CPSO: "I attempted to refrain from making any allegations against Lianne Gagnon or any other individual but, rather, stated my views concerning non-accidental injury from which the Children's Aid Society may have proceeded to draw their own inferences, along with such other information that may have been considered by them." He told the CPSO, "I was not involved in this matter in any way by the CAS."

These statements were also false. Dr. Smith had been directly involved in the CAS proceedings. Dr. Smith attended a CAS case conference on May 8, 1998. A CAS employee swore in an affidavit that, during the case conference, Dr. Smith indicated "he was 99% certain that [Nicholas] had died due to a non-accidental

trauma that had been inflicted on the child by the sole caregiver, being the mother, who had the opportunity to do so during the time frame for this type of injury." At the Inquiry, Dr. Cairns, who was also present at the meeting, did not dispute this recollection and recalled that Dr. Smith had a very high degree of certainty in his conclusions. Moreover, Dr. Smith swore two affidavits, dated June 29, 1998, and July 20, 1998, in the CAS proceedings. Dr. Smith's allegation that he was "not involved in this matter in any way by the CAS" was untrue.

In 2001, with regard to Jenna's case, Ms. Waudby initiated a complaint against Dr. Smith with the CPSO, alleging, among other things, that he had failed to perform an adequate sexual assault examination, that he had lost a hair collected from Jenna's body during the autopsy, and that he had failed to provide an accurate opinion on the timing of Jenna's injuries. Around the same time, in July 2001, the police reopened the investigation into Jenna's death. In October 2001, the officer in charge of the investigation, Detective Constable (now Sergeant) Larry Charmley of the Peterborough Lakefield Community Police Service, contacted Dr. Smith about the hair. In November 2001, he determined that Dr. Smith still had the hair collected from the autopsy and retrieved it from Dr. Smith's office.

On December 21, 2001, Dr. Smith responded to Ms. Waudby's complaint. Of note were two of Dr. Smith's assertions. First, he indicated that a SCAN physician, Dr. Huyer, had assisted at the autopsy and together they agreed there was no evidence of abuse. He told the CPSO: "Nevertheless, appropriate sampling was undertaken. The police, who are responsible for the submission of evidence in a homicide investigation, chose not to submit this material for analysis. It remained under seal, in my care." With respect to the whereabouts of the material, Dr. Smith informed the CPSO that, following Ms. Waudby's complaint, "I have asked the police investigators to reconsider their decision and they agreed to do so. Subsequently, a member of the Peterborough Police Service obtained the material from me, and he gave it to the Office of the Chief Coroner for safekeeping until a final decision is made on whether it will be examined."

Second, with respect to his opinion on the timing of Jenna's injuries, Dr. Smith told the CPSO that he understood a review of the clinical information would be important in determining when Jenna sustained her fatal injuries. He wrote, "I even suggested to Ms. Waudby's lawyer that they seek the opinion of Dr. Sigmund Ein, a pediatric surgeon at the Hospital for Sick Children."

While the CPSO investigation was ongoing, on February 14, 2002, the media learned of Detective Constable Charmley's discovery and retrieval of the hair, and openly criticized the police investigation and Dr. Smith's autopsy in the case. Shortly thereafter, Dr. Smith and his wife attended a meeting with Dr. Cairns,

where they discussed this aspect of the case. During the meeting, Dr. Smith once again failed to respond with candour to Dr. Cairns' concerns. As he did in his response to the CPSO, Dr. Smith told Dr. Cairns that he seized the hair and offered it to the forensic identification officer who was present at the autopsy, but that the officer refused to take it. When Dr. Cairns asked Dr. Smith why he did not tell the court that he had collected the hair when specifically asked about a hair found on Jenna's body at the preliminary hearing in October 1998, Dr. Smith had no answer. However, he told Dr. Cairns that he had in fact brought the hair to court with him that day, and that it was in an envelope in his jacket pocket while he testified.

Dr. Smith repeated this version of events at the Inquiry. However, he was no longer certain that it was the forensic identification officer who told him that the police were not interested in the hair. It could have been a police officer, the local coroner, or the regional coroner, but he had no specific recollection of someone providing him with that information. Nevertheless, Dr. Smith testified that he collected the hair and put the envelope containing the hair in his file, which he kept in a cabinet in his office. He said that, in October 1998, he took the envelope containing the hair with him to court when he testified at the preliminary hearing but denied any knowledge of it when asked. He could not recall why he took the hair with him to court that day.

At the Inquiry, Dr. Cairns testified that he found Dr. Smith's claim that the forensic identification officer refused to take the hair at the autopsy "preposterous." Dr. Cairns could not understand why, if the officer had refused to take the hair, Dr. Smith did not immediately report that refusal to someone at the OCCO. Nor could Dr. Cairns understand why Dr. Smith failed to record that he collected the specimen, either in his report of post-mortem examination or in his rough notes. And, with respect to Dr. Smith's claim that he had the hair in his pocket with him at the preliminary hearing, while failing to answer correctly the questions put to him by defence counsel about the hair, Dr. Cairns testified: "I just couldn't understand it."

I share Dr. Cairns' reaction. In my view, what Dr. Smith told Dr. Cairns in early 2002 and what he continued to maintain at the Inquiry makes no sense. Constable Kirkland, the forensic identification officer present at Jenna's autopsy, testified at the Inquiry. He denied having any knowledge of the hair at the post-mortem examination and testified that he would never refuse to take a sample offered by the pathologist. He said, "It would be against all my training, all my experience, my personal ethics and it wouldn't even make any sense." I accept Constable Kirkland's evidence on this point. Dr. Smith's assertion that the police were not interested in a hair found in a deceased child's genital area during an

autopsy of a criminally suspicious case defies logic. And, even if that were the case, I cannot understand why Dr. Smith did not record the fact in his notes and in his report of post-mortem examination. Instead, he waited until October 2001, almost four years after the post-mortem examination, to reveal for the first time that he had collected the hair and that the police allegedly refused to accept it. In my view, his statements were intended to lead Dr. Cairns into believing that he had performed an adequate post-mortem examination and had treated the collection of the hair in an appropriate and conscientious manner.

Dr. Smith's claim that he had the hair with him at the preliminary hearing is simply baffling. As I discussed above, Dr. Smith typically did not review his file before attending court. Moreover, Dr. Smith wrongly told the court at the preliminary hearing that he had no notes of autopsy. This evidence demonstrates to me that Dr. Smith failed to review his file in this case before attending the preliminary hearing. I cannot comprehend what might have possessed Dr. Smith, in his version of events, to open his file on Jenna's case before court, remove the envelope containing the hair that the police apparently believed was a contaminant, take it with him to court that day yet leave the rest of his file behind, and then make no reference to the hair when asked about it in court. It defies any logical explanation. It is untrue.

Dr. Smith's statement to the CPSO that he had suggested to defence counsel that an opinion be sought from Dr. Ein was also false. Although counsel did consult with Dr. Ein about the time of Jenna's injuries, Dr. Smith had nothing to do with the decision to do so.

Dr. Smith's assertion that the hair had finally gone to the police for testing only at his insistence was untrue as well. It happened at the initiative of Ms. Waudby's counsel, James Hauraney, and on the insistence of Detective Constable Charmley.

Dr. Smith's responses to the CPSO unfortunately put an end to any effective oversight by it. His responses actually convinced Dr. Stephen Cohle, the expert assessor appointed by the CPSO, of his version of events. Dr. Cohle accepted what Dr. Smith told him, stating in his opinion to the CPSO Complaints Committee: "Dr. Smith did retrieve a hair from the body which apparently the police refused to submit to the crime lab. To Dr. Smith's credit, he retained the hair and eventually the police did accept it for examination." Moreover, in Dr. Cohle's opinion, "It is to Dr. Smith's credit that he suggested Dr. Ein as a consultant but this did not occur until after the case was in court." In the result, the CPSO investigation was not as probing as one would have hoped.

Finally, Dr. Smith's attempts to frustrate oversight were not limited to the CPSO and continued even after he left SickKids. In September 2005, after resigning from SickKids, Dr. Smith applied to the College of Physicians and Surgeons of

Saskatchewan. As a part of his application, Dr. Smith was required to fill out a questionnaire, which asked if he had ever been the subject of an investigation by a medical licensing authority or a hospital. Dr. Smith replied, "No." This was false. Dr. Smith was the subject of three lengthy CPSO investigations in the cases of Amber, Nicholas, and Jenna, as discussed above.

At the Inquiry, Dr. Smith acknowledged that he was wrong. He explained his response to the college's questionnaire by saying that he misinterpreted the question. He testified that, although he knew that the CPSO had received several complaints regarding his work, those complaints had been dismissed. I cannot accept that Dr. Smith was unaware that his answer was misleading.

The litany of misrepresentations – whether to those responsible at the OCCO or to the CPSO or to the College of Physicians and Surgeons of Saskatchewan – all played some part in impeding effective oversight and professional regulation of Dr. Smith. While this whole episode undoubtedly throws a harsh light on aspects of Dr. Smith's character, that should not obscure the systemic lessons to be drawn.

Professional responsibility is as important a quality for pathologists as for any other professional. Candour and integrity are essential at all times, but especially in dealing with the professional's overseers and with his or her professional regulator. But the approach of those who have oversight responsibilities also matters. Healthy scepticism is preferable to trusting acceptance. The story of Dr. Smith and the hair in Jenna's case makes the point.

Summary

My review clearly demonstrates the kinds of serious failures that occurred in the practice of pediatric forensic pathology in Ontario in the 1980s and 1990s. Coupled with the equally serious failures of oversight that I will describe in Chapter 9, Oversight of Pediatric Forensic Pathology, the results were, unfortunately, often tragic.

In this review of the practice of pediatric forensic pathology, I have necessarily drawn heavily on the evidence I heard about the work of Dr. Smith in the criminally suspicious cases that were the subject of the Chief Coroner's Review. As I have said earlier, I have not attempted to determine the frequency with which these kinds of errors were made, or the extent to which flawed practices were followed, by Dr. Smith or by others, in those years. That was not my task. What is important is to determine the ways in which the practice of pediatric forensic pathology could and did go badly wrong, so that the problems thus revealed can be addressed and, to the extent possible, prevented from happening again.

The failings identified cover most aspects of the role played by a pathologist in a criminally suspicious case. To begin with, Dr. Smith brought to that role woefully inadequate training in forensic pathology. Yet that is the critical expertise called for. He was not alone in this. In those years, very few pathologists in Ontario had the qualifications they should have had.

Many of the practices employed by Dr. Smith in the actual conduct of the post-mortem examinations in cases like those discussed here raise systemic concerns. He did not normally visit the scene, despite the useful information that might yield. He was often careless in obtaining the necessary information; in recording it carefully; in screening out irrelevant information; in recording what he did, saw, and collected; and in preserving and testing the materials from the autopsy. Again, he was not alone. There were other pathologists who followed many of these flawed practices. All of these practices substantially added to the risk of erroneous pathology opinions.

As the expert reviewers concluded, Dr. Smith's ultimate opinions in these cases were fundamentally wrong. I have examined the ways in which they were wrong, not only because of the impact they had on the individuals in these cases, but also because they represent various failings that can and must be addressed for the future.

The same is true of the problems with the way in which Dr. Smith prepared his reports. Here too a number of the flawed practices he used do not appear to have been used by him alone. These failings need to be addressed to help restore and enhance public confidence.

Dr. Smith's interactions with the criminal justice system were also a major source of difficulty. These interactions include his dealings with police, the Crown, and coroners. But of particular importance are the lessons to be learned from the way he played his role as an expert, including his giving of evidence. The kind of behaviour he exhibited creates significant problems for the criminal justice system. It is vital to minimize the risk of a repetition of this behaviour by pathologists in the future.

The review also examined the ways in which Dr. Smith impeded oversight of his work. Once again, there are lessons to be learned here that will improve the contribution that the practice of pediatric forensic pathology can make to the criminal justice system.

The review has thus identified a wide range of failings in the practice of pediatric forensic pathology in Ontario from 1981 to 2001. The failings provide the basis for devising systemic changes to the practices used by pathologists particularly in criminally suspicious pediatric cases. The recommendations I make in Volume 3 respond directly to these findings and will, I hope, ensure that pediatric

forensic pathology can properly serve the criminal justice system in the future.

Finally, although this is a systemic inquiry, it is important to give some attention to Dr. Smith's personal characteristics that may have contributed to the failings I have identified. It is true that personal characteristics cannot be changed by revising the practices followed by pathologists, but their impact can be controlled. In this sense, Dr. Smith's particular personal characteristics exemplify an important challenge. It is a challenge that focuses on ensuring that the quality assurance and oversight mechanisms put in place are able to detect personal shortcomings of pathologists and prevent them from doing harm. If in future there should be an incompetent pathologist, the systemic challenge is to ensure that those responsible for maintaining an effective and fair criminal justice system are able to do so.

It is in this context I turn to a brief assessment of some of the traits that affected Dr. Smith's flawed practices. In his appearance at the Inquiry, Dr. Smith was candid in acknowledging how disorganized he was. He also admitted his own arrogance and the dogmatic manner in which he often presented his opinions. These qualities were on display in many of the cases examined by the Inquiry. They made impossible the proper performance of the task required of him as an expert. As well, his deeply held belief in the evil of child abuse caused him to become too invested in many of these cases. As a result, the objectivity and self-discipline that must be the foundation of the expert's role proved to be beyond him.

Dr. Smith was adamant that his failings were never intentional. I simply cannot accept such a sweeping attempt to escape moral responsibility. The most obvious examples of conduct that belies Dr. Smith's assertion were his attempts to frustrate oversight that I have reviewed. At those moments when the need for accountability and oversight might have become even more apparent to those in a position to do something about it, Dr. Smith was not above using deception to attempt to throw them off the trail.

Dr. Smith is a complex, multi-dimensional person. The terrible irony is that, in some ways, the negative attributes I have described were compounded by positive qualities. He was willing to take on difficult pediatric cases that his colleagues were not anxious to do. He has a sense of responsibility that led him to cooperate with the work of this Inquiry. In his evidence, he admitted many of his shortcomings that the evidence had laid bare. And, albeit much too late, he owned up to a great deal. In addition, the evidence is clear that others found him engaging. Support staff liked working with him, and many people found him a charismatic and effective speaker. As we now know, although he did so on the basis of terribly deficient training and fundamentally flawed practices, he

appeared to be completely assured, and often certain, in circumstances where the science could not provide certainty. These sorts of qualities not only increased the risk he posed as an expert in the criminal justice system but tended to build an unwarranted trust in already lax overseers.

Such an expert can do much damage without effective oversight by those who must provide it and constant vigilance on the part of the participants in the criminal justice system who can protect the system against flawed expert evidence. None of that happened here. The challenge is to ensure that this history does not repeat itself.

9

Oversight of Pediatric Forensic Pathology

Introduction

The tragic story of pediatric forensic pathology in Ontario from 1981 to 2001 is not just the story of Dr. Charles Smith. It is equally the story of failed oversight. The oversight and accountability mechanisms that existed were not only inadequate to the task but were also inadequately employed by those responsible for using them. The role of the Office of the Chief Coroner for Ontario (OCCO) is, therefore, the main subject of this chapter. However, the roles of two other institutions are also important in understanding how Dr. Smith's flawed practices went unchecked for so long: the Hospital for Sick Children (SickKids) in Toronto where he worked, and the College of Physicians and Surgeons of Ontario (CPSO), the professional regulator for all doctors in the province. They too are part of this chapter. In the final section of this chapter, I describe the changes in the oversight regime for forensic pathology that have occurred since 2001.

At its simplest, accountability is the obligation to answer for a responsibility conferred. When called on to account, the accountable party must explain and justify his or her actions and decisions, normally against criteria of some kind. Oversight is the other side of the equation. Once a responsibility is conferred, oversight seeks to ensure that those who hold the responsibility are held accountable for their actions and decisions. Quality control or quality assurance measures can be important tools in successfully performing the oversight function. Setting standards, monitoring compliance, and correcting shortcomings are all important quality control measures that are part of effective oversight.

As with my discussion of the practices used in pediatric forensic pathology, my review of oversight and accountability must necessarily describe what was happening for forensic pathology generally. Very few oversight and accountability mechanisms were targeted specifically at pediatric forensic pathology. In large measure, the mechanisms and their shortcomings applied to all of forensic pathology.

My assessment of how those who had oversight responsibility for forensic pathology performed their jobs has been done largely through the lens of the cases conducted by Dr. Smith which were examined at the Inquiry. As with my review of the practice of pediatric forensic pathology, it is important to emphasize that this investigation represents neither a full survey nor a random sampling of the supervisory work done by the individuals who were responsible for pediatric forensic pathology in Ontario from 1981 to 2001. What these cases provide is a clear picture of the ways in which that supervision could and did go wrong, with the tragic consequences I have described. In Volume 3 I propose a number of recommendations that will, I hope, contribute to preventing another such damaging failure of oversight.

The failures of supervision are seen most graphically in a series of events through the 1990s which called for the oversight of Dr. Smith, but in which the response was woefully inadequate. I have already described some of the events in general terms, because they were the basis of the broad concerns about Dr. Smith's work which grew over the decade. In this chapter, I focus on the roles of those responsible for him, because it is clear that, for far too long, Dr. Smith was not held accountable. This breakdown in oversight responsibility is not something that can be dealt with simply by replacing the overseers. Rather, the shortcomings represent systemic failings of oversight that must be corrected if public confidence is to be restored.

The troubling series of events during the 1990s took place in the context of institutional and organizational weaknesses that made effective oversight difficult. I describe most of them in Chapter 7, Organization of Pediatric Forensic Pathology. In particular, the legislative framework created by the *Coroners Act*, RSO 1990, c. C.37, provides no foundation for effective oversight of forensic pathology in Ontario. Although the *Coroners Act* structures the coronial system in Ontario and provides that the coroner is in charge of the death investigation, it makes no mention of a forensic pathology service, those who might run it (such as the Chief Forensic Pathologist), or those who should be allowed to perform post-mortem examinations. There is no reference at all to pediatric forensic pathology. It provides only that the coroner can issue a warrant for the post-mortem examination of the body of a deceased person, and that the person performing that examination (who is not required by the *Coroners Act* to be a pathologist) must report the findings forthwith to the coroner and the Crown attorney, among others. In other words, no legislative framework was or is currently provided to ensure proper oversight and accountability of forensic pathology in general, or pediatric forensic pathology in particular.

In addition to being ignored in the legislation, the supervisory role of the

Chief Forensic Pathologist was left unclear in OCCO policies and practices at the time. Relationships between the OCCO and the regional forensic pathology units, in particular the Ontario Pediatric Forensic Pathology Unit (OPFPU) at SickKids, were ill defined and failed to assign clear oversight responsibilities or clear lines of accountability. The directors of the regional forensic pathology units (regional directors) had no expressly articulated oversight whatsoever.

These weaknesses in the institutional arrangements left the working relationships in individual cases largely between the pathologist and the investigating coroner. At the level of the individual case, local coroners, who were most frequently general practitioners, simply did not have the expertise to provide any quality control over the pathologist's work, particularly in the more difficult forensic cases.

As we have seen, despite the lack of clarity in his roles and responsibilities, Dr. David Chiasson tried, during his tenure as Chief Forensic Pathologist, to introduce some quality control measures for the forensic pathology performed in individual cases. But best practices guidelines were limited, peer review by colleagues in an individual case was cursory, and review by the Chief Forensic Pathologist of post-mortem reports was only a paper review. Rounds proved ineffective at providing quality control in criminally suspicious cases. There was no organized tracking of the timeliness of reports or of pathologists' involvement in ongoing cases, nor was there any review of either their testimony or judicial comments about them. There was no institutionalized mechanism for receiving complaints from other participants in the criminal justice system and addressing them in an expeditious and objective way. The lack of tools available to the Chief Forensic Pathologist to achieve compliance by individual pathologists, when coupled with the fee-for-service method of payment that applied in so many cases, compounded the challenges of effective oversight. These failings all contributed to the difficulties of proper quality assurance in individual cases.

These institutional shortcomings were more than enough to stand in the way of truly effective oversight. In the context of Dr. Smith's flawed practices, they were exacerbated by the professional relationships between him and those who might have done something about his mistakes.

As Chief Forensic Pathologist, Dr. Chiasson felt he did not have overall responsibility for the OPFPU or for Dr. Smith. He had no clear oversight authority by which to hold Dr. Smith accountable. Nor was he in a personal position to exercise any professional suasion over him. He was junior to Dr. Smith, who had by 1994 become the perceived leading expert in the field of pediatric forensic pathology. Dr. Smith never asked him for advice or assistance even in his most complex cases, such as Sharon's case, where Dr. Chiasson's forensic pathology

expertise would have added significant value. Overall, Dr. Chiasson felt that Dr. Smith was not open to even the gentlest oversight from him.

Equally important, by the time Dr. Chiasson became Chief Forensic Pathologist, Dr. Smith already had close working relationships with Dr. James Young and Dr. James Cairns, the Chief Coroner and Deputy Chief Coroner for Ontario, respectively. By the mid- or late 1990s, Dr. Smith and Dr. Cairns consulted on cases at least three or four times a week. As Dr. Smith told the Inquiry, he looked to Dr. Cairns for advice and peer review in forensic issues. When he dealt with the OCCO, Dr. Smith clearly was used to working directly with both of these senior officials. I have no doubt that he viewed them as the supervisors of his pediatric forensic pathology work. And, through the 1990s, that was the essential reality. As the problems became more serious and impossible to ignore, Dr. Cairns and Dr. Young finally, and far too late, moved to exercise this oversight responsibility and hold Dr. Smith accountable.

Thus, the story of failed oversight in Dr. Smith's years is the story of Dr. Young's and Dr. Cairns' failures and of the context in which that happened – the completely inadequate mechanisms for oversight and accountability.

OCCO Oversight of Dr. Smith

Throughout the 1990s, obvious and unmistakable danger signals arose about Dr. Smith's work. His mistakes as a forensic pathologist and his failure to understand his proper role in the justice system were clearly apparent by the end of the 1990s. However, the systemic weaknesses in the oversight and accountability mechanisms, quality control measures, and institutional arrangements of pediatric forensic pathology in Ontario from 1981 to 2001 left the system vulnerable to the errors made by Dr. Smith and other pathologists doing pediatric forensic cases. Dr. Young and Dr. Cairns, the de facto overseers of Dr. Smith's work, failed to recognize many of these ominous signals, and the signals they did recognize prompted only inadequate responses. The story of the missed warning signs began early in the decade, with Dr. Smith's participation in Amber's case.

July 1991: Justice Dunn's Reasons for Judgment

As I describe in Chapter 2, Growing Concerns, on July 25, 1991, Justice Patrick Dunn of the Ontario Court (Provincial Division) acquitted S.M. of the charge of manslaughter in the death of Amber after a trial in Timmins. Justice Dunn strongly criticized Dr. Smith in detailed reasons for judgment, which expert witnesses at the Inquiry described as a "masterful analysis" of the forensic pathology

issues raised in the case. Justice Dunn also identified flaws in the approach of SickKids' physicians with regard to fact-finding, communications, documentation, and consultations with other experts.

Justice Dunn identified 16 areas of concern with the conduct of SickKids' physicians in Amber's case. At the Inquiry, Dr. Young acknowledged that the senior officials at the OCCO would have been concerned about each of these areas, in particular Justice Dunn's criticisms of Dr. Smith's objectivity, skill, and familiarity with the latest literature, had they been aware of the decision. However, the OCCO appears not to have learned about the substance of Justice Dunn's decision for several years after it was released. It had no system in place to monitor the progress or result of criminal cases involving pathologists performing forensic work under coroner's warrant.

Justice Dunn's decision was forwarded to Dr. Robin Williams, a pediatric physician, at the time of its release. Dr. Williams, currently the medical officer of health for the Niagara Region, has sat on the Paediatric Death Review Committee (PDRC) since 1990. Dr. Young testified at the Inquiry that Dr. Williams did not forward the judgment to the OCCO, nor did Dr. Smith. With no organized way to obtain judgments involving pathologists doing forensic work, the OCCO's ability to react to Justice Dunn's decision was compromised.

Dr. Young testified that, in 1991, he did not hear about Justice Dunn's decision and was neither familiar with the particulars of the trial nor aware of Justice Dunn's reasons for acquitting S.M. The first time he heard anything about the result was sometime later, when Dr. Smith told him that a defence expert had argued that there was no such thing as shaken baby syndrome and that Justice Dunn had acquitted S.M.

Similarly, Dr. Cairns did not recall hearing about Justice Dunn's decision when it was released in 1991. He learned about it sometime before he read an excerpt from the decision that a lawyer in Nicholas' case sent to him in 1998. Around that same time, Dr. Cairns told Dr. Chiasson about Justice Dunn's decision in Amber's case, but Dr. Chiasson did not read the decision then either.

After the trial, Dr. Smith misrepresented to Dr. Young and Dr. Cairns that Justice Dunn had subsequently told him that he had changed his mind about the medical evidence and, had his understanding of shaken baby syndrome been as complete at the trial, he would have convicted S.M. At the time, Dr. Young and Dr. Cairns regarded Dr. Smith's statements as credible. They both chose to believe Dr. Smith's unlikely story without further investigation and without even reading the decision in question.

Dr. Young testified that he did not finally read Justice Dunn's reasons in Amber's case until 2007, when he was preparing to appear at this Inquiry. He said

that, before the Inquiry, he did not know that a number of expert witnesses had testified for the defence in the case. Although he acknowledged the many opportunities he had to learn about the decision, he stated that he did not learn until 2007 that Justice Dunn was sharply critical of SickKids and of Dr. Smith and his methodology. As I explain below, after his February 1997 meeting with a CPSO investigator about the case, Dr. Young should have known that Justice Dunn's reasons for judgment were sharply critical of Dr. Smith.

May 1995: Crown Counsel's Concerns Regarding Dr. Smith

Tiffani died on July 4, 1993, at the age of three months. Her parents were charged with failing to provide the necessaries of life, aggravated assault, and manslaughter. Dr. Smith's report of post-mortem examination, dated January 17, 1994, concluded that the cause of death was asphyxia. Dr. Smith testified at the preliminary hearing into the charges filed against Tiffani's parents that, although the cause of death was undetermined, he was "suspicious" that whatever killed Tiffani was an "asphyxial type of mechanism."[1]

Crown counsel Sheila Walsh thought that Dr. Smith had "severely backtrack[ed]" from his original verbal opinion that Tiffani's death was non-accidental. She commented to another Crown counsel that Dr. Smith's testimony resulted in Crown counsel looking "like a total fool on this case at the end of the day." Ultimately, Tiffani's parents pleaded guilty to failure to provide the necessaries of life.

In 2000, Ms. Walsh stated in an email to another Crown counsel that she approached Dr. Young about Tiffani's case at a Crown conference shortly after the criminal proceedings concluded in May 1995. Ms. Walsh recorded that she "spoke privately to Dr. Young, expressing [her] concerns about Dr. Smith's conduct in [Tiffani's] case," and that Dr. Young responded that "he was planning to have a meeting about [Tiffani's] case." Ms. Walsh never heard anything more about the matter. In a subsequent memorandum in 2003, she again reported this conversation, but, by then, she did not recall with whom at the OCCO she had raised her concern.

Dr. Young and Dr. Cairns both told the Inquiry that they were not aware of Ms. Walsh's concerns about Dr. Smith's conduct in Tiffani's case. Whether Ms. Walsh spoke to Dr. Cairns, Dr. Young, or another OCCO official need not be resolved. The important point is that the OCCO did not have a system to collect,

[1] See Appendix 28 at the end of Volume 4 for summaries of the 20 cases that the Review Panel found problematic.

track, and resolve concerns received from either Crown counsel or defence counsel regarding the work of pathologists performing forensic autopsies. This gap made it difficult to investigate and respond to such concerns in an efficient and coherent way. Although not all concerns will prove well founded, it is essential that they be investigated, given the important role that pathologists play in the criminal justice system.

Although he testified that he was not aware of Ms. Walsh's specific concerns, Dr. Cairns indicated at the Inquiry that, on four or five other occasions, he was alerted to the fact that Dr. Smith "would be stronger in his opinion when he would be talking at an early stage and then he would weaken that opinion in … court." Dr. Cairns spoke with Dr. Smith a number of times about the concern that he sometimes provided different information at the time when charges were laid and when he later testified at trial. In response, Dr. Smith usually countered that he had received more information by then or that the police had misunderstood his original opinion. Dr. Cairns told Dr. Smith that he should have contacted Crown counsel before the trial to report that he had changed his opinion because of new information. Dr. Cairns was right. He did not, however, document any of his concerns or his conversations with Dr. Smith.

In Chapter 8, Dr. Smith and the Practice of Pediatric Forensic Pathology, I review the serious problems that can arise when pathologists do not commit their opinions to writing, including the possibility for significant misinterpretation of those opinions by police officers and Crown counsel. The fact that Dr. Cairns had to address such concerns more than once with Dr. Smith was a warning sign. The repeated nature of the problem should have resulted in a more formal response than the occasional undocumented discussion.

September 1996: Baby X's Case

Baby X's case is a clear example of a situation where Dr. Cairns failed to provide necessary oversight of Dr. Smith. Instead, he permitted Dr. Smith to abandon his appropriate role as an expert scientist and to assist a police investigation improperly. In this case, Dr. Cairns and Dr. Smith had attended case conferences with the police in April and May 1996 and knew that Baby X's mother was a person of interest in the police investigation. Subsequently, Baby X's mother contacted Dr. Cairns to inquire about the results of the autopsy. Dr. Cairns asked Dr. Smith to meet with Baby X's mother, and Dr. Smith agreed. On September 4, 1996, because of their lawful surveillance of her home, the Ontario Provincial Police (OPP) intercepted a telephone conversation between Dr. Smith and Baby X's mother and learned that Dr. Smith intended to meet with the mother at her home. The

OPP then told Dr. Smith that the police had installed listening devices in the home, which would likely intercept the scheduled conversation. Although it is not clear when Dr. Cairns learned that the house was under surveillance, he certainly knew that fact before Dr. Smith met with Baby X's mother. Despite this knowledge, he did not object to Dr. Smith going forward with the meeting.

In short, Dr. Cairns permitted Dr. Smith to attend at a suspect's house and discuss the contents of the report of post-mortem examination with her while the police secretly recorded their conversation. Dr. Smith met with the Barrie Police Service and the OPP before and after his meeting with Baby X's mother on September 5, 1996. The police did not tell Dr. Smith what to do during his meeting with Baby X's mother, nor did they ask him to solicit any information from her. Nonetheless, with Dr. Cairns' approval, Dr. Smith improperly furthered a police investigation.

Several of the forensic pathologists and coroners who testified at the Inquiry emphasized that it is inappropriate for a pathologist to meet with a person who is a suspect in an ongoing police investigation. The effect of that inappropriate meeting was compounded because the conversation was being intercepted by the police. Dr. Cairns and Dr. Smith compromised the independence of their respective positions as Deputy Chief Coroner and expert witness. This case was a warning sign about Dr. Smith's failure to understand the appropriate role of a pathologist in a criminally suspicious case. Dr. Cairns did not recognize the warning sign and, indeed, permitted the meeting to go ahead.

February 1997: Dr. Young Learns of Justice Dunn's Criticisms

In February 1997, Dr. Young met with C. Michéle Mann, an investigator with the CPSO, to discuss a complaint made by D.M., the father of S.M., regarding the conduct of Dr. Smith and two other SickKids physicians who had been involved in Amber's case. Dr. Young and Ms. Mann both testified at the Inquiry about their meeting. They agreed that they discussed Amber's case in general and some of D.M.'s outstanding questions about elements of the coroner's investigation, such as the order for exhumation and the Chief Coroner's authority to involve a pathologist in an investigation. However, they disagreed about what else they discussed during their meeting.

Ms. Mann testified that, at the outset of the meeting, she reviewed Amber's case with Dr. Young to provide him with some background about D.M.'s complaint. She specifically recalled discussing with Dr. Young the fact that several international witnesses had testified and contradicted Dr. Smith, and that Justice Dunn's decision "had also been very critical of the actions of Dr. Smith in the

investigation of Amber's death." Ms. Mann testified that she was surprised when Dr. Young said he felt "very strongly that S.M. had killed this child." Ms. Mann did not know if Dr. Young had previously read Justice Dunn's decision, but he did not seem surprised by any of the information she provided. He did not ask her any further questions or for a copy of Justice Dunn's decision.

Dr. Young recalled that his meeting with Ms. Mann in February 1997 focused primarily on the specific issues raised by D.M. in his complaint, such as the ordering of the exhumation and the role of coroners and pathologists. He was already aware that Dr. Smith had been criticized in Amber's case for losing an X-ray.[2] While he and Ms. Mann may have discussed criticism of Dr. Smith and other evidence in court, he understood that the trial was "hard fought" and that one or two witnesses had testified that shaken baby syndrome did not exist. His meeting with Ms. Mann did not alter his understanding.

I find that, although Ms. Mann told Dr. Young about the trial of S.M. and specifically that Justice Dunn's judgment was highly critical of Dr. Smith, Dr. Young did not really appreciate the significance of what she told him. His views were coloured by his belief in Dr. Smith's status as the leading pediatric forensic pathologist in the province, by Dr. Smith's misleading account of that trial, and by his own entrenched misunderstanding of the case. Because he did not approach the meeting with the openness and objectivity one expects of an overseer, it did not change his mind about the importance of the judgment. Another opportunity to address the concerns identified by the judge was lost.

Mid- to Late 1990s: General Complaints about Dr. Smith

Throughout the 1990s, coroners, police officers, and Crown counsel brought a litany of concerns about Dr. Smith's work practices to the attention of the OCCO. People complained repeatedly about Dr. Smith's failure to produce reports in a timely fashion; his unresponsiveness; his carelessness; and the inconsistencies between his written reports, his pre-trial comments, and his sworn evidence. In many instances, the OCCO did nothing to respond to these concerns. When it did respond, it was mainly through informal verbal and undocumented requests to Dr. Smith that he try to improve, all of which were inadequate and had no effect.

In the late 1990s, Dr. Smith often failed to return telephone calls from police, coroners, and regional coroners and, in so doing, impeded the efficient function-

[2] Justice Dunn in fact criticized Dr. Smith for failing to order complete X-rays. In his responses to the CPSO, Dr. Smith stated that the X-rays were taken but had been misplaced.

ing of the criminal justice system. When people could not get in touch with Dr. Smith, they often contacted Dr. Cairns, who appeared to have the most success in reaching him. Dr. Smith returned Dr. Cairns' calls in a timely fashion. Dr. Cairns exercised a supervisory role toward Dr. Smith in this respect, and he told Dr. Smith that he needed to be more responsive and return telephone calls. Dr. Smith replied that he was very busy and would do his best. However, complaints about Dr. Smith's responsiveness continued, and, despite their frequency, Dr. Cairns did not put his concerns about responsiveness to Dr. Smith in writing.

As I describe in Chapter 8, Dr. Smith and the Practice of Pediatric Forensic Pathology, Dr. Smith frequently did not provide his reports of post-mortem examination to the participants in the criminal justice system in a timely fashion. Police officers raised concerns with the OCCO about the timeliness of Dr. Smith's reports and sometimes asked Dr. Cairns to contact Dr. Smith. On some occasions in the mid- to late 1990s, subpoenas had to be issued to get Dr. Smith to respond.

General concerns about Dr. Smith's delays were sometimes expressed at meetings of the OCCO's senior management group. Difficulties with delay were not unique to Dr. Smith, but his problems were much more significant than those of other pathologists.

Regional coroners discussed Dr. Smith's delays at a number of their own meetings, and they approached Dr. Cairns about Dr. Smith's lack of responsiveness to inquiries and his failure to produce reports in a timely fashion. These complaints increased over time. Dr. Cairns eventually told the regional coroners to consider sending consultation requests elsewhere in light of the significant delay in getting reports from Dr. Smith.

Although the OCCO did not have a system or central mechanism to track outstanding reports, nor any guidelines for turnaround times of reports of post-mortem examination, these complaints from members of the death investigation team alerted the OCCO, certainly by 1994, to Dr. Smith's chronic lateness in producing reports, even after repeated requests. As Dr. Young described at the Inquiry, the OCCO faced a "chronic problem with Dr. Smith about lateness and tardiness and pulling reports out of him."

Dr. Cairns and Dr. Chiasson attempted to address concerns about the timeliness of Dr. Smith's reports through a series of meetings with Dr. Lawrence Becker, a neuropathologist who was pathologist-in-chief and the chief of the Department of Pediatric Laboratory Medicine at SickKids. They understood from Dr. Smith that his reports were delayed because of inadequate secretarial support. They met with Dr. Becker about this issue because Dr. Smith continued to tell them he did not have proper administrative support and would prefer an arrangement where he had a dedicated secretary. Over a number of years, Dr. Cairns and Dr. Chiasson

suggested that Dr. Smith be provided with a dedicated assistant. SickKids did not do so, and the OCCO did not insist. Although we now know that lack of secretarial assistance was not a factor in Dr. Smith's timeliness problems, the OCCO was not aware of that at the time.

The OCCO tried to address Dr. Smith's delay problems through one-on-one conversations. On occasion, Dr. Young told Dr. Smith to "get going" on his reports. Dr. Cairns often called Dr. Smith to urge him to complete a particular delayed report of a post-mortem examination. Dr. Cairns and Dr. Young did not document their attempts to address concerns directly with Dr. Smith. The OCCO believed that Dr. Smith's expertise was unique and invaluable, and it felt it needed to keep using him despite his delays. It considered that continuing to use Dr. Smith – while pushing him to rectify critical delays that might affect court cases – was better than not having him perform coroner's autopsies at all.

Although the OCCO did not have the ability to track turnaround times on any particular report of post-mortem examination, the OCCO had more than enough data to know of Dr. Smith's problems in completing reports in a timely fashion. Given the frequency of the complaints and the seriousness of the problem, Dr. Young and Dr. Cairns should have done more to address Dr. Smith's chronic delays. It is true that the problem was complicated by the facts that Dr. Smith was not an employee of the OCCO, they had few administrative or disciplinary sanctions available to them, and very few pathologists were willing to do forensic work, much less pediatric forensic work. Nevertheless, over time, Dr. Smith's delays lengthened, and the price paid for his delays rose.

Summer 1997: Nicholas' Case

Nicholas' case represents a particularly troubling example of how the organizational weaknesses of the OCCO, together with errors in judgment by Dr. Young and Dr. Cairns, combined to prevent meaningful oversight of Dr. Smith.

Although Nicholas died on November 30, 1995, in Sudbury, Ontario, Dr. Smith did not become involved until he produced a consultation report dated January 24, 1997, for the PDRC. Dr. Smith concluded that, "In the absence of an alternative explanation, the death of this young boy [was] attributed to blunt head injury."

In May 1997, Dr. Cairns attended a meeting with Dr. Smith, the regional coroner, and the Sudbury police at which he and Dr. Smith told the police that the case was being classified as sudden unexplained death syndrome (SUDS) and that an exhumation was necessary to determine whether the cause of death was head trauma. Dr. Cairns subsequently wrote to the Sudbury police and indicated that

both he and Dr. Smith believed that Nicholas died of a head injury in highly suspicious circumstances. Dr. Cairns stated that disinterment was necessary to clarify the issue. He did not involve Dr. Chiasson in the decision to recommend disinterment in Nicholas' case. Indeed, Dr. Chiasson did not become involved in the case until the CAS proceedings in the year following the disinterment.

The exhumation and second autopsy occurred on June 25, 1997. Dr. Smith took his 11-year-old son to the disinterment. In 1998, Maurice Gagnon, Nicholas' grandfather, complained to the CPSO about Dr. Smith's conduct in this respect. In October 1998, the CPSO declined jurisdiction over the matter and forwarded the complaint to the OCCO. Dr. Cairns and Dr. Young consulted with Dr. Smith, who explained that he had taken his son to Sudbury with him to help him stay awake on the drive and had nowhere to leave him during the disinterment. Dr. Cairns told Dr. Smith it was inappropriate for his son to have attended the disinterment. Subsequently, Dr. Young wrote to Nicholas' grandfather, provided Dr. Smith's explanation for the incident, and apologized.

Dr. Smith prepared a report of post-mortem examination dated August 6, 1997, which concluded that the cause of death was cerebral edema consistent with blunt force injury. He added that, "[i]n the absence of a credible explanation, in my opinion the post-mortem findings are regarded as resulting from non-accidental injury." During a meeting between Crown counsel, Dr. Smith, and the police in November 1997, those present determined that, if criminal charges were laid, an acquittal would be inevitable. They felt that Dr. Smith's particular wording suggested that a credible explanation (and hence a reasonable doubt) might well be available on the evidence. Despite this decision, Dr. Cairns told the Inquiry that he maintained complete confidence in Dr. Smith and was not troubled by Dr. Smith's conclusions in the case.

The local children's aid society (CAS) became involved with Nicholas' family in 1998, when Nicholas' mother became pregnant. On April 7, 1998, Dr. Cairns attended a case conference with the CAS in which he said that Nicholas had died of cerebral edema, not of sudden infant death syndrome (SIDS). The following month, on May 7, Dr. Cairns and Dr. Smith attended another case conference with the CAS. In a subsequent affidavit, a CAS social worker swore that, during this meeting, Dr. Smith said he was "99% certain that this child died due to a non-accidental trauma that had been inflicted on the child by the sole caregiver, being the mother." At the Inquiry, Dr. Cairns did not dispute this statement, and recalled that Dr. Smith had a very high degree of certainty about his conclusions. Dr. Cairns shared Dr. Smith's opinion that it was a non-accidental injury. Later in May 1998, the CAS decided to make a protection application for Crown wardship of the unborn child of Lianne Gagnon, Nicholas' mother.

On June 16, 1998, Dr. William Halliday, a Winnipeg neuropathologist, swore an affidavit on behalf of Nicholas' mother in the CAS proceedings. He commented that Dr. Smith's conclusions "went far beyond the boundaries that can be supported by the presenting scientific and forensic facts." Dr. Chiasson reviewed Dr. Halliday's first opinion and discussed it with Dr. Cairns, but he let Dr. Cairns take the lead. Dr. Cairns was not persuaded by Dr. Halliday's affidavit. Instead, he was influenced by Dr. Smith's reputation, stating that, "at this time Dr. Smith was the eminent pediatric pathologist; not only in Ontario but across much of Canada." He did not know Dr. Halliday by reputation but was aware that Dr. Halliday did not practise in pediatrics.

On June 16, 1998, after receiving Dr. Halliday's affidavit, the CAS contacted Dr. Cairns and Dr. Smith and asked whether Dr. Halliday's opinion that there was no evidence of cerebral edema resulting from a blunt head injury was medically reasonable. According to CAS counsel, Dr. Cairns and Dr. Smith "were extremely clear … that the theories put forth by Dr. Halliday were not sustainable and the position of the Coroner's Office had not changed relative to the cause of death."

The very next day, CAS counsel Réjean Parisé faxed an excerpt from Justice Dunn's reasons in Amber's case to Dr. Cairns. In that excerpt, Justice Dunn criticized Dr. Smith's approach and concluded that Dr. Smith refused to consider causes of death other than shaking. Justice Dunn also found that Dr. Smith provided insufficient detail in the report of post-mortem examination, failed to consult with other specialists before conducting the autopsy, and was not aware of new research that had been published on short falls, which was a central issue in Amber's case. Dr. Cairns read the excerpt from Justice Dunn's decision sent to him by Mr. Parisé.

Despite Justice Dunn's pointed criticisms, Dr. Cairns neither obtained a full copy of the decision nor took any other steps to investigate Justice Dunn's findings. Dr. Young testified that Dr. Cairns did not inform him about the faxed excerpts of Justice Dunn's decision. Dr. Cairns admitted that he was influenced by Dr. Smith's claims that Justice Dunn had changed his mind about the medical evidence after the trial. Essentially, Dr. Cairns accepted Dr. Smith's unlikely story about Justice Dunn without question, even after he read excerpts from Justice Dunn's decision. For the second time, a senior OCCO official had Justice Dunn's reasons highlighted for him, and, for the second time, the OCCO took no action. The failure to take the reasons for judgment seriously represents a significant oversight failure.

Later in June 1998, after the Crown had determined that it could not proceed on the basis of his opinion, Dr. Smith swore an affidavit in the CAS proceedings. He stated that he was very certain that Nicholas' death was due to non-accidental

injury. He thought it was likely due to severe cerebral edema caused by blunt impact to the head, but asphyxia was also a possible cause.

On June 19, 1998, Dr. Cairns also swore an affidavit in the CAS proceedings which included the following statement: "I wholly agree with the specific and crucial findings of Doctor Smith that the cerebral edema suffered by the infant was severe rather than mild as characterized by [the pathologist who performed the initial autopsy]." This affidavit expressed a pathology opinion that Dr. Cairns did not have the expertise to provide. His evidence was based entirely on Dr. Smith's views, and he had not reviewed any of the underlying medical evidence in the case. Dr. Cairns told the Inquiry that, in his affidavit, he intended to indicate only that the OCCO accepted Dr. Smith's opinion. But Dr. Cairns' affidavit went much further than that: it contained what purported to be an expert pathology opinion.

In his affidavit, Dr. Cairns had offered himself as an expert qualified to comment on the specific and crucial findings of severe cerebral edema, and the CAS had prepared its case based on the understanding that Dr. Cairns was going to testify as an expert regarding the pathology findings. The CAS and defence counsel were therefore under the understandable but mistaken impression that Dr. Cairns could provide his own expert opinion evidence about the cause of Nicholas' death. Moreover, the CAS believed, correctly in my view, that Dr. Cairns' status as Deputy Chief Coroner for Ontario would likely bolster the strength of the opinion in court.

Dr. Cairns took no steps to correct the CAS misunderstanding. Rather, he explained the limited nature of his expertise to Berk Keaney, the lawyer for Ms. Gagnon and her spouse, in a meeting in December 1998. Mr. Keaney then took it upon himself to correct Mr. Parisé's misunderstanding.

It is extremely important to the proper functioning of the justice system that experts respect and communicate the limits of their expertise. The failure to do so in this case is one example of the larger systemic issue. Had Dr. Cairns clearly restricted himself to matters within his area of expertise, it is likely that the OCCO or the CAS would have obtained an independent pathology opinion much sooner than it did.

On December 1, 1998, Mr. Parisé wrote to Dr. Cairns and Dr. Smith and suggested that another expert opinion would help to buttress Dr. Smith's opinion. In their December 1998 meeting, Dr. Cairns and Mr. Keaney also discussed that there were differing expert opinions from respected pathologists about whether the head injury was accidental or non-accidental. Only after these suggestions by Mr. Parisé and Mr. Keaney, some six months after Dr. Halliday first drew Dr. Smith's opinion into serious question, did the OCCO finally decide, in or around

January 1999, to obtain an independent opinion to resolve the differences of expert opinion in the case.

Dr. Chiasson assisted Dr. Cairns in obtaining an independent opinion from Dr. Mary Case, an experienced American forensic pathologist with certifications in both forensic pathology and neuropathology and an interest in pediatric head trauma. In her report dated March 6, 1999, Dr. Case concluded that the cause and manner of Nicholas' death should have been designated as undetermined. She said there were no findings to support the conclusion that the death was caused by either a head injury or an asphyxial mechanism. The OCCO accepted Dr. Case's opinion as sound and treated it as final.

The OCCO provided Dr. Case's report to the parties on March 23, 1999. The CAS immediately dropped all proceedings against Ms. Gagnon, vacated all temporary orders, withdrew the child protection application, and withdrew her registration from the Child Abuse Register.

Defence counsel received a further expert report after the CAS proceedings were withdrawn. Dr. Derek de Sa, a professor of pathology at the University of British Columbia, stated that he found it difficult to understand how Dr. Smith reached his conclusions. He commented that he had discussed Nicholas' case with several senior colleagues in his department, and that none of them agreed with Dr. Smith. On May 25, 1999, Mr. Keaney sent Dr. de Sa's report to the OCCO, where it was distributed to Drs. Cairns, Chiasson, and Young. The OCCO did not take any additional measures to respond to Dr. de Sa's report.

In reviewing Dr. Case's opinion, Dr. Chiasson concluded that Dr. Smith had rendered an opinion that exceeded what the evidence allowed. However, he did not sit down with Dr. Smith to discuss the case. He did not feel comfortable with pediatric issues, particularly pediatric neuropathology, and he thought that the case fell within a somewhat grey area. In addition, in Dr. Chiasson's experience, Dr. Smith did not take criticism well. This situation illustrates the difficulty caused by the absence of clear lines of accountability between the Chief Forensic Pathologist and a pathologist doing forensic work. The conflicting professional views in this case called out for a frank professional conversation. It was unfortunate that such a conversation did not occur.

Dr. Cairns testified at the Inquiry that his confidence in Dr. Smith's judgment was not shaken by the OCCO's decision to accept Dr. Case's opinion in Nicholas' case. In light of expert opinions from Dr. Case and Dr. de Sa that Dr. Smith's opinion had no basis in the pathology evidence, this lack of concern is troubling. Dr. Cairns, who witnessed Dr. Smith tell the CAS that he was "99% certain" that Nicholas' mother had killed the child, believed the case reflected only a difference of opinion between respected experts. This scenario underscores the problem of

having coroners without forensic pathology training attempt to provide oversight of forensic pathologists.

By contrast, Dr. Young testified that he became concerned about Dr. Smith's work after the OCCO received Dr. Case's opinion. He stated that it was the first time he was aware of questions about the quality of Dr. Smith's work. To address his concerns, Dr. Young met personally with Dr. Smith and told him that his report in Nicholas' case had gone too far and was not supported by good evidence. He advised Dr. Smith to be more conservative in his views and stay within the mainstream of pathology views. Dr. Young did not want Dr. Smith on the "leading edge" of opinion, and he used the analogy of a tree. He said that Dr. Smith's opinion in Nicholas' case was at the far end of one branch, Dr. Halliday's opinions were in various places on the other side of the tree, and Dr. Case was hugging the tree. Dr. Young told Dr. Smith that the OCCO wanted him hugging the tree from now on. Dr. Young testified that he also spoke with Dr. Smith about the need to improve the timeliness of his reports and to document informal corridor consultations with other experts.

This conversation should have involved the Chief Forensic Pathologist. The problem with Dr. Smith's opinion was not that it was on the leading edge but that there was no pathology evidence to support it. Once again, this case further demonstrates the weakness of a coroner-led system of professional oversight. It also illustrates how the OCCO undervalued the importance of training in forensic pathology and did not involve the Chief Forensic Pathologist in important conversations with pathologists about their practice.

Other than Dr. Young's conversation as described, Dr. Smith was not reprimanded after the conclusion of Nicholas' case. Dr. Young did not put any of his concerns about Dr. Smith in writing. He took no measures to improve Dr. Smith's skills or knowledge, and he created no plan of action to improve the situation.

May 1998: The OCCO Asks the CPSO to Decline Jurisdiction to Investigate Dr. Smith

In meetings, correspondence, and discussions with the CPSO in 1997 and 1998, Dr. Young and Dr. Cairns took the position that the CPSO had no jurisdiction to investigate complaints about the actions of coroners or pathologists arising from their coronial work. By then, the CPSO had received a complaint about Dr. Smith from D.M. in relation to Amber's case. Dr. Young gave two main reasons for opposing the CPSO's jurisdiction. First, he believed that the CPSO was not well equipped to manage certain aspects of pathologists' cases such as court testimony and expert opinions, and he was concerned that the CPSO might be seen to be

second-guessing the courts in some instances. Second, he was worried about exposing pathologists to an extra layer of review. If the CPSO asserted jurisdiction over pathologists, he believed it would be even harder to recruit and retain them to work for the OCCO. The OCCO already faced a serious shortage of pathologists, and he thought that the institution needed to defend its pathologists' work and stand up for them.

In October 1997, the leaders of the OCCO and the CPSO agreed that the CPSO Complaints Committee would handle complaints regarding a coroner's actions that were part of the practice of medicine, but that complaints regarding acts done in the exercise of coronial duties would be referred to the OCCO. If a complainant insisted that the CPSO Complaints Committee deal with the matter, the coroner would reply only to the extent required to establish that the acts complained of were not part of the practice of medicine, but were performed in the exercise of coronial duties. At that point, the Complaints Committee could dismiss the matter and refer it to the OCCO. If a complainant appealed this outcome, the CPSO and OCCO agreed they would work cooperatively in submitting to the body hearing the appeal that the OCCO should handle the matter.

When it came to pathologists, Dr. Young took the position in a letter to the CPSO dated March 4, 1998, that the CPSO had no jurisdiction to deal with complaints about a pathologist acting under the *Coroners Act*. That same year, the OCCO and the CPSO agreed that, in all likelihood, an assertion of lack of jurisdiction on the part of the CPSO regarding pathologists performing coroner's autopsies would fail legally. However, due to shortages of pathologists willing to perform coroner's cases, Dr. Young felt compelled to appear to protect pathologists. The CPSO also wanted to avoid duplication of work created by multiple forums. The OCCO and the CPSO agreed not to end up in court fighting about the CPSO's jurisdiction over pathologists and decided that, at the first instance, complaints received by the CPSO regarding the actions of a pathologist as an agent of the coroner would be referred to the OCCO.

In general, Dr. Young was right to be concerned about the shortage of forensic pathologists in Ontario. The scarcity of these professionals was, and is, a major systemic issue in the province. The shortage influenced the way in which the OCCO dealt with many issues related to pathology, not for the better. On this issue, however, focusing on the shortage issue came at the expense of maintaining public confidence in the system through the accountability that comes with requiring pathologists to answer to an independent regulator.

The CPSO could provide an independent and objective investigation of complaints about pathologists. Resisting this oversight was unfortunate and only exacerbated the organizational weaknesses of the OCCO. That is particularly so

because the OCCO itself had no adequate and independent mechanism in place to address complaints about pathologists. The CPSO was much better equipped to handle such complaints.

In May 1998, the CPSO Complaints Committee decided that it had no jurisdiction over D.M.'s 1991 complaint against Dr. Smith because the latter's involvement in Amber's case arose through his coroner's work. On June 16, 1998, D.M. requested a review of the CPSO's decision by the Health Professions Appeal and Review Board (HPARB). On September 1, 2000, the HPARB issued its decision and held that the CPSO had jurisdiction over the matter and referred the complaint back to the Complaints Committee for further investigation.

February to May 1999: Mr. Gagnon's Complaint to the Coroners' Council

In February 1999, Mr. Gagnon, Nicholas' grandfather, submitted a 20-page complaint about Dr. Smith to the Coroners' Council, a body that dealt with significant complaints about the work of coroners. It had been disbanded, however, on December 18, 1998, when the legislature repealed its statutory foundation – ss. 6 and 7 of the *Coroners Act* – and no independent mechanism remained to address complaints about coroners. Dr. Young therefore responded personally to the complaint. At the Inquiry, he testified that he would normally have forwarded a complaint about the substance of a pathologist's work to the Chief Forensic Pathologist. However, he did not refer this complaint, which included a number of specific criticisms of Dr. Smith's pathology findings, to Dr. Chiasson, nor did he delegate the investigation to any of his staff. Indeed, there is no evidence that Dr. Young took any measures to investigate the details of Mr. Gagnon's concerns about Dr. Smith's practices in Nicholas' case. At the Inquiry, Dr. Young testified that it was not possible for him to respond to every aspect of a detailed complaint. He said that complainants often tried to "mess facts together" regarding different cases that were not directly relevant to their complaints. It was, he said, his regular practice to skip sections of complaints which he deemed irrelevant.

Mr. Gagnon's complaint outlined several concerns about Dr. Smith's conduct in Nicholas' case, including the exaggeration of findings of "mild diastasis" into "widely split skull sutures," reliance on undocumented "corridor" consultations, contradictory findings regarding scalp injury, and identification of post-mortem artefacts as abnormal findings. He also referenced Justice Dunn's decision in Amber's case and included lengthy quotations from the judge's findings and criticisms of Dr. Smith.

At the Inquiry, Dr. Young testified that he had no recollection of reading the

section of Mr. Gagnon's complaint quoting Justice Dunn's decision. He thought it most likely that he skipped that section because its subtitle, "Precedent (Crown vs [S.M.]," indicated to him that it concerned a case other than Nicholas' case and was not relevant to Mr. Gagnon's complaint.

On May 6, 1999, after the CAS proceedings concluded, Dr. Young responded to the complaint from Mr. Gagnon. Before sending the letter, he circulated his draft to Dr. Cairns and Dr. Chiasson, Dr. Bonita Porter, the Deputy Chief Coroner of Inquests, as well as OCCO legal counsel Al O'Marra and Ed Maksimowski. In his response, Dr. Young stated that he had read Mr. Gagnon's complaint "in detail" and considered it very carefully. He said he had met with Dr. Smith to discuss the complaint and explained to Mr. Gagnon that "[t]he variety of opinions held by Drs. Halliday, Case, and Smith, clearly illustrates the complexity of the pathology in this case. What all seem to be agreeing upon at this point, and it is also the view of our office that the cause of the death of [Nicholas] is appropriately classified as 'undetermined.'"

Dr. Young told Mr. Gagnon that the previous month, on April 12, 1999, together with Dr. Chiasson, he had distributed Memorandum 99-02, "Forensic Pathology Pitfalls," to all coroners and pathologists. It had been prepared in part as a result of the complaint, and it addressed the importance of pathologists staying within the limits of their expertise and documenting their consultations. In Nicholas' case, where Dr. Smith had failed to record his consultations with a SickKids neuropathologist, the OCCO recognized that such gaps in documentation, especially in forensic cases, can cause significant problems.

However, Dr. Young could not assure Mr. Gagnon that the OCCO had dealt with the central issue arising in Nicholas' case from the perspective of its oversight responsibilities for Dr. Smith – the absence of pathology evidence to support his opinion. Such an evaluation of Dr. Smith's work had simply not been done.

Dr. Young's response contained some regrettable and significant inaccuracies. He stated that, as soon as the OCCO became aware of Dr. Halliday's opinion, the OCCO requested an opinion from a third independent forensic pathologist. In fact, the OCCO did not contemplate consulting with an independent expert until Mr. Parisé and Mr. Keaney raised the issue six months after Dr. Halliday's first opinion. In addition, Dr. Young stated that he had read Mr. Gagnon's complaint "in detail" and considered it very carefully. That was not true. Dr. Young testified at the Inquiry that he probably skipped the portion of the complaint that quoted from Justice Dunn's decision.

I found Dr. Young's testimony on this issue very troubling. He insisted that the CPSO should defer to the OCCO to investigate these complaints. Yet his actions displayed a serious disregard for his responsibility to read, investigate, and

respond fairly to complaints from the public. He did not give Mr. Gagnon's complaint the attention it deserved.

February to May 1999: Sharon's Case

At the same time that Dr. Young and Dr. Cairns were responding to Mr. Gagnon's complaint about Dr. Smith, they also learned that several leading experts disagreed with Dr. Smith's opinion in Sharon's case and had concerns that it was creating the possibility of a miscarriage of justice.

Dr. Cairns and Dr. Young became actively involved in Sharon's case in mid-February 1999, when they attended a meeting of the American Academy of Forensic Sciences (AAFS). Dr. Young told the Inquiry that, during the meeting, Dr. Michael Baden, forensic pathologist and the former Chief Medical Examiner of New York City, expressed his understanding to Dr. Young that some experts held the opinion that a dog had caused the injuries in Sharon's case. Dr. Baden's colleague Dr. Lowell Levine, a forensic odontologist, was also aware of the case. Dr. Young then ran into Dr. Robert Dorion, a forensic odontologist from Montreal who had been consulted by defence counsel for Sharon's mother. Dr. Dorion believed that a dog had caused Sharon's injuries. Dr. Cairns also learned that Dr. James (Rex) Ferris, a British Columbia forensic pathologist, had been consulted by defence counsel for Sharon's mother and disagreed with Dr. Smith's opinion. The four experts all questioned Dr. Smith's finding that the cause of death was exsanguination secondary to multiple stab wounds and thought that a miscarriage of justice might be occurring in the case. Dr. Young was concerned that the experts had such "polar opposite" positions to those of the OCCO experts.

Dr. Cairns and Dr. Young decided that they needed to obtain an independent appraisal of the evidence. In this respect, the OCCO's approach to conflicting expert opinions in Sharon's case differed from its initial approach in Nicholas' case. In Sharon's case, to its credit, it reacted very quickly. According to Dr. Cairns, the difference was that the experts who expressed concerns about Sharon's case were "heavy hitters." They all had excellent reputations and were more qualified than Dr. Smith to differentiate stab wounds from dog bites.

After the February 1999 AAFS meeting, Dr. Cairns met with Dr. Smith, Dr. Chiasson, Dr. Robert Wood, a forensic odontologist who had provided an opinion to Crown counsel in Sharon's case concluding that Sharon's wounds were "unequivocally" not dog bites, and Barry Blenkinsop, Chief Pathologist Assistant at the OCCO, who had assisted Dr. Smith during the initial autopsy. Dr. Cairns stated that they needed to address the allegation of a possible miscarriage of jus-

tice. At the meeting, Dr. Wood, Dr. Smith, and Mr. Blenkinsop maintained that a dog did not cause any of Sharon's wounds. Nonetheless, everyone present at the meeting agreed that an exhumation and second autopsy were needed to rule out dog involvement once and for all.

Dr. Chiasson testified at the Inquiry that he saw himself as a mediator at the 1999 meeting regarding a possible disinterment. He had limited experience with dog bites and did not feel he could challenge the opinions of the other experts, all of whose work he respected. Dr. Smith, in particular, seemed clear and firm in his opinion and had conducted the post-mortem examination, which put him in the best position to examine the wound tracks.

Dr. Cairns, Dr. Chiasson, and Dr. Benoit Béchard, the regional coroner, met with Crown counsel and the police in Kingston on March 29, 1999. The OCCO informed Crown counsel and the police about the differences of opinion between the various pathologists and odontologists. Dr. Cairns told Crown counsel and the police that, in his opinion, an exhumation and second autopsy, in the presence of the defence experts, were necessary to resolve the issue. Everyone agreed.

When they were considering the possibility of exhumation, Dr. Cairns reviewed the transcript of Dr. Smith's testimony at the preliminary hearing. At that hearing, Dr. Smith had expressed very strong opinions and was highly dismissive of the possibility of a dog attack. He ridiculed the possibility of a dog attack by equating it with being as likely as the possibility of a polar bear attack.

Dr. Cairns also knew that Dr. Smith had lost a cast of Sharon's skull and a set of X-rays from the first post-mortem examination (although they appear not to have been of evidentiary value). That Dr. Smith had lost these materials was a sign of his disorganization, carelessness, and sloppiness. However, the OCCO believed the evidence in question was unimportant and therefore did nothing about it. This, of course, misses the point – the losses were symptomatic of Dr. Smith's larger failings.

Before the meeting in Kingston, Dr. Chiasson had reviewed Dr. Smith's report of post-mortem examination in Sharon's case for the first time. The report had originally bypassed his regular review process because, after a significant delay necessitating the issuance of a subpoena to Dr. Smith, Dr. Smith provided it directly to Crown counsel. When Dr. Chaisson did finally review it in 1999, he thought that the injuries, in particular the internal wound tracks, were not well defined or described, and that the wound depths were not properly delineated. Dr. Chiasson communicated this information to Crown counsel and the police, and it was used in the application for the disinterment. However, he never discussed his concerns with Dr. Smith. He did not take any measures to address Dr. Smith's report-writing skills or his ability to describe wounds. As Chief Forensic

Pathologist, Dr. Chiasson should have taken this task on as part of his responsibility for the quality of forensic pathology in the province. However, the lines of responsibility and accountability were so blurred that this remedial oversight did not happen.

May 1999: Dr. Porter's Contrary Conclusion in Jenna's Case

The OCCO missed another important warning signal in May 1999 when Dr. Porter reached a conclusion about the timing of the injuries in Jenna's case that was very different from Dr. Smith's opinion.

Jenna died in the early morning hours of January 22, 1997. Dr. Smith, who performed the autopsy, told the police that the cause of death was blunt abdominal injury. Dr. Cairns and Dr. Young attended meetings with the police and Dr. Smith in the initial stages of the investigation. The major issue to be resolved was the timing of the non-accidental fatal injuries. At these meetings, Dr. Smith told the police that Jenna's injuries were sustained within 24 hours of her death. In October 1998 at the preliminary hearing, Dr. Smith indicated that the fatal injuries could have occurred some 24 or 28 hours before death.

After the preliminary hearing, the defence retained Dr. Sigmund Ein, a staff surgeon at the Division of General Surgery at SickKids, who concluded that Jenna sustained her fatal injuries no earlier than six hours before death. In December 1998, contrary to the thrust of his confusing testimony at the preliminary hearing, Dr. Smith agreed with Dr. Ein that the fatal injury occurred on the evening of Jenna's death. Defence counsel passed this information on to Crown counsel, who in turn contacted the OCCO.

Dr. Porter agreed to review the case and provide an opinion on the timing of the fatal injuries. Dr. Chiasson was not asked to provide an opinion in the case, or to review Dr. Porter's opinion, even though the timing of injuries is also a forensic pathology issue. On May 26, 1999, Dr. Porter provided her opinion, based both on her expertise as a clinician and in some part on the opinions of pathology experts, that the time between Jenna's injuries and her death was less than six hours. On June 15, 1999, Crown counsel withdrew the second-degree murder charge against Jenna's mother because the medical evidence could not substantiate that she had care of Jenna at the time of the fatal injuries.

The fact that the Deputy Chief Coroner of Inquests had reached such a different opinion from Dr. Smith, albeit from a clinical, not a forensic pathology, point of view, should have triggered some form of review at the OCCO. At the very least, Dr. Porter's opinion should have been forwarded to the Chief Forensic Pathologist to compare it with Dr. Smith's. Again, it was one of those occasions

that should have prompted more reflection than it did. Ultimately, it was yet another warning signal that was missed.

It was missed in part because of the organizational weaknesses in the OCCO. The Chief Forensic Pathologist had no role in reviewing such starkly different opinions. There was no quality assurance mechanism in place to attempt to identify the cause of the controversy or to recommend steps to avoid such mistakes in the future.

Even by the time Dr. Young testified at the Inquiry, he did not see any problems with the pathology evidence provided by Dr. Smith in Jenna's case. He was not concerned that other experts disagreed with Dr. Smith about the timing of the fatal injuries. He testified that he thought it was problematic when experts gave too narrow a window of time, but he was not concerned if an expert provided a window that was too broad. Dr. Young maintained that Dr. Smith was not wrong, given that the injuries were inflicted within 24 hours before death. In his view, Dr. Smith just did not narrow the time period as far as he could have to six hours before death. Dr. Michael Pollanen, the present Chief Forensic Pathologist, testified at the Inquiry that Dr. Young's analysis of Dr. Smith's pathology opinion was simply incorrect. He said that, although it is often the counsel of caution to give a broader window for time of death or the time that injuries were inflicted, this principle does not apply where part of the broader time frame is excluded by the pathology evidence, as was the case here. It is of fundamental importance to identify precisely when the injuries were inflicted wherever that is possible. In this case, the pathology clearly indicated that the fatal injuries were inflicted within hours of death, and that they could not have been inflicted earlier.

Jenna's case illustrates the danger of having coroners providing oversight of pathologists who are doing forensic work. This structural weakness contributed greatly to the failure of oversight with regard to Dr. Smith. Without the training in forensic pathology necessary for meaningful oversight of pathologists, Dr. Young and Dr. Cairns simply could not see this red flag.

July to September 1999: The Exhumation in Sharon's Case

The exhumation and second autopsy of Sharon occurred on July 13, 1999. Dr. Chiasson conducted the autopsy, and Dr. Smith, Dr. Wood, Dr. Ferris, and Dr. Dorion also attended. Mr. Blenkinsop was the autopsy assistant. Dr. Young attended part of the autopsy. Dr. Chiasson signed his report on September 30, 1999. He concluded: "Based on the findings of this second post-mortem examination and my review of Dr. Wood's report, it is my opinion that: 1. a dog was responsible for at least some of the injuries sustained by the decedent and 2. the

possibility that a weapon was also involved in the infliction of the injuries is not excluded by this second post-mortem examination." Dr. Chiasson accepted Dr. Wood's opinion contained in his September 13, 1999, report that a dog had caused at least some of the injuries to Sharon's skull, neck, and left upper arm. Dr. Wood also concluded that there were markings on the bones that were not consistent with dog bites. Dr. Chiasson deferred to Dr. Wood's expertise in the evaluation of bone because he did not consider bone injuries to be within his area of expertise.

In his supplementary report, which he did not complete until February 14, 2000, Dr. Smith concluded that, "[b]ecause death resulted not from a single injury but the combined effect of numerous injuries, it is not possible on morphologic grounds alone to determine the relative responsibilities of the non-canine versus the canine-like injuries in causing Sharon's death." In September 2000, Dr. Smith and Dr. Wood met with the Kingston police and Crown counsel. Dr. Smith continued to maintain that, although most of the wounds were attributable to dog bites, there were other serious wounds, especially in the thoracic inlet, that were not caused by an animal. Dr. Wood also maintained that some of the wounds were not animal related.

These new opinions differed dramatically from Dr. Smith's initial opinion that none of the wounds on Sharon's body had been caused by an animal and that it was absurd to suggest otherwise. Over time, Dr. Smith's adamant opinion that Sharon died from stab wounds had been gradually undermined by contrary expert opinions. Eventually, even Dr. Smith had to acknowledge and accept the opinions of the opposing experts.

Dr. Chiasson testified that, even though he had conducted the second autopsy, he was not comfortable providing an opinion in Sharon's case. He had limited experience with dog bites. He felt he was in a position of conflict because of his ongoing professional relationships with Dr. Wood, Dr. Smith, and Mr. Blenkinsop. He felt he had been forced into the middle, with credible opinions on either side of the issue. Dr. Chiasson was correct to be concerned about his ongoing professional relationships. In the absence of defined lines of accountability from pathologists to the Chief Forensic Pathologist, he was in a challenging position.

After the second autopsy, Dr. Chiasson did not discuss the case with Mr. Blenkinsop, Dr. Wood, or Dr. Smith. Between the second autopsy and the eventual withdrawal of the charge in January 2001, he never spoke to Dr. Smith directly about the case. Despite his difficult position, this omission was unfortunate. Dialogue among experts, especially over matters of controversy or disagreement, is an essential part of a professional, high-quality, forensic pathology service.

The results of the second autopsy represent another missed warning sign. The OCCO should have been deeply concerned by the fact that the results of the second autopsy were so different from Dr. Smith's initial opinion on cause of death and his testimony at the preliminary hearing. This discrepancy, like the changed opinions in Jenna's case, should have triggered a more formal review at the OCCO. The OCCO now had evidence available to it that, viewed objectively, raised concerns about Dr. Smith's work in the cases involving Amber, Nicholas, Jenna, and Sharon. But this evidence was discounted, minimized, or missed altogether.

Instead, Dr. Young and Dr. Cairns continued to maintain their confidence in Dr. Smith's abilities even after his opinion unravelled, attributing Dr. Smith's errors to a "team failure." Dr. Cairns concluded that Dr. Smith's alarmingly overstated opinions at the preliminary hearing were less of a concern because Dr. Smith may have relied on Dr. Wood's and Mr. Blenkinsop's strong opinions to bolster his own. Once again, Dr. Cairns and Dr. Young failed to take any corrective steps regarding Dr. Smith. They exercised no oversight and required no accountability from Dr. Smith.

November 1999: *the fifth estate* Program

On November 10, 1999, CBC Television's *the fifth estate* aired a program about Dr. Smith which focused on his work in the cases of Nicholas, Amber, and Sharon. Dr. Cairns agreed to be interviewed for the program. He told *the fifth estate* that Dr. Smith was "top notch" and had been doing forensic pathology since 1990. He defended Dr. Smith's credentials in forensic pathology, telling the interviewer that Dr. Smith had his American fellowship in pediatric pathology and that a significant amount of the pediatric pathology sub-specialty exam dealt with forensic pathology. In his own evidence at the Inquiry, Dr. Smith contradicted this assessment and explained that, although the American exam included some questions about forensics, "they were focused on the medical aspects of pediatric forensic pathology."

The fifth estate program discussed Amber's case and Justice Dunn's reasons for judgment acquitting S.M. It reiterated Justice Dunn's strong criticism of Dr. Smith for failing to consider possibilities other than shaking in Amber's case, and expressed concerns that Dr. Smith's assumptions might have coloured his approach to the facts. During his interview on the program, Dr. Cairns commented on Justice Dunn's decision: "I, with due respect, feel that the medical evidence was confusing and that the judge may not have clearly understood all the evidence that was being given." When he gave the interview, Dr. Cairns had

not even read Justice Dunn's full reasons for judgment or the court transcripts. He had not discussed the case with any pathologist other than Dr. Smith. Dr. Cairns concluded that Justice Dunn did not understand all the evidence solely because of what Dr. Smith told him. He was not in a position to comment independently and objectively on the decision, and he ought not to have criticized Justice Dunn's decision based solely on Dr. Smith's opinion. Any reasonable viewer of the program would have assumed (wrongly) that the OCCO had investigated this case before defending Dr. Smith and blaming the judge for getting it wrong.

Dr. Cairns watched *the fifth estate* program when it aired in 1999 and heard the interview with Dr. Case, the independent expert retained by the OCCO in Nicholas' case. Dr. Case said that Dr. Smith's statement that the death was caused either by a head injury or by asphyxia by strangulation was "in the area of irresponsible testimony." This comment did not shake Dr. Cairns' confidence in Dr. Smith's opinion. He thought it was merely another example of experts disagreeing.

Dr. Chiasson also watched *the fifth estate* broadcast. In his opinion, the OCCO was already aware of the issues and criticisms being raised in the broadcast and, consequently, the story did not change the OCCO's approach to Dr. Smith.

Dr. Young testified at the Inquiry that, because he was away when *the fifth estate* episode aired, he did not see it, nor did he make any effort to watch it on his return. He "was not a particular fan of *the fifth estate*," and he did not think the program "represent[ed] the finest in Canadian journalism." Dr. Young stated that nobody asked him specifically about the program, no other media outlets picked up the story, and he had heard there was nothing new in it. As he did not think it contained anything "new or significant," he concluded that he had no reason to watch it. He did not take any action about the story because "no Crown attorney, no defence attorney, no police officer, no one called me and said, 'All these things are going on. We want a review of Dr. Smith.'"

This reaction was unwise. Dr. Young was the Chief Coroner for Ontario, responsible for the OCCO. *The fifth estate* program had seriously criticized one of the experts on whom the OCCO most strongly relied. Rather than assess the information provided by the program himself, Dr. Young chose to rely on his own sense of the community's reaction to the information in the program and on his own absolute faith in Dr. Smith. He owed it to his office to take the program more seriously.

In February 2000, Dr. Smith sued the CBC over *the fifth estate* program. Even though he never bothered to watch the program, Dr. Young requested that the Ministry of the Solicitor General assist Dr. Smith with the legal fees for his law-

suit, which the ministry did. It is difficult to understand how Dr. Young could make the decision to support Dr. Smith's legal action without having watched the episode. His explanation is that he felt it was important that the ministry support its people because, otherwise, people would not work for the ministry. This request was one of several examples where Dr. Young was willing to use the authority of his office to defend Dr. Smith, justified or not, from any criticisms or damage to his reputation.

March 2000: Mr. Gagnon Complains to the Solicitor General

On March 6, 2000, Mr. Gagnon complained to the Solicitor General about Dr. Cairns' conduct in the investigation into Nicholas' death. He alleged that Dr. Cairns erred by failing to review and assess fairly the actual facts of the case and that he was unduly and singularly influenced by the unsustainable opinion of Dr. Smith.

In 2000, there was no structure in place to review independently any complaints about the work of the Chief Coroner or the Deputy Chief Coroner – a gap representing yet another organizational weakness. It was made worse when Dr. Young, who at the time also held the position of assistant deputy minister of public safety in the ministry, prepared the Solicitor General's April 13 reply to the complaint. The reply set out that the OCCO had arranged for an independent review by Dr. Case and, after receiving this opinion, had concluded that no cause of death could be established and that the means of death was undetermined. The OCCO had reviewed Dr. Smith's involvement, the letter continued, and had "concluded that the opinion Dr. Smith came to was within a reasonable range given the facts of the case." The OCCO therefore considered the complaint and the underlying matter "dormant."

The Solicitor General's response to Mr. Gagnon's complaint, drafted by Dr. Young, was substantively inaccurate. Dr. Case directly contradicted Dr. Smith's opinion. The OCCO had accepted Dr. Case's opinion that there were "no findings" to support Dr. Smith's determination of asphyxia or head trauma. Dr. Young had met with Dr. Smith to talk to him about concerns that he was "out on a limb," not "hugging the tree." No independent expert ever suggested to the OCCO that Dr. Smith's opinion in Nicholas' case fell within a reasonable range. There was therefore no basis for Dr. Young to make that assertion.

January 22, 2001: Charge Stayed in Tyrell's Case

In January 2001, the Crown terminated the criminal proceedings in Tyrell's case and Sharon's case. Both proceedings ended after Crown counsel learned that several well-respected experts disagreed significantly with the opinion of Dr. Smith, who had performed the initial autopsy in both cases.

Tyrell died on January 23, 1998, at the age of four years. His caregiver reported that Tyrell hit his head on a marble table or a tile floor during a household fall before his death. Subsequently, the police charged Tyrell's caregiver with second-degree murder. Dr. Smith, who conducted the post-mortem examination, advised the police, and testified at the preliminary hearing, that the caregiver's explanation of a household fall could not account for the severity of Tyrell's head injury. Dr. Smith consulted neuropathologist Dr. Becker on the case and incorporated Dr. Becker's comments into his own report without attributing the findings to him.

In 2000 and 2001, a number of defence experts provided contrary opinions, stating that the reported fall could have caused Tyrell's fatal head injuries. The defence provided these opinions to Crown counsel. The criminal proceedings concluded on January 22, 2001, when Crown counsel Frank Armstrong stayed the charge of second-degree murder against Tyrell's caregiver. At the time, neither Dr. Cairns nor Dr. Young had heard about Tyrell's case. Dr. Cairns called Mr. Armstrong and asked him "what the problem was with Dr. Smith in this case." Mr. Armstrong replied that there was no problem with Dr. Smith. Rather, Dr. Smith said the cause of death was non-accidental head injury, while a defence expert said it was an accidental head injury. Mr. Armstrong had also consulted with a SickKids neurosurgeon, Dr. Robin Humphreys, who could not say whether the injury was accidental or non-accidental. Consequently, Dr. Cairns understood that, given the conflicting expert evidence, Mr. Armstrong did not believe that the Crown had a reasonable prospect of conviction. Mr. Armstrong was also concerned that he had only recently learned that Dr. Becker had performed the neuropathology that Dr. Smith incorporated without attribution into his report. Dr. Cairns concluded that this case was simply another one where reasonable experts could differ.

January 25, 2001: Charge Withdrawn in Sharon's Case

The same week as the stay of proceedings in Tyrell's case, the Crown withdrew the charge of second-degree murder against Ms. Reynolds. A number of events led to the Crown's decision.

In the summer of 2000, Dr. Young spoke to Crown counsel Ed Bradley about Sharon's case at a conference they were both attending. Mr. Bradley, the lead prosecutor in the case, had recently received a brief report from Dr. Ferris concluding that Sharon died as a result of a dog attack, and he subsequently interviewed Dr. Ferris in person and received a more detailed report. To his credit, Dr. Young suggested that they retain a leading international expert to provide an authoritative opinion on the case. Dr. Cairns arranged to get an opinion from Dr. Steven Symes, a forensic anthropologist from the University of Tennessee whom Dr. Chiasson had helped to identify as an appropriate expert. In his December 7, 2000, report, Dr. Symes concluded that most of the injuries were definitely caused by a dog attack and that some fresh fine incisions on the skull were caused by a knife with a thin bevel edge. Mr. Blenkinsop maintained that the incisions on the skull identified by Dr. Symes were not artefacts from the autopsy.

In December 2000, Mr. Bradley consulted with Dr. Cairns about Sharon's case. Dr. Cairns appeared skeptical of Dr. Smith's conclusions and told Mr. Bradley that there were other explanations for the wounds that Dr. Smith maintained were not related to an attack by an animal.

Mr. Bradley then spoke to Dr. Smith in January 2001 about the opinions of Dr. Symes and Dr. Ferris. Dr. Smith acknowledged that he could see where these experts were coming from, although he still felt "in his heart" that he was correct that some of Sharon's injuries were not caused by a dog.

On January 25, 2001, the Crown withdrew the charge of second-degree murder against Sharon's mother. In its submissions on withdrawal, the Crown noted that it no longer had proof that the death was caused by stab wounds and therefore no longer had a reasonable prospect of conviction. Neither Dr. Cairns nor Dr. Young were surprised that the Crown withdrew the charge in this case. Indeed, Dr. Young had provided input on the content of the Crown's submissions.

January 25, 2001: The OCCO Decision to Remove Dr. Smith

Within a single week, in January 2001, the Crown had withdrawn or stayed serious charges in Sharon's case and Tyrell's case. In both cases, eminent experts had contradicted Dr. Smith's views regarding the pathology issues. There was significant media attention surrounding the termination of proceedings in these cases, and, in particular, regarding Dr. Smith's role in them. Prominent news outlets reported that Dr. Smith's "professional conduct came under heavy assault."

That same month, Dr. Young became concerned about the adverse publicity surrounding Dr. Smith. He thought that Dr. Smith had become a "lightning rod" and that both Dr. Smith and the OCCO would benefit if Dr. Smith temporarily

stopped doing coroner's cases. Before this time, nobody at the OCCO had considered not permitting Dr. Smith to perform coroner's autopsies. At the Inquiry, Dr. Young and Dr. Cairns explained that they were still not concerned about the competence or quality of Dr. Smith's work. Rather, they were seeking to maintain public confidence in the work of the OCCO and to protect its reputation. In addition, they thought that the controversy surrounding Dr. Smith might impede his ability to conduct coroner's cases. In contrast, Dr. Chiasson had some concerns about Dr. Smith's competence, noting at the Inquiry that he thought "where there's a lot of smoke, there was some fire going on here, yes."

Dr. Cairns and Dr. Young met with Dr. Smith very shortly before or on January 25, 2001. They discussed the fact that Dr. Smith had become a lightning rod and that everything he did would attract an undue amount of attention. They told Dr. Smith he should not do any more coroner's cases in the immediate future. They gave him the option to resign voluntarily because it would be better for his reputation and would make it easier for the OCCO to reinstate him eventually. Soon after this conversation, on January 25, the very day the Crown withdrew the charge in Sharon's case, Dr. Smith wrote a letter to Dr. Young in which he asked to be removed from performing forensic autopsies and requested an external review of his work. Dr. Young acceded to Dr. Smith's request.

Dr. Young did not issue a press release announcing Dr. Smith's resignation. He considered it an internal matter and feared that a press release would not only damage Dr. Smith's reputation and career but also possibly preclude the OCCO from using his services in the future. However, within a day or so of January 25, 2001, a reporter from the *Kingston Whig-Standard* asked Dr. Young whether Dr. Smith was still doing work for the OCCO. Dr. Young told the reporter that Dr. Smith was no longer engaged in work for the OCCO and that, before he resumed any coroner's cases, an external review would be conducted. Dr. Young subsequently told other media outlets including the *Toronto Star* that he had ordered an independent review of several cases handled by Dr. Smith.

The 2001 Reviews

After Dr. Smith resigned, the senior officials of the OCCO briefly considered conducting a broad external review of his work. Such a review was discussed at a January 26, 2001, meeting at the OCCO. They did not have a clear idea of the form or size of the review, although they knew it would have to include Sharon's and Tyrell's cases. After the January 26 meeting, the OCCO searched the computer files in an attempt to gather a list of Dr. Smith's cases and asked forensic

pathologists outside Canada about their interest in participating in a review. They were able to find all the cases Dr. Smith had conducted under a coroner's warrant after 1986, but, in most of them, they did not have information about whether or not the case went to trial. In addition, they had no records of any of the cases in which Dr. Smith had provided a consultation. This gap demonstrates a significant systemic failure. The inability of the OCCO to produce comprehensive lists of the post-mortem reports completed by Dr. Smith, the consultation reports he had prepared, the status of the cases for which Dr. Smith had performed the post-mortem examination or provided a consultation opinion, and the results of those cases was problematic – and it significantly complicated all of the reviews of Dr. Smith's work, both at that time and much later.

The OCCO's senior officials also stated publicly that it was going to conduct an external review specifically of Sharon's case. Within a day or so of January 25, 2001, Dr. Young told a reporter from the *Kingston Whig-Standard* that he would likely have an external expert review Sharon's case. Five days later, on January 31, Dr. Cairns advised Crown counsel in Paolo's case, who was inquiring about Dr. Smith's status, that the OCCO was reviewing Dr. Smith's work in Sharon's case and Tyrell's case.

In Dr. Young's mind, the sole purpose of any external review was to determine whether Dr. Smith was fit to return to work for the OCCO. He did not consider that an examination of Dr. Smith's cases might also be in the public interest to determine what pathology lessons might be learned or whether there were possible wrongful convictions in cases involving Dr. Smith's work. Each of the leaders of the OCCO had different views of what an external review would consider. Dr. Chiasson understood that a review would encompass all criminal cases, past and present, in which Dr. Smith was involved. Dr. Cairns and Dr. Young, in contrast, anticipated that a review would encompass only those cases that were still before the criminal courts.

By February 12, 2001, however, Dr. Young had quietly stopped any external review. On February 8, 2001, Sharon's mother filed a lawsuit against Dr. Smith, Dr. Wood, and others. And, by that time, there were several complaints about Dr. Smith before the CPSO. Dr. Young testified that he decided to put the external review on hold because he was not prepared to reinstate Dr. Smith until the resolution of the lawsuit and the complaints. From his perspective, the only purpose of an external review was to consider Dr. Smith's possible reinstatement, and once the reinstatement was not imminent, the review became unnecessary. The senior OCCO leaders subsequently decided that an external review even of Sharon's case was not required because there had already been an exhumation and consultation with many external reviewers.

Dr. Young's decision to terminate the review was not based on legal advice, although he briefly discussed the decision with OCCO counsel. That was not well understood at the OCCO. While testifying at the preliminary hearing in Athena's case in November 2001, Dr. Cairns said that he thought the review had been suspended because of legal advice. It is evident that even Dr. Cairns was unaware of Dr. Young's rationale for his cancelling the external review.

Dr. Young did not issue a press release about his decision not to proceed with a review, nor did he tell Dr. Smith. He made no public statement about his decision until approximately June 2001, when he told the *Toronto Star* that he was not proceeding with the review of Dr. Smith's work. In fact, in a television interview that had aired on February 16, 2001, Dr. Young indicated that the OCCO was going to review Sharon's case and others and that "the review will probably be conducted by experts from the United States or Britain."

Dr. Young did not tell either the media or the Crown that he had cancelled the review. At a meeting on January 31, 2001, the OCCO had asked for the Crown's assistance in tracking down Dr. Smith's cases in order to conduct a comprehensive review of his work. From approximately January to April 2001, the OCCO sought and received the assistance of Crown counsel and the police to identify criminal cases in which Dr. Smith had been involved. Despite these requests and the help it received, at no point did the OCCO tell the Crown or the police about its decision to terminate the proposed external review.

Because they were never informed of its termination, Crown counsel assumed that the OCCO was conducting the planned external review of a cross-section of Dr. Smith's cases. Justice John McMahon, then director of Crown attorneys for the Toronto region, understood that the OCCO would tell the Crown of any problems that were discovered during the review. He believed that the OCCO would consider the possibility of wrongful convictions and asked the OCCO to inform him of any findings that could affect any ongoing or completed criminal prosecution. When he heard nothing further from the OCCO about the progress or status of the review, he understandably assumed that the OCCO had discovered no problems.

The Crown was not alone in its belief that the OCCO was conducting a review of Dr. Smith's cases. A number of police services and defence lawyers believed that the OCCO was reviewing all Dr. Smith's current criminal cases to ensure that his opinions were medically sound and that his testimony accorded with accepted standards. In cases where there could be any reasonable dispute about the cause of death, they believed that the OCCO would refer each case to independent reviewers. Some defence counsel also understood that the OCCO was undertaking a review of Dr. Smith's past criminal cases.

In 2001, Dr. Chiasson, Dr. Cairns, and Dr. Barry McLellan, then regional coroner for the Greater Toronto Area East Region, did engage in a sort of internal review after identifying Dr. Smith's cases. It was, at best, a superficial review. If a case did not involve any criminal aspect, the OCCO did not conduct any internal review. If Dr. Chiasson had already completed a forensic pathology case review form during his regular review of post-mortem reports in criminally suspicious cases, the case was deemed to have passed an internal review. (The limitations of this paper review are described in Chapter 7, Organization of Pediatric Forensic Pathology.) If he had not completed such a form, Dr. Cairns, Dr. McLellan, or Dr. Chiasson tried to conduct a paper review of the file to determine if it revealed a significant error. No reports or notes were generated regarding this internal review process. No running total or summary was maintained, and, in any event, only one of the reviewers, Dr. Chiasson, had the qualifications necessary to assess the pathology in question.

In April 2001, counsel for William Mullins-Johnson twice requested that the OCCO conduct a review of Dr. Smith's work in Valin's case. Mr. Mullins-Johnson had been convicted of first-degree murder. The theory was that Mr. Mullins-Johnson murdered Valin while committing a sexual assault. Dr. Smith was the only pathologist who testified at the trial that the child was sexually assaulted at or around the time of death. The other pathologists opined that Valin had been the victim of a sexual assault, but did not find signs of a recent sexual assault. Because Dr. Smith had prepared a consultation report but had not performed the post-mortem examination, the OCCO did not have any record of Dr. Smith being involved in Valin's case. For that reason, it did not respond to this request, at least not in 2001.

More generally, on April 4, 2001, defence counsel James Lockyer wrote to Dr. Young, saying that, in his view, "a thorough review of Dr. Smith's past cases is necessary." Dr. Young testified at the Inquiry that, at the time, he did not consider this letter from Mr. Lockyer a request for a broad review of Dr. Smith's past cases. He was familiar with Mr. Lockyer, whom he described as "very persistent" and "like a dog with a bone." He thought that if Mr. Lockyer had wanted to call for a broad review of Dr. Smith's cases, he would have done so publicly and in a much more forceful manner than a letter. However, it is difficult to see how Mr. Lockyer's letter could have been clearer.

Dr. Young also told the Inquiry that Mr. Lockyer's was the only request for a full review that he received from any player in the justice system. However, he accepted that there might have been confusion about whether the OCCO was already conducting such an independent review because the OCCO did not properly communicate its decision to cancel it. Indeed, the fact that others did not request a review may be attributable to the misapprehension that the OCCO was already undertak-

ing a comprehensive review of Dr. Smith's work in criminal cases. Dr. Young caused these misunderstandings and did little, if anything, to correct them.

May 2001: The *Maclean's* Article

In May 2001, *Maclean's* magazine published "Dead Wrong," an article about Dr. Smith which criticized his work in a number of cases, including Amber's case. The article discussed Justice Dunn's "harsh commentary" and his criticism of Dr. Smith "for not even following his own prescribed autopsy procedures."

Dr. Cairns gave an interview to *Maclean's*, before the publication of the article, in which he defended Dr. Smith's work. He commented that Dr. Smith was a "wonderful asset" in the investigation of child deaths and was quoted as saying: "He's a friend, I admire his work and he is greatly admired at the Hospital for Sick Children." Dr. Cairns informed *Maclean's* that, although the recent controversies had taken a toll on his colleague, Dr. Smith had been involved in many successful legal cases.

Dr. Young told the Inquiry that he "read at least part of the article," but did not recall reading portions of it pertaining to Amber's case. He thought he probably skipped those parts, in the same way he skipped the portion of Mr. Gagnon's complaint that dealt with Amber's case. Despite not being sure if he had read the entire article, Dr. Young concluded that it was unbalanced and unfair to Dr. Smith. He put very little store or confidence in the article and did not ask anyone to review the pathology in the cases it discussed.

Even when Justice Dunn's decision was specifically and repeatedly raised with Dr. Cairns and Dr. Young, they chose to ignore it, preferring to rely on Dr. Smith's story that Justice Dunn had later changed his mind. By repeatedly ignoring this obvious red flag about Dr. Smith, Dr. Cairns and Dr. Young failed to fulfill their responsibilities for the quality of pathology evidence used in death investigations.

Dr. Smith was very upset about the article and spoke to Dr. Young about it. He subsequently launched a lawsuit against *Maclean's* over it. In his response to a letter from two concerned parents who had been affected by Dr. Smith's evidence and had read the article, Dr. Young commented that, in his view, the *Maclean's* article was "dead wrong," in that it was full of inaccurate assumptions and statements, and that it was currently the subject of a lawsuit. He did so, apparently, without even having read the entire article.

June 2001: The Carpenter Review – Dr. Smith Resumes Some Coroner's Autopsies

Dr. Smith did not conduct any coroner's autopsies from January to June 2001. However, he continued to testify in those cases where he had previously conducted autopsies or consultations and which came to trial after January 2001.

In June 2001, the OCCO arranged for Dr. Blair Carpenter, the chief of pathology at the Children's Hospital of Eastern Ontario, to review six of Dr. Smith's non-criminally suspicious files. The purpose of Dr. Carpenter's review was to determine whether Dr. Smith could resume work on coroner's cases that were not criminally suspicious. SickKids urgently needed Dr. Smith to resume some coroner's work because of the significant burden coroner's autopsies were placing on its other pathologists. Dr. Chiasson selected the cases for review at random, but ensured that Dr. Carpenter reviewed at least one trauma case. The OCCO sent Dr. Carpenter the reports of post-mortem examination for his review, along with histology and photographic material. Dr. Carpenter's report was very positive. He concluded that Dr. Smith's work did not give rise to any concern regarding quality, accuracy, and competency. Following Dr. Carpenter's review, the OCCO allowed Dr. Smith to resume performing non-criminally suspicious coroner's autopsies.

After January 2001, with one exception described below, Dr. Smith did not perform any coroner's autopsies where criminal suspicions were raised. However, the OCCO never advised local coroners or regional coroners that Dr. Smith was no longer performing autopsies in criminally suspicious pediatric cases. The OCCO was, quite astonishingly, relying on indirect word of mouth to make people aware of Dr. Smith's situation. It surely would have been fundamental to any notion of quality assurance or oversight that the OCCO tell coroners that the director of the OPFPU, the leading expert in the field, was no longer doing criminally suspicious pediatric cases as of January 2001.

Once he resumed some work for the OCCO, Dr. Smith, in several instances, started an autopsy where there were no criminal suspicions and, when something of concern arose during the autopsy, stopped the procedure and contacted the OCCO. Dr. Chiasson took those cases over. The OCCO relied on Dr. Smith or other SickKids staff to notify it when a case that initially presented as routine raised criminal suspicions during the course of the post-mortem examination. The coroner, the police, and Dr. Smith made decisions about whether or not cases were criminally suspicious. The OCCO also relied on the pathology assistants at SickKids, who were to contact the OCCO if Dr. Smith started to perform a criminally suspicious autopsy and indicated he would continue with the autopsy.

Dr. Smith performed one criminally suspicious autopsy after January 2001. It involved a child who was left alone on a hot night and was later found deceased and dehydrated. No other pathologist was available to perform the autopsy. After consulting with the Toronto Police Service – Homicide Bureau, the OCCO decided to let Dr. Smith conduct the autopsy and, subsequently, Dr. McLellan sent the case for review by another expert.

Although Dr. Smith was not allowed to perform criminally suspicious autopsies after January 2001, he nonetheless continued as director of the OPFPU. He also continued to provide guidance to pathologists at SickKids.

September 2001: The Report of the Ombudsman on Mr. Gagnon's Complaint

Well before Dr. Smith's removal from the roster for criminally suspicious cases, Mr. Gagnon complained to the Ombudsman of Ontario about the OCCO's investigation into Nicholas' death. On June 26, 2000, he requested that the Ombudsman investigate his complaints regarding Dr. Smith and Dr. Cairns and the complaints process at the OCCO.

On November 10, 2000, Dr. Young wrote to the Ombudsman regarding the complaint. In this letter, he stated that Dr. Cairns had responded appropriately and expeditiously to the conflicting opinions of Dr. Smith and Dr. Halliday by arranging for an independent review. He also maintained that the varying opinions in the case illustrated "the complexity of forensic pathology in young children" and that Dr. Smith's opinions fell within a reasonable range of the science. As noted above, in the face of Dr. Case's clear conclusions to the contrary, Dr. Young should not have stated that Dr. Smith's opinion was within a reasonable range.

Then, on November 23, 2000, Virginia West, the Deputy Solicitor General, wrote to the Ombudsman. She stated that Dr. Young had reviewed the actions of Dr. Smith and Dr. Cairns throughout the case and that the ministry had concluded that Dr. Cairns acted in an appropriate manner.

The Ombudsman, however, concluded on September 24, 2001, that the Solicitor General should consider establishing an independent complaints handling body with special expertise to review complaints and ensure the accountability of the coroner system. In 2002, a formal mechanism was instituted for complaints regarding the Chief Coroner or the Deputy Chief Coroner, whereby complaints would be sent directly to the deputy minister's office and investigated independently of the OCCO. No independent process has yet been established for coroners or for pathologists.

October 2001 to April 2002: The Hair in Jenna's Case

In late 2001 and early 2002, concerns regarding Dr. Smith's conduct at the autopsy in Jenna's case came to light.

In October 2001, Detective Constable Larry Charmley, who was in charge of the re-investigation in Jenna's case, spoke by telephone with Dr. Smith about a hair that had apparently been observed in Jenna's vaginal area, but had not been filed as an exhibit. Dr. Smith told him he had collected and kept the hair because the police did not want to take it or to submit it for forensic testing. He believed he still had the hair. Dr. Smith also said that he had arranged for an expert in child sexual abuse to examine Jenna, and the expert had found no evidence of sexual assault. Detective Constable Charmley asked Dr. Smith to retrieve the hair so that the police could seize it as evidence.

On November 6, 2001, Dr. Smith confirmed that he had the hair. Nine days later, on November 15, Detective Constable Charmley went to Dr. Smith's office and retrieved a sealed white envelope with the words "hair from pubic area" written on the outside. A seal on the envelope indicated that the contents were seized from Jenna's autopsy.

In February 2002, a newspaper reported that the police had recovered the hair from Dr. Smith. Media reports criticized both the police investigation and Dr. Smith's post-mortem examination. Following these reports, and certainly before the end of the first week of April 2002, Dr. Smith's spouse, who was also a coroner, called Dr. Cairns to express her concern that Dr. Cairns and the OCCO were not supporting Dr. Smith. Dr. Cairns offered to meet with them both to discuss this issue.

Dr. Cairns subsequently met with Dr. Smith and his spouse at the OCCO, and their meeting lasted between two and two-and-a-half hours. Dr. Cairns advised the Inquiry that Dr. Smith asked why the OCCO was not supporting him.[3] Dr. Cairns told Dr. Smith that he could not understand Dr. Smith's statements that the police officer at Jenna's autopsy refused to take the hair. He found this suggestion "preposterous." He further told Dr. Smith that, had an officer really refused to take a hair, he would have expected Dr. Smith to call Dr. Cairns or Dr. Chiasson to ask what to do. He asked why, if the officer had refused to take the hair, Dr. Smith did not record this fact in his report of the post-mortem examination. Dr. Cairns also asked if Dr. Smith had kept rough notes recording this event, but Dr. Smith told him that he had not. Dr. Cairns responded that he did not

[3] Dr. Smith testified that he had no specific recollection of the meeting, but he did not dispute the recollection of Dr. Cairns.

understand why Dr. Smith had not made a "huge note in massive letters" highlighting what would have been a bizarre event.

During their meeting, Dr. Cairns informed Dr. Smith that he had reviewed the transcript of Dr. Smith's evidence at the preliminary hearing. He observed that Dr. Smith had testified that it would have made a difference in his post-mortem examination if he had been aware that a treating physician and nurse were concerned that Jenna may have been sexually assaulted and had observed a possible pubic hair in her vaginal region. Dr. Smith told Dr. Cairns that he had the hair in an envelope in his jacket pocket when he testified at the preliminary hearing. As Dr. Cairns told the Inquiry, Dr. Smith's story was "getting stranger and stranger." He asked Dr. Smith why he did not say he had the hair in his pocket when he was directly asked about it during his testimony, but Dr. Smith did not respond.

Dr. Smith also told Dr. Cairns that Dr. Dirk Huyer, a physician with the Suspected Child Abuse and Neglect (SCAN) Program at SickKids, had attended at least part of the autopsy, although his attendance was not recorded in the report of post-mortem examination. Dr. Cairns found it even more incredible that Dr. Huyer would not have collected the hair. In Dr. Cairns' experience as an emergency physician, finding a hair would mandate a full sexual assault examination, including swabs, but no swabs had been taken. The fact that this procedure had not been done reinforced in Dr. Cairns' mind that Dr. Huyer could not have been present at the autopsy. When asked about Jenna's case, Dr. Huyer could not recall one way or the other if he was present.

Dr. Cairns did not believe any aspect of Dr. Smith's description of the events. For the first time, he concluded that Dr. Smith could not be believed, and he questioned Dr. Smith's competence as a forensic pathologist.

April 2002: Dr. Cairns Advises the CPSO and Dr. Young about the Hair in Jenna's Case

During the first week of April 2002, shortly after he met with Dr. Smith and his spouse, Dr. Cairns contacted Dr. John Carlisle, the interim registrar at the CPSO. At the time, the CPSO was investigating a complaint by Jenna's mother about Dr. Smith. Dr. Cairns relayed to Dr. Carlisle the information Dr. Smith had provided about the hair in Jenna's case, including the fact that he had kept the hair in his possession since the investigation and had not submitted it for analysis or given it to the police before 2002. Dr. Cairns told Dr. Carlisle that he had no previous knowledge of the facts provided by Dr. Smith and that he believed, based on the facts, Dr. Smith was in serious difficulty.

Dr. Cairns told Dr. Carlisle that the OCCO would not argue that the CPSO did

not have jurisdiction over the matter. As Dr. Young told the Inquiry, the OCCO had always been clear in its position that the CPSO had jurisdiction over physicians in matters giving rise to criminal misconduct or ethical concerns. Dr. Young testified that he considered the issues regarding the hair and the sexual assault examination in Jenna's case as possibly engaging criminal or ethical questions.

On the day after his meeting with Dr. Smith and his spouse, Dr. Cairns recounted the meeting to Dr. Young and told him that he had discussed the matter with the CPSO. Dr. Young also thought that Dr. Smith's story was not credible. In his experience, police officers do not refuse to take samples. In addition, he was concerned about Dr. Smith's story that he took the hair home and then brought it to court. He could not figure out why Dr. Smith was choosing to disclose the hair at that time. Dr. Smith's conduct in the Jenna case did cause Dr. Young to question Dr. Smith's judgment and ethics.

However, despite Dr. Cairns' and Dr. Young's concerns about Dr. Smith's conduct in Jenna's case, Dr. Smith's status at the OCCO did not change after his meeting with Dr. Cairns. He continued to sit on the PDRC and the Deaths under Two Committee. He continued to perform non-criminally suspicious autopsies for the OCCO. And he continued to hold the position of director of the OPFPU.

Dr. Cairns testified that the OCCO thought Dr. Smith's role was sufficiently limited because he could not perform post-mortem examinations in any more criminally suspicious cases. The OCCO was concerned that, if it took further steps regarding Dr. Smith, it might harm the ongoing criminal investigation in Jenna's case. However, looking back on this episode when he testified at the Inquiry, Dr. Young could not muster any explanation for his ongoing support and trust in Dr. Smith as of April 2002, stating rather forlornly, "I don't know why we didn't stop him doing everything at that time … I just don't know."

April 2002: Dr. Young Supports Dr. Smith to the CPSO

By April 2002, there were three active complaints regarding Dr. Smith before the CPSO. They related to the cases involving Jenna, Nicholas, and Amber. On April 10, 2002, at the request of counsel for Dr. Smith, Dr. Young sent a letter to Elizabeth Doris, the CPSO chief investigator. Dr. Smith's counsel had drafted the letter, and Dr. Young sent it virtually unaltered. Dr. Young requested that his letter be provided to the panel of experts convened by the CPSO to review Dr. Smith's practices.

Dr. Young's letter said that, in the opinion of the OCCO, Dr. Smith, as one of only five or six pathologists in Canada with certification in pediatric pathology, was "qualified to undertake the work requested of him in each of these investiga-

tions [Jenna, Nicholas, and Amber]." He stated that the OCCO believed that the conclusions reached in Amber's and Nicholas' cases were within the range of reasonable expectation. He further opined that he was not aware of any professional misconduct by Dr. Smith in the Amber or Nicholas investigations. Finally, Dr. Young stated, "To the best of my knowledge, at no time did Dr Smith act in bad faith or with the intent to obstruct or hinder these Coroner's investigations."

By the time he sent this letter, Dr. Young had been fully apprised by Dr. Cairns of Dr. Smith's dubious story about the hair in Jenna's case. As I have described, this information caused him to question Dr. Smith's ethics and judgment. He knew that the hair and the sexual assault examination raised ethical and criminal questions and might give rise to findings of bad faith or obstruction. Yet Dr. Young still felt it appropriate to write to the CPSO on Dr. Smith's behalf in this way. At the Inquiry, Dr. Young acknowledged that his statement that Dr. Smith did not act in bad faith or obstruct or hinder the investigations was "not a correct statement."

Apart from writing this admittedly incorrect statement, Dr. Young made no attempt in his letter to lay out for the CPSO the facts about the hair in Jenna's case. And despite defending Dr. Smith's work and expertise, he made no mention of the fact that, for the 15 months prior, the OCCO had removed Dr. Smith from criminally suspicious pediatric cases.

Dr. Young's letter misled the CPSO. Based on this letter, its recipient, Ms. Doris, assumed that the OCCO had no concerns about Dr. Smith's competence or performance. Dr. Young told the Inquiry that he sent this letter in an attempt to be fair to Dr. Smith. He did so, however, at a cost to the public interest. Coming as it did after the long series of incidents described above, the letter was not balanced or objective or candid. It was not a letter worthy of a senior public office-holder in Ontario.

July 2002: Dr. Cairns Offers an Expert Pathology Opinion in Paolo's Case

In July 2002, Dr. Cairns, like Dr. Young in his letter to the CPSO, defended Dr. Smith. This time it was in relation to Dr. Smith's pathology opinion in Paolo's case. In so doing, Dr. Cairns exceeded his expertise, the effect of which was to shield Dr. Smith's opinion from further scrutiny. Even before that, however, Dr. Cairns caused some confusion about Dr. Smith's status at the OCCO.

In October 2001, Lucy Cecchetto, Crown counsel, requested that the OCCO review Dr. Smith's work in Paolo's case as requested by the defence. In the course of their correspondence regarding the case, Dr. Cairns failed to inform Ms.

Cecchetto about the nature of the 2001 review of Dr. Smith's work and Dr. Smith's status regarding coroner's cases. In all, he made three incorrect representations to Ms. Cecchetto.

First, he said that Dr. Smith's work in approximately 20 cases had been reviewed. In 18 of those cases, there was no difference of opinion with Dr. Smith, and, in the other two cases, the difference of opinion was limited to where experts might reasonably disagree. Second, he said there was no suggestion from these reviews that Dr. Smith was incompetent or negligent in these cases. Third, he said that, following the review, Dr. Smith was returned to the autopsy roster in June 2001 and that, as far as the OCCO was concerned, Dr. Smith was competent to conduct any autopsy. None of Dr. Cairns' three statements was correct.

Despite being copied on a letter to defence counsel in which Ms. Cecchetto repeated the inaccurate information he provided about the OCCO review, Dr. Cairns did not take any steps to correct the misunderstandings. This failure to act had the effect of misleading Crown and defence counsel about the rigour of the OCCO review process and the scope of Dr. Smith's practice after June 2001.

On or about July 31, 2002, Dr. Cairns advised Ms. Cecchetto orally that he had completed his review in Paolo's case, including a review of the autopsy and all the medical evidence. Dr. Cairns reported that he was of the view that there was complete consistency between Dr. Smith's opinion and that of the other medical experts. He saw no contradictions whatsoever and had no concerns about the autopsy report or any of the medical evidence. Dr. Cairns told Ms. Cecchetto that, in his opinion, nothing would be served by doing anything further or seeking out any other opinions.

The Crown requested a written report from Dr. Cairns because defence counsel was considering whether or not to pursue a fresh evidence application. On September 27, 2002, Dr. Cairns wrote to Ms. Cecchetto and confirmed that he had conducted a "thorough review" of Dr. Smith's work in Paolo's case, including the autopsy report, photographs, and expert testimony at the trial. He confirmed that he had "no concerns regarding the opinion given by Dr. Smith and [saw] no reason what so ever for [the OCCO] or the Crown to hire another expert."

Dr. Cairns was wrong. Once experts reviewed the case, Dr. Smith's opinion was sufficiently discredited by other pathology experts that the Supreme Court of Canada ordered a new trial for Paolo's parents. As with his affidavit in Nicholas' case, Dr. Cairns did not have the expertise to provide this opinion. A proper review required expertise in forensic pathology. Moreover, at the time Dr. Cairns provided this unqualified opinion, he was fully apprised of the serious concerns about Dr. Smith's competence, integrity, and judgment arising from cases such as Jenna's. This incident provides yet another example of the importance of experts understanding

and respecting the limits of their expertise. As he candidly acknowledged at the Inquiry, Dr. Cairns had absolutely no business offering this opinion.

November–December 2002: Dr. Smith's Confrontation with the OPP

The next episode involved a different concern regarding Dr. Smith: an alleged abuse of his authority as director of the OPFPU, a position Dr. Young permitted Dr. Smith to hold notwithstanding all the warning signals that had been sounded.

On November 18, 2002, Inspector J.J. (Jim) Szarka of the OPP wrote to Dr. Young stating that one of his officers from the Cobourg office of the Northumberland OPP had stopped Dr. Smith for speeding on November 9, 2002. According to the officer, Dr. Smith became angry when he was issued a ticket and said, "Do you know who I am? I am the Head of Pediatric Forensic Pathology for this province." After asking what location the officer worked out of, Dr. Smith reportedly said, "Next time Cobourg needs forensics on a child they won't get one from our office." The officer then asked Dr. Smith if he was going to deny Cobourg his services and put an investigation of a child death at risk because of a speeding ticket, to which Dr. Smith reportedly replied yes. Inspector Szarka noted the obvious seriousness of the matter and asked for Dr. Young's reply.

Dr. Young discussed the matter with Dr. Smith. Dr. Young told the Inquiry that he had informed Dr. Smith that his conduct had been wrong and that he owed the police an apology. On December 23, 2002, Dr. Young wrote to Inspector Szarka, indicating that he had reviewed the complaint with Dr. Smith and stating, "Without agreeing to the accuracy of the description of what took place, [Dr. Smith] sincerely regrets any suggestion or impression that services would not be available." Dr. Young also noted that the provision of services was never in jeopardy.

Dr. Young testified at the Inquiry that he did not perceive that the allegation by the OPP raised the prospect that Dr. Smith was misusing his title as director of the OPFPU. This reaction is difficult to fathom, especially in light of the fact that, by then, Dr. Young said that he already had concerns about Dr. Smith's integrity and judgment arising from Jenna's case. Dr. Smith remained as director of the OPFPU for more than a year and a half after this disturbing incident. Dr. Young could not yet bring himself to remove Dr. Smith.

The OCCO Response to the CPSO Decisions

On October 15, 2002, the Complaints Committee of the CPSO rendered its decisions in the complaints arising out of the cases involving Jenna, Nicholas, and

Amber. In all three cases, the committee concluded that Dr. Smith met the overall standards of a pathologist assisting the coroner, although it noted a number of deficiencies and omissions, including that Dr. Smith

a) failed to review clinical information before performing the autopsy;
b) failed to perform a rape kit examination;
c) failed to document significant findings regarding sexual assault;
d) produced post-mortem photographs of substandard quality;
e) provided an estimate of the time during which the fatal injuries were received that was far too broad, and failed to consult with another expert on this issue;
f) employed an overly dogmatic approach in court;
g) over-interpreted some of the pathology;
h) failed to take complete radiographs or have a radiologist review the X-rays;
i) gave testimony that was sometimes weak and deferred to defence witnesses without a critical evaluation of their opinions; and
j) made unsubstantiated findings.

Dr. Smith was subsequently cautioned in person by the CPSO. The medical profession perceives a caution by the CPSO as a significant outcome, and many physicians will appeal a decision of the Complaints Committee to issue a caution to the Health Professions Appeal and Review Board. When the Complaints Committee declined to refer any of the three cases to the Discipline Committee, D.M. and Jenna's mother unsuccessfully appealed the decision not to refer their matters to discipline to the HPARB.

In its decision regarding Jenna's case, the Complaints Committee did not mention the issue of the hair. Dr. Young had no concerns that the hair was not discussed in this decision. He viewed the hair as engaging credibility issues rather than substantive forensic issues, and he thought it likely that the hair would be of no evidentiary value.

The OCCO took no further action with respect to Dr. Smith following the October 15, 2002, decisions of the Complaints Committee. Dr. Young read all three decisions of the CPSO, and they did not change his attitude toward either Dr. Smith's competence or his continued performance of some autopsies for the OCCO. Dr. Young did not feel they could afford to stop Dr. Smith from performing OCCO autopsies in non-criminally suspicious cases. In failing to react once again to serious expert criticisms of Dr. Smith, Dr. Young put his concerns about the scarcity of forensic pathologists ahead of his oversight of Dr. Smith.

Although he did nothing to address concerns about Dr. Smith, Dr. Young did see fit to intervene, once again, with the CPSO on Dr. Smith's behalf. Following

the decisions, Dr. Smith raised concerns that some of the problems identified by the Complaints Committee were beyond his control as a pathologist. On February 17, 2003, Dr. Young wrote to the registrar of the CPSO to clarify that coroners were responsible for some of the errors attributed to Dr. Smith and that the OCCO was attempting to address these errors through new policies. He outlined that the investigating coroner, not the pathologist, was responsible for ensuring that the pathologist had all the available information before the autopsy. The investigating coroner was also responsible for directing efforts with regard to consultations or testing. In addition, the pathologist could not be faulted for substandard photographs (as in Jenna's case), as they were taken by the investigating police service.

Although Dr. Young testified at the Inquiry that he did not question the findings the Complaints Committee made about Dr. Smith, and that he merely wanted to highlight areas where coroners shared responsibility, the fact that he still considered it appropriate to write to the CPSO in the way he did at Dr. Smith's request is worrisome. It illustrates his failure to understand his role as an overseer of Dr. Smith. It was not his role to protect Dr. Smith from his professional regulator.

June 2003: Charges Stayed in Athena's Case

On June 23, 2003, the trial judge in Athena's case delivered his reasons for judgment staying the proceedings against Athena's parents because of unreasonable delay. In his reasons, Justice W. Brian Trafford criticized Dr. Smith's role in the delay and commented on Dr. Cairns' testimony in the case. As I describe in Chapter 8, Dr. Smith and the Practice of Pediatric Forensic Pathology, Dr. Smith took over eight months to produce a one-and-a-half-page addendum to his postmortem report in Athena's case. This unacceptable delay led, in part, to Justice Trafford's decision to stay the proceedings.

Well before that, Dr. Cairns had played a role in Athena's case. In November 2001, Dr. Cairns testified at the preliminary hearing, in large part regarding the controversy surrounding Dr. Smith. He attempted to describe the OCCO's 2001 review of Dr. Smith's work. He testified that a number of autopsies were selected at random and sent out for independent review. He gave evidence that the review of Dr. Smith's work consisted of a review of six cases by Dr. Carpenter and a review of 17 criminal cases by Dr. Cairns, Dr. Chiasson, and Dr. McLellan. Of the 17 cases, 10 were externally reviewed at the request of either Crown counsel or the defence. Aside from the decision to stop the independent review in Sharon's case because of legal advice in connection with the lawsuit initiated by Sharon's mother, Dr. Cairns testified that the other independent reviews had

been completed. He also gave evidence that he, Dr. Chiasson, and Dr. McLellan reported to Dr. Young with the results of their review by June 2001 and told him that Dr. Smith was competent to perform any pediatric autopsy. The preliminary hearing judge committed Athena's parents to stand trial, and the matter proceeded to trial.

In 2002, Dr. Cairns was summonsed, in the context of a third-party records application by the defence, to attend at the trial in Athena's case before Justice Trafford. Dr. Cairns swore two affidavits in response to the defence application. The documents attached to his October 23, 2002, affidavit included a chart of the cases subject to the OCCO's review that he had provided to the defence in November 2001. Dr. Cairns testified in Athena's case on November 28 and 29, 2002.

On June 23, 2003, Justice Trafford issued the stay of proceedings on the ground of unreasonable delay, a decision later upheld by the Court of Appeal for Ontario. In his reasons for ruling, Justice Trafford found that Dr. Cairns' testimony at the preliminary hearing, while in good faith and not intentionally misleading, had the effect of misleading the defence and resulted in the defence making unnecessary applications for the production of all the criminal files they understood were the subject of review. Justice Trafford cited three examples of Dr. Cairns' misleading testimony. First, Dr. Cairns described the Carpenter review as part of the independent review, when it was not. Second, Dr. Cairns testified that, with the exception of Sharon's case, the independent review had been completed, whereas, in fact, Dr. Young had indefinitely suspended it. Third, Dr. Cairns testified that the review concluded that Dr. Smith was competent to perform all autopsies, whereas, in fact, no such opinion had been given and, indeed, Dr. Smith had been removed from the roster for criminally suspicious pediatric cases.

At the Inquiry, Dr. Cairns candidly admitted that his evidence during the preliminary hearing and application suggested that the internal review was more thorough and rigorous than it was. He agreed that his evidence was extremely confusing and had a misleading effect. The defence ended up thinking that the OCCO had conducted a rigorous, scientific review. In addition, during his testimony in 2002, Dr. Cairns had provided a chart to the defence that appeared to detail the results of the external and internal reviews in 17 of Dr. Smith's criminally suspicious cases. However, the chart inaccurately described the level of agreement of other experts with Dr. Smith's conclusions and was misleading. It would lead reasonable people to conclude that the OCCO had conducted an internal review and an external review, and that the reviewers had agreed with Dr. Smith in most cases. None of this was true.

Following Justice Trafford's decision, Dr. Smith remained on the OCCO roster

for non-criminally suspicious autopsies, remained director of the OPFPU, and continued to sit on OCCO committees charged with the review of pediatric deaths.

December 2003: The OCCO Removes Dr. Smith from the Roster for Coroner's Autopsies

In December 2003, the OCCO finally removed Dr. Smith from the roster for performing all coroner's warrant autopsies. The decision was made amid continuing media scrutiny about Dr. Smith, including coverage of the June 2003 stay of proceedings for delay in Athena's case. The fact that Dr. Smith was a lightning rod for criticism was a very significant, if not primary, concern of the OCCO in its decision to stop using his services altogether. There was a general sense among members of OCCO committees that Dr. Smith's continued work with the OCCO might damage its reputation, and a sense that the OCCO needed to cut all ties with Dr. Smith. In addition, pathologists were expressing concerns about completing criminally suspicious autopsies that Dr. Smith had started. Around the same time, the OCCO obtained additional resources to perform autopsies, including the hiring of Dr. Pollanen, which provided alternatives to having Dr. Smith continue to perform autopsies.

On October 2, 2003, Dr. Smith, Dr. McLellan, Dr. Young, Dr. Cairns, Dr. Porter, and Mr. O'Marra met to discuss Dr. Smith's ongoing relationship with the OCCO. The OCCO leadership and Dr. Smith discussed whether he should continue performing autopsies for the OCCO or participating in OCCO committees, such as the PDRC and the Deaths under Two Committee.

Two weeks later, on or about October 16, Dr. Young and Mr. O'Marra met again with Dr. Smith. They asked him to resign from performing autopsies for the OCCO. Notes of the meeting recorded concerns about Dr. Smith being a lightning rod and that, although likely unfair, even his name on a report caused concerns and resulted in defence counsel "smell[ing] blood." At the Inquiry, Dr. Young stated that, although he focused on the reputation and lightning rod problems in this meeting as a way of sparing Dr. Smith's feelings, he also had concerns by this point about the quality of Dr. Smith's work. He therefore told Dr. Smith at the meeting that the OCCO needed to sever its relationship with him and asked for his timely response.

Dr. Smith did not resign after these discussions in October 2003. In December, two months later, Dr. Young finally informed Dr. Smith that he would no longer be allowed to perform any autopsies for the OCCO. Nevertheless, Dr. Smith continued to hold his position as director of the OPFPU. He asked the OCCO if he could retain his existing title until the completion of the CPSO proceedings in the

complaints arising out of the cases involving Nicholas, Jenna, and Amber. On May 26, 2004, the CPSO proceedings were resolved when the CPSO Complaints Committee issued a caution to Dr. Smith.

It is not clear exactly when Dr. Smith was informed he could no longer participate on OCCO committees. Dr. Young's recollection is that he spoke with Dr. Smith sometime in the first half of 2004 and asked him to resign from the committees. In any event, he was removed from the committees by the summer of 2004.

June 2004: The OCCO Removes Dr. Smith as Director of the OPFPU

As director of the OPFPU, Dr. Smith continued to perform administrative responsibilities and to review reports of post-mortem examination completed by other pathologists within the unit even after January 2001. He reviewed reports before they were sent to the coroner to ensure the propriety of the terminology used to classify the cause of death and to ensure that they did not include any history or discussion that was beyond the level desired by the OCCO. At times, he raised concerns with his colleagues about findings in their reports. In his testimony on November 8, 2001, at the preliminary hearing in Athena's case, Dr. Smith stated that, as director of the OPFPU, he continued to exercise a supervisory function over pathologists performing pediatric forensic autopsies at SickKids.

In July 2002, because of Dr. Young's significant other commitments as assistant deputy minister of public safety and commissioner of public safety, Dr. McLellan became Acting Chief Coroner for Ontario and was charged with responsibility for almost all the OCCO's daily management. However, Dr. Young retained responsibility for handling issues involving Dr. Smith.

Dr. Young testified at the Inquiry that he kept on in this role because he had handled most of the past significant events regarding Dr. Smith. Dr. McLellan testified that he suggested to Dr. Young and Dr. Cairns that Dr. Smith be removed from ongoing involvement in OCCO committees and autopsy work, as well as from his position as director of the OPFPU. Dr. McLellan was concerned about Dr. Smith's ongoing roles, and in particular was worried about how family members and other members of the death investigation team might feel about his continued involvement with the OCCO. When Dr. Young disagreed and decided that Dr. Smith should remain in these positions, Dr. McLellan asked Dr. Young to continue dealing with Dr. Smith, and Dr. Young agreed.

Dr. McLellan was appointed as Chief Coroner for Ontario in April 2004. Finally, at Dr. McLellan's insistence, Dr. Smith resigned as director of the OPFPU effective July 1, 2004.

Summary

As this review demonstrates, for over a decade, while the danger signals about Dr. Smith kept coming, those in charge at the OCCO who ultimately might have done something about the mounting problem did far too little. It is a graphic demonstration of how the oversight of pediatric forensic pathology could and did fail, almost completely. In large measure, responsibility for this failure lies in three areas: the grave weaknesses that existed in the oversight and accountability mechanisms, the inadequate quality control measures, and the flawed institutional arrangements of pediatric forensic pathology in particular, and forensic pathology as a whole.

The legislative framework for death investigations in Ontario provided by the *Coroners Act* created no foundation for effective oversight of forensic pathology. It contained no recognition whatsoever of forensic pathology, the essential service it provides, or those who should be responsible for it.

The institutional arrangements for forensic pathology at the time were no more helpful. The position of Chief Forensic Pathologist was left very ill defined by the OCCO, and with no clear responsibility for oversight. Although in the organizational structure of the OCCO the Chief Forensic Pathologist was accountable to the Chief Coroner, in the absence of any definition of this supervisory role, the actual relationship between the two positions was equally obscure. The same lack of clarity infected the relationships between the OCCO and the regional forensic pathology units, especially the OPFPU, and rendered any effective oversight by the OCCO of the practice of pediatric forensic pathology at the OPFPU that much more difficult. The role of the regional director, the position Dr. Smith held at the OPFPU, had little, if any, defined oversight responsibility for the work done in the unit. In addition, it was completely unclear to whom the regional director was accountable, and for what. In practice, the pathology conducted by a regional director like Dr. Smith was done without any effective oversight.

Given these weaknesses in the institutional arrangements, as well as the inadequacies of the quality control measures introduced in the 1990s, oversight of Dr. Smith's pathology work was virtually non-existent. The one exception was the de facto supervision by Dr. Young and Dr. Cairns that derived from their longstanding relationship with Dr. Smith, together with their positions of ultimate responsibility at the OCCO. In reality, this loose supervision was the only operative oversight available for Dr. Smith's pediatric forensic pathology. Both men served Ontario for many years in a number of responsible positions, and I am sure in many respects they did so effectively and well. But in this task they failed.

Because of their positions, Dr. Young, as Chief Coroner, and Dr. Cairns, as his deputy, clearly had authority over Dr. Smith in his role as director of the OPFPU and in his work on individual cases, had they chosen to exercise it. Ultimately, they could have removed him from both functions. Unfortunately, this authority was never translated into effective oversight. On their watch, he was never removed as director, and only much too late was he asked to stop his forensic work. Many factors, in addition to the institutional weaknesses I have described, contributed to this failure.

Perhaps most important, neither Dr. Young nor Dr. Cairns had any specialized training in pathology, let alone forensic pathology, and they clearly did not understand the deficit position that this lack of expertise put them in. Although Dr. Cairns offered what purported to be expert pathology opinions of his own in several cases, he now recognizes how inappropriate that was and how unqualified he was to do so. For his part, in giving evidence at the Inquiry, Dr. Young attempted to defend as reasonable Dr. Smith's opinion about the timing of the fatal injury in Jenna's case, when the overwhelming expert consensus was not just that the opinion was unreasonable but that it was bad forensic pathology. Dr. Young's and Dr. Cairns' lack of expertise contributed to their failure to recognize Dr. Smith's deficiencies in forensic pathology despite the mounting evidence that accumulated during the 1990s. It meant that many of the problems the expert reviewers have now made so glaringly obvious did not shake their absolute faith in Dr. Smith until the very end, and after much damage had been done.

Dr. Young and Dr. Cairns also had few, if any, tools for effective oversight of Dr. Smith's work. There were not many best practice guidelines against which his performance, case by case, could be measured. This gap left them with nothing but anecdotal information about his practices and his performances in the criminal justice system, and individual complaints in particular cases could not, and did not, displace their faith in the person they felt was the dominant figure in the field.

In addition, Dr. Young and Dr. Cairns had a kind of symbiotic relationship with Dr. Smith. They actively protected him and played a substantial role in the development of his career. They found his growing profile in the field to be of benefit to the OCCO, and the OCCO had a vested interest in continuing to be able to use his services. Dr. Young, in particular, was afraid that, given the small number of qualified people in the field, without Dr. Smith there would be nobody to do the work in criminally suspicious pediatric cases. In short, Dr. Smith needed the OCCO to continue his work, and, for the same reason, the senior leadership at the OCCO needed him to do it. This symbiosis stood between the OCCO and the ability to assess Dr. Smith's work without bias – an objectivity that is vital to effective oversight.

Any possibility of objective assessment was made all the more difficult by the working relationship among the three men. Dr. Young and Dr. Cairns both shared with Dr. Smith the same commitment to the "think dirty" approach to uncovering possible child abuse. By the end of the 1990s, they had worked together for a decade and had become close professional colleagues who valued one another's work. Dr. Young and Dr. Cairns considered Dr. Smith an important member of the senior team at the OCCO. As Dr. Young said, they took as a given a level of competence at the top end of the organization. To doubt Dr. Smith would have been to doubt one of their own. In my view, this professional closeness made objective oversight of Dr. Smith very difficult for the senior leadership at the OCCO. The unfortunate consequence was that, when this oversight failed, it was at the cost of lost public confidence in the governance capability of the OCCO itself.

At the Inquiry, Dr. Cairns candidly acknowledged his responsibility for this failure of oversight. As he said, he put undue faith in Dr. Smith because he had put him on such a pedestal. In a touch of irony, he expressed profound disappointment in himself, as one who advocated the "think dirty" approach, in not being more suspicious or even objective in his assessment of Dr. Smith's performance and for taking such a long time to realize what was actually happening.

Like Dr. Cairns, Dr. Young also apologized at the Inquiry. As he recognized, these events happened on his watch, and he bears ultimate responsibility for them. In my view, this apology is appropriate because, in addition to what I have already described, Dr. Young's own attributes contributed to the failure.

While still Chief Coroner, and as these events unfolded, Dr. Young simultaneously took on even more senior positions in the provincial government, first as assistant deputy minister of public safety and then, in addition, as commissioner of public safety. He candidly acknowledged to the Inquiry that he was a "big-picture person" who got bored with detail, who scanned the paper that came to him but did not read it, and who did not have time to analyze things in detail. As he said, "I'm vision. I look at things in big ways and, frankly, I get bored doing the same thing every day and I'm not well suited to it." With the additional burdens imposed by his new responsibilities, Dr. Young's inattention to day-to-day administration was a recipe for a failure of oversight. Whether it was his failure to pursue Justice Dunn's judgment and its implications, or to read all of Mr. Gagnon's complaint before responding, or to watch *the fifth estate* program and explore the validity of its criticisms, or, in 2001, to structure and follow through with any coherent plan for the review of Dr. Smith's cases, the regular vigilance required for effective oversight was missing.

At first, as the storm clouds gathered, Dr. Young was guided more by his con-

cern that, for the sake of the OCCO, Dr. Smith's services had to be continued than by whether those services were providing deeply flawed forensic pathology. As the end neared, Dr. Young was more concerned with the possibility of the adverse publicity that Dr. Smith might bring to the OCCO than about the possible impact of Dr. Smith's shortcomings on the OCCO's responsibility for high-quality death investigations. He gave no thought to whether the office might have played a role in past wrongful convictions as a result of Dr. Smith's work. Concerns about the OCCO's reputation, while valid, cannot stand in the way of the paramount imperative of ensuring high-quality death investigations.

Finally, as the last act played out, Dr. Young continued to defend the indefensible in the name of saving the reputation of the OCCO. Even after Dr. Cairns had lost faith in Dr. Smith's integrity and competence, with the revelation of Dr. Smith's actions concerning the hair in Jenna's case, Dr. Young took no action; instead, he supported Dr. Smith's abilities as a pathologist and his professional expertise. Dr. Young was the last to see the writing on the wall, and, at the Inquiry, he was left to say what he might have said with equal validity at many moments in the preceding decade: "I don't know why we didn't stop him doing everything at that time … I just don't know."

In the end, as Chief Coroner, Dr. Young must bear the ultimate responsibility for the failure of oversight. As he rose to take on more senior positions, he proved unable to exercise the authority of the position he already held: to ensure vigilant oversight of Dr. Smith. When he finally did act, it was to protect the reputation of his office, and not out of concern that individuals and the public interest may already have been harmed. Sadly, the de facto oversight of Dr. Smith that resulted was far too little, far too late.

The Role of SickKids

From at least 1995 to 1997, Dr. Becker and others at SickKids had concerns about both the timeliness and the quality of Dr. Smith's pathology work for the hospital. Notwithstanding their ongoing concerns about delays and diagnostic discrepancies in Dr. Smith's work, it appears that no one at SickKids took any formal disciplinary action against Dr. Smith, nor did they tell the OCCO about their misgivings. Ultimately, I cannot determine what might have happened had SickKids informed the OCCO of its concerns, but there can be no doubt that, if they had been known, these concerns should have informed the actions of the OCCO from 1995 to 1997. By choosing not to provide this information, SickKids impeded the OCCO's ability to provide meaningful oversight.

Unlike the OCCO, SickKids tracked the turnaround times for all surgical

pathology cases, hospital autopsies, and coroner's autopsies conducted or reviewed at the hospital. At the end of each month, the pathology department produced a list of every pathologist's incomplete cases which was distributed both to Dr. Becker and to the individual pathologist. Although most pathologists met Dr. Becker's expectations, Dr. Smith typically did not.

Dr. Smith often had the highest number of incomplete surgical pathology, hospital autopsy, and forensic autopsy reports in the department. In addition, his reports were frequently incomplete for the longest periods of time. In some instances, it took four months for Dr. Smith to finish a surgical report that should have taken, at most, two weeks.

Dr. Smith's tardiness frustrated concerned parents and delayed the work of clinicians who required surgical pathology test results before making important decisions related to patient care. Clinicians and family members were forced from time to time to contact Dr. Smith throughout the 1990s and even in the early 2000s, urgently requesting his surgical reports, sometimes to no avail. Dr. Becker tried to deal with these persistent problems by speaking to Dr. Smith directly about the urgent cases and, in some instances, even getting another pathologist to complete the report.

At the Inquiry, Dr. Smith acknowledged that, throughout his tenure at SickKids, there were persistent problems concerning his timeliness in completing both surgical and autopsy reports. Although he was aware of his delays and the problems they caused, the improvements he was able to make from time to time proved only temporary. He acknowledged that frequent delays in the completion of his reports adversely affected the work of his colleagues and may have diminished the quality of patient care in some instances.

As well as timeliness, the hospital also had concerns about Dr. Smith's diagnostic accuracy. Clinicians rely on pathologists' diagnoses to make critical decisions about treatment. Diagnostic discrepancies in surgical pathology can have profound effects on patient care. As pathologist-in-chief, Dr. Becker dealt with diagnostic concerns about Dr. Smith's surgical pathology reports on several occasions. Around 1997, there was demonstrable concern at SickKids about Dr. Smith's clinical skills in the reading and interpretation of microscopic slides.

In one instance, a surgeon complained about a diagnosis made before March 1997 in which Dr. Smith's misdiagnosis of ganglion cells resulted in a young patient undergoing an unnecessary surgery. Understandably, the surgeon was extremely concerned, as Dr. Smith's error profoundly affected patient care. According to Dr. Glenn Taylor, the current pathologist-in-chief at SickKids, the diagnosis of ganglion cells is regarded as difficult, and such misdiagnosis is a very common source of civil litigation against pediatric pathologists.

On March 21, 1997, Dr. Paul Thorner, the associate head of pathology at SickKids, wrote a memo to Dr. Becker regarding diagnostic discrepancies in four of Dr. Smith's surgical pathology cases. The identification of four misdiagnoses within a short time frame was concerning. The first involved an error in what should have been a rather straightforward diagnosis. In the second case, the proper diagnosis was one that was easy to confuse with the diagnosis made by Dr. Smith. The third case involved diagnosis of an unusual lesion that might be difficult to recognize. These three cases did not affect patient care, but the fourth one did.

In the fourth case, Dr. Smith misdiagnosed two frozen sections of tissue. Frozen sections are the first tissue samples reviewed by a pathologist while the patient remains under anesthetic in the operating room. Dr. Smith reported that the two frozen sections were reactive, or non-malignant. Based on Dr. Smith's diagnosis, the patient was removed from the operating room to recover. Subsequently, the tissue samples were blocked and the permanent slides were prepared. Dr. Smith correctly read the permanent section as malignant. The child had to return to the operating room for placement of a chemotherapy line. At a minimum, the child required a second surgical procedure. More seriously, the proper treatment may have been delayed unnecessarily.

In April 1997, Dr. Becker prepared a letter addressed to Dr. Smith about "a disproportion in the number of complaints about diagnostic inconsistencies from pediatricians and surgeons" regarding Dr. Smith's surgical pathology work. The letter indicated that Dr. Becker was curtailing Dr. Smith's responsibilities in surgical pathology until Dr. Smith completed continuing medical education courses to improve his surgical pathology skills. The letter was unsigned and appears not to have been sent.[4] Dr. Smith testified that no one ever advised him of significant concerns regarding his surgical pathology work or informed him that, as a result, he should cease performing surgical cases. Dr. Becker's letter also stated that, as Dr. Smith would not be conducting surgical pathology on a regular rotation, his "salary from the Division of Pathology will be reduced by $20,000 for 1997." However, Dr. Smith's salary was not reduced in this manner. Whether the letter was sent or not, it clearly reflects Dr. Becker's serious concerns with Dr. Smith's diagnostic skills.

Also in 1997, a SickKids oncologist complained about two surgical pathology cases in which Dr. Smith had made errors. In one case, Dr. Smith had correctly identified two components of the tumour, but, on review, Dr. Thorner and Dr.

[4] Dr. Becker died in July 2002. It was therefore not possible to hear his evidence on this point.

Taylor found a third component, which meant a change in treatment. The additional diagnosis would not have been within the realm of normal experience for pathologists who do not regularly see these lesions. Dr. Thorner testified that Dr. Smith should have noted there was something he did not recognize and requested assistance from his colleagues. In the other case, Dr. Smith failed to recognize that a Wilms' tumour had spread beyond the kidney. Dr. Taylor was asked to review the case approximately one year later, when the child presented with a recurrence of the tumour. He found that the tumour had spread beyond the kidney, and that this invasion was evident in the original slides reviewed by Dr. Smith. If Dr. Smith had correctly diagnosed the spread of the tumour, the child would have received a more aggressive treatment.

These cases were a small minority of all the surgical pathology work that Dr. Smith conducted during the course of his career. However, at times, his colleagues were clearly frustrated with his diagnostic mistakes. This frustration was evidenced by an email written by Dr. Thorner to Dr. Becker in May 1997 in which he referred to two complaints regarding Dr. Smith as "another nail for the coffin." However, it must be said that the complaints regarding diagnostic issues did not rise to the level where the pathologist-in-chief formally restricted Dr. Smith's privileges.

Failure to Share Information with the OCCO

SickKids decided not to share its concerns about Dr. Smith's frequent delays in completing reports in a timely fashion or its misgivings about his diagnostic errors with the OCCO. Despite meeting frequently with representatives of the OCCO to discuss that office's concerns regarding Dr. Smith's delays, representatives of SickKids never indicated that they had the same difficulty with his work for them.

Dr. Young testified that, if the OCCO had known about concerns with Dr. Smith's work regarding diagnostic discrepancies in surgical work, that information would have affected his judgment regarding Dr. Smith's work for the OCCO. Dr. Cairns shared this view and told the Inquiry that Dr. Smith's skills in histopathology were critical to his performance as a forensic pathologist. In pediatric cases, in particular, there may be increased reliance on histopathology because external signs of violence can be very subtle.

This failure to share relevant information about diagnostic discrepancies was wrong. Where a pathologist conducts clinical pathology for a hospital and forensic pathology for the OCCO, it is important that the two institutions communicate about these serious kinds of concerns.

The Role of the CPSO

The College of Physicians and Surgeons of Ontario is the professional regulator for the medical profession in Ontario. The medical profession is largely self-regulating, and that regulation is achieved through the CPSO. Doctors must be members of the CPSO in order to practise medicine in the province. It is essential that the CPSO act first and foremost in the public interest to govern the medical profession.

The CPSO regulates the practice of medicine by issuing certificates of registration to doctors, by monitoring and maintaining standards of practice through peer assessment and remediation, by investigating complaints against doctors on behalf of the public, and by disciplining doctors who may have committed acts of professional misconduct or displayed incompetence. The role and authority of the CPSO is set out in the *Regulated Health Professions Act*, SO 1991, c. 18; Schedule 2 of that Act, the *Health Professions Procedural Code (HPPC)*; and the *Medicine Act, 1991*, SO 1991, c. 30.

The Complaints about Dr. Smith

The three complaints against Dr. Smith initiated by D.M., Mr. Gagnon, and Ms. Brenda Waudby were complex complaints for the CPSO investigators who dealt with them. The complexity arose from the seriousness of the complaints and the number of areas of concern raised in each complaint.

Complaint in Amber's Case (D.M. Complaint)

In the first case, D.M. contacted the CPSO on November 5, 1991, and expressed concerns regarding Dr. Smith and two other SickKids physicians. D.M. reported that his daughter, S.M., had been acquitted of manslaughter by Justice Dunn on July 25, 1991, in a decision that was critical of the SickKids physicians. A letter from D.M. to the CPSO, dated November 6, 1991, enclosed Justice Dunn's judgment and other documentation in support of D.M.'s complaint that "doctors at The Hospital for Sick Children were negligent in formulating a diagnosis of child abuse (shaking) in the death of the infant Amber that resulted in a charge of Manslaughter" against D.M.'s 12-year-old daughter.

On March 24, 1992, D.M. sent a formal letter of complaint to the CPSO which outlined his concerns about Dr. Smith, the other SickKids physicians, and the SCAN Program at SickKids regarding "their wrongful diagnosis of the shaken baby syndrome." The criticisms outlined in D.M.'s complaint were very closely linked to the criticisms set out in Justice Dunn's decision in Amber's case. D.M.'s

complaint also focused on the strongly held opinions of the approximately 10 defence experts who had disagreed with Dr. Smith and the other SickKids doctors during the trial.

On April 1, 1992, the CPSO investigator wrote to Dr. Smith, providing him with a copy of the complaint against him and requesting his response to it. In his response the following month, on May 4, Dr. Smith stated:

> [O]n two occasions during my week of testimony, the Judge, Patrick Dunn, discussed my evidence with me at length. He repeatedly indicated to me that he believed [S.M.] to be guilty, and that he believed the opinions provided by [the SickKids doctors] and me.
>
> …
>
> I remain as convinced as ever, that [Amber's] head injury resulted from a non-accidental injury. Furthermore, in the months which have passed since her death, the increasing body of medical literature in the area of child abuse serves to underscore my opinions.

In October 1996, CPSO investigator C. Michéle Mann took over investigation of D.M.'s complaint because the previous investigator had left the CPSO. There did not appear to have been any activity on this investigation between October 1992 and October 1996, other than one letter written to D.M. in October 1995. This was an inordinate period of delay.

When she read the file in October 1996, Ms. Mann was surprised and concerned by Dr. Smith's comments regarding his discussions with Justice Dunn. She thought that judges were not allowed to discuss a case with a witness during the trial. However, at the time, Ms. Mann believed Dr. Smith's statement to be an accurate portrayal of his discussion with Justice Dunn, and she did not contact Justice Dunn to seek his comments on Dr. Smith's remarks. She believed that, if these discussions had occurred, it was a matter for the criminal courts to deal with and not a matter for the CPSO, as it did not involve the practice of medicine. Investigator Elizabeth Doris, who took the file over from Ms. Mann in 2000, reached the same conclusion. It is unfortunate that neither of them probed Dr. Smith's comments more deeply. Primary responsibility, however, must lie with Dr. Smith for misleading the CPSO by falsely attributing those statements to Justice Dunn.

Ms. Mann met with D.M., D.M.'s spouse, and S.M. on November 9, 1996. D.M. indicated that he wanted his complaint against Dr. Smith to proceed to the CPSO Complaints Committee for a full review and for a decision to be rendered as to whether medical standards had been breached. By December 15, 1997, Ms.

Mann had prepared the file for this process, and the case was listed for a Complaints Committee hearing in March 1998.

On October 15, 1997, members of the CPSO Executive Committee met with Dr. Young and Dr. Cairns. They agreed that, pending an amendment to clarify the legislation, complaints regarding acts performed by medical doctors in the discharge of duties for the OCCO would not be brought to, nor adjudicated by, the Complaints Committee, but instead would be dealt with by the Chief Coroner and the Coroners' Council. The CPSO Complaints Committee would deal only with complaints regarding acts that were part of the practice of medicine. If a complainant insisted that the Complaints Committee deal with a complaint about a coroner, the coroner complained of would be required to reply only to the extent necessary to establish that the acts complained of were not part of the practice of medicine, but were performed in the exercise of OCCO duties. At that point, the Complaints Committee would dismiss the matter and refer it to the OCCO. This process represented the functioning policy of the CPSO as of October 1997.

By letter dated March 4, 1998, Dr. Young wrote to Ms. Mann regarding D.M.'s complaint against Dr. Smith. Dr. Young's position was that, "[a]s the complaint against Dr. Smith relates to actions performed by him pursuant to the *Coroners Act* the complaint should be properly addressed to me." Dr. Young expressed his view that the CPSO did not have jurisdiction "to deal with complaints about the actions, findings or opinions of a pathologist acting pursuant to the *Coroners Act*."

Later that same month, the Complaints Committee sought the direction of the Executive Committee as to the applicability to the D.M. complaint of the October 1997 policy statement that had resulted from the Executive Committee meeting with Dr. Cairns and Dr. Young. The CPSO director of investigations, Howard Maker, wrote to the co-chairs of the Complaints Committee, Dr. Rocco Gerace and Dr. David Walker, seeking their direction regarding the jurisdictional issues.

At the time, Dr. Gerace's expectation was that both the CPSO and the OCCO had the same intent regarding protection of the public interest. Dr. Gerace surmised that a decision had been made not to duplicate activity, but to ensure that concerns were dealt with adequately and effectively. He assumed that the investigation would be done appropriately by either the OCCO or the CPSO. At the time, the CPSO had no reason to believe that the OCCO would not investigate the complaints properly. He was surprised and disappointed to learn at the Inquiry that, in the second complaint submitted to the CPSO in relation to Nicholas' case, Dr. Young had not read the entire complaint filed by Mr. Gagnon.

On March 23, 1998, Dr. Gerace sent an email to Mr. Maker regarding jurisdictional issues and the complaint against Dr. Smith. He wrote that it appeared the CPSO had "a responsibility to take on the Smith case." This email reflected his view at the time that the CPSO Complaints Committee should consider all complaints against physicians. In cases where the expertise of the Complaints Committee was lacking, he knew there was an opportunity to seek assistance or an independent opinion from an expert in the area.

In April 1998, however, the Executive Committee concluded differently: "When a physician acts under the instruction of a coroner and reports back to the coroner, then any complaint received by the College with respect to that physician's actions as agent of the coroner's office should be referred to the Chief Coroner's Office."

The Complaints Committee met over three days from March 9 to 11, 1998, to address the complaint by D.M. against Dr. Smith. At this time, Dr. Gerace, who was a member of the Complaints Committee that reviewed D.M.'s complaint, was taken aback by Justice Dunn's decision, considering it "quite scathing in respect to Dr. Smith's performance both at the time of his performing the autopsy and his testimony." In May 1998, the Complaints Committee decided to take no further action on D.M.'s complaint. Because Dr. Smith's involvement in this matter was undertaken as an agent of the OCCO, the Complaints Committee concluded that it did not have jurisdiction to deal with the complaint.

In his testimony at the Inquiry, Dr. Gerace said that, in his view, Dr. Smith was engaged in the practice of medicine when he performed his post-mortem examinations and that the CPSO should have taken jurisdiction of the complaints made against him. I agree. The decision to decline jurisdiction of D.M.'s complaint was a missed opportunity for the CPSO to deal with the complaints alleged against Dr. Smith by 1998.

On June 16, 1998, D.M. requested a review by the HPARB of the CPSO's decision to decline jurisdiction to resolve his complaint. The HPARB is an independent adjudicative agency that hears appeals from decisions made by complaints committees of health colleges. When the HPARB issued its decision, on September 1, 2000, it determined that the CPSO did indeed have jurisdiction over the complaint. It referred the complaint back to the Complaints Committee for further investigation. Ms. Doris was assigned to take charge of the file.

Complaints in Nicholas' Case (Gagnon Complaint)

The CPSO received a complaint in October 1998 regarding Dr. Smith's conduct at Nicholas' disinterment from Maurice Gagnon, Nicholas' grandfather. Mr. Gagnon raised two areas of concern. First, the disinterment of Nicholas' body

occurred later in the day than the Gagnon family had been advised it would occur, resulting, to the distress of the family, in some onlookers being present. Second, Dr. Smith brought his young son to the disinterment with him.

Ms. Mann was assigned to investigate this matter, and she wrote to Mr. Gagnon indicating that the CPSO had no jurisdiction to take any action regarding complaints against a physician acting as a coroner in pursuance of authority under the *Coroners Act*. Ms. Mann discussed this delineation of responsibility with Mr. Gagnon, and he agreed that she should send a copy of his complaint to Dr. Young, so that the OCCO could look into his concerns. During her discussion with Mr. Gagnon, Ms. Mann indicated that the best avenue for redress for his concerns was through the OCCO and the Coroners' Council. In providing this advice, Ms. Mann was reflecting the policy as passed by the CPSO Executive Committee.

On November 30, 1999, Mr. Gagnon wrote to Dr. John Bonn, registrar, CPSO, initiating a second complaint and asking if the CPSO would assume jurisdiction over Dr. Smith since the Coroners' Council had been disbanded. Mr. Gagnon indicated that he was dissatisfied with Dr. Young's response to his complaint and alleged that Dr. Smith was guilty of professional misconduct in the case.

After the HPARB issued its September 1, 2000, decision in the D.M. complaint, which held that the CPSO had jurisdiction to investigate complaints against physicians working under the jurisdiction of the OCCO, the CPSO Complaints Committee assigned an investigator to look into Mr. Gagnon's second complaint. In 2000 and 2001, the CPSO investigated Dr. Smith's conduct in Nicholas' case.

Complaint in Jenna's Case (Waudby Complaint)

In the third complaint case, the CPSO received a complaint in May 2001 from Jenna's mother, Ms. Waudby, about Dr. Smith. Ms. Waudby's complaint addressed Dr. Smith's opinion on the timing of injuries to Jenna; the fact that Dr. Smith did not conduct a "rape kit" examination, although the hospital staff had noted signs of sexual abuse; and the fact that Dr. Smith had lost a hair collected from Jenna's body. Ms. Doris investigated this complaint.

During the course of her investigation, Ms. Doris collected materials provided by the complainant, responding materials provided by Dr. Smith, hospital records from Peterborough Civic Hospital and SickKids, a collection of expert opinions, preliminary hearing testimony, police reports, witness statements, additional materials provided by the Peterborough Lakefield Community Police Service, materials provided to the panel of assessors assigned by the CPSO, materials from the OCCO, and autopsy photographs. Ms. Doris prepared an

investigative summary, which included information regarding telephone calls and correspondence with the parties.

The OCCO did not initially comply with the CPSO requests for provision of documents related to Ms. Waudby's complaint. A letter from Dr. Cairns to Ms. Doris, dated August 9, 2001, indicated that the criminal case had been reactivated and that a further police investigation was under way. For this reason, Dr. Cairns maintained that he was unable to furnish the CPSO with the requested documents until the investigation was completed.

Further Investigation and Decision of the CPSO in the Three Complaints

In July 2001, the CPSO Complaints Committee had convened a three-member panel of experts to assess the complaints made by D.M., Mr. Gagnon, and Ms. Waudby. The CPSO requested an independent medical opinion from the panel regarding the three complaints.

On September 4, 2001, Ms. Doris requested that the registrar appoint investigators to conduct an investigation under s. 75(c) of the *HPPC* with respect to the complaints made by D.M., Mr. Gagnon, and Ms. Waudby. An appointment under s. 75(c) allows the investigator broader powers – something Ms. Doris wanted because she had experienced difficulty in obtaining certain materials during the course of her investigation before this appointment.

In September 2001, the CPSO advised Dr. Smith that it had approved the appointment of investigators under s. 75(c) of the *HPPC* and that the investigators would be inquiring into and examining his practice with respect to pathology. Dr. Smith was advised that the CPSO was making efforts to assemble a team of experts, who would be asked to provide an opinion as to whether the care Dr. Smith provided met the expected standard of practice in the profession.

In December 2001, the CPSO confirmed the appointment of three panel members: Dr. Cynthia Trevenen, a pediatric pathologist at the Alberta Children's Hospital; Dr. Lloyd Denmark, a pathologist and the deputy chief medical examiner in Alberta; and Dr. Stephen Cohle, a certified forensic pathologist from Michigan. Dr. Cohle was to act as the chair of the panel. The panel members were asked "to provide an opinion as to whether the care provided by Dr. Smith meets the standard of practice of the profession."

On February 14, 2002, Ms. Doris wrote to the panel of assessors and asked them to address nine specific questions related to D.M.'s complaint. She provided them with approximately 1,000 pages of material to review in assessing this complaint. She also provided a similar list of questions and material for the panel to review in the Gagnon and Waudby complaints. Other than one request for addi-

tional excerpts of testimony related to Jenna's case, Ms. Doris believed that the panel of assessors was satisfied she had provided them with sufficient information to permit them to answer the questions posed.

On April 10, 2002, Dr. Carlisle wrote a memo to file regarding his conversation with Dr. Cairns about Jenna's case. Dr. Carlisle's memo indicated that Dr. Cairns informed him that he had discussed Ms. Waudby's complaint with Dr. Smith and that Dr. Smith had told Dr. Cairns that "he had not conducted a rape kit examination" and that "he had not taken any of the samples or specimens that would ordinarily be associated with such an examination." Moreover, Dr. Smith had found "what he believed to be a hair." He had collected the hair and placed it in a sealed envelope, which he had kept in his possession since the time of the investigation. Dr. Smith had not revealed the existence of the hair to anyone, he had not submitted it for analysis, and he had not given it to the police. Dr. Cairns indicated, as a result of this revelation, "he believed that Dr. Smith would be in some serious difficulty and that he did not wish to be party as Deputy Chief Coroner to any deception."

In response to this information, Dr. Carlisle indicated that his memo would be for his record and would "not form part of the Complaints File."

On April 10, 2002, Dr. Carlisle wrote a memorandum to Ms. Doris regarding Ms. Waudby's complaint against Dr. Smith. He wrote that, as he had indicated earlier to Ms. Doris, he had spoken with officials in the provincial government regarding Jenna's case. Dr. Carlisle told Ms. Doris that there was some level of frustration at the OCCO, but he did not relate the details of his conversation with Dr. Cairns or the contents of his memo to file to her. He wanted to know the progress of the investigation, and Ms. Doris provided him with those details.

When asked about the April 10, 2002, memo to file at the Inquiry, Dr. Gerace testified: "I would not consider the practice [of writing a memo that would not form a part of the file] to be advisable. In fact, that practice would not occur at the present time." He went on to describe the current approach to the receipt of information:

> We have a practice at the College that if information comes to any member of the staff about a member, that the person providing that information is told up front that that information will be acted upon.
>
> There are no confidential documents that are not acted on. So, if a conversation of this sort were to have occurred today, I would send a note to the relevant individuals outlining the content of that conversation.

I agree with the CPSO's current approach.

On April 10, 2002, Dr. Young wrote to Ms. Doris regarding the CPSO's investigation of Dr. Smith. As discussed above, that letter was not balanced, objective, or candid. At the time she received this letter, Ms. Doris was not aware that, since January 2001, the OCCO had not allowed Dr. Smith to conduct autopsies in criminally suspicious cases. She told the Inquiry that the information that Dr. Smith was no longer performing autopsies in criminally suspicious cases would have been relevant to the determinations of the Complaints Committee and would have been provided to them, if disclosed.

On June 18, 2002, Dr. Cohle interviewed Dr. Smith on behalf of the assessment panel. Before the interview, Ms. Doris provided Dr. Smith with a copy of the questions he would be asked. The CPSO recording secretary took notes of the interview, and it appears that the meeting was collegial and professional.

Ms. Doris met with Dr. Cohle in the morning, before his interview with Dr. Smith, and provided him with a "summary of evidence for medical review" prepared by the police and a copy of Detective Constable Charmley's notes. During the interview, Dr. Smith stated that, in Jenna's case, the police had said that the hair was a contaminant and had refused to take it.

Dr. Gerace testified that Dr. Cohle would not have been in a position to evaluate Dr. Smith's credibility. While this may be true, this aspect of the process appears to have been a missed opportunity for the CPSO to test the veracity of Dr. Smith's statements. It is unfortunate that the statements of others, which would have contradicted Dr. Smith, were not read to Dr. Smith during this interview, and that Dr. Smith's explanation seems simply to have been accepted.

On July 22, 2002, Dr. Cohle provided the opinion of the panel of experts relating to the complaints. He noted certain deficiencies, but concluded that Dr. Smith did not fall below a reasonable standard of care in any of the areas of concern raised by the CPSO in the three complaints.

On October 15, 2002, the CPSO Complaints Committee issued its decisions in the D.M., Gagnon, and Waudby complaints. The Complaints Committee reviewed the expert panel's findings and found that the deficiencies noted by the panel generally fell into two broad categories: Dr. Smith's work was not as thorough as it should have been; and, where doubt existed, Dr. Smith was overly dogmatic in stating his conclusions. The committee accepted the expert panel's opinion that Dr. Smith's overall approach was acceptable and concluded:

> Nevertheless, the Committee is extremely disturbed by the deficiencies in his approach in this case, as set out above.
>
> Accordingly, the Committee will require Dr. Smith to attend before a panel of the Complaints Committee, to be cautioned with respect to those points. A

> caution in person is a serious outcome for members of the medical profession. It is a tangible symbol of the disapproval of one's peers and a sharp reminder about the need for improvement in future practice.

On November 20 and 29, 2002, D.M. and Ms. Waudby, respectively, wrote to the HPARB and requested that it review the decisions of the CPSO Complaints Committee. On November 10, 2003, and January 22, 2004, the HPARB issued decisions confirming the committee's decisions in Ms. Waudby's and D.M.'s complaints, respectively.

On May 26, 2004, Dr. Smith was cautioned by the CPSO Complaints Committee.

Members of the committee who administer the caution complete a "Record of Interaction," which records indicators of each member's attitude with respect to the caution. A Record of Interaction form completed by Dr. Dale Mercer, the acting committee chair, in relation to Dr. Smith's caution indicated that Dr. Mercer's overall sense regarding the extent to which the caution served as a useful educative function was "10" or "very useful." Dr. Mercer also noted that Dr. Smith "understands his role in this complaint & had instituted appropriate changes."

While the CPSO did play its role as one accountability mechanism for doctors, with hindsight a more vigorous response would have been preferable. There is no doubt that the misinformation it received from Dr. Smith, its acceptance of this misinformation without testing it, and its failure to be informed of relevant facts by the OCCO contributed to what happened. However, this review remains yet another lesson in the need for active vigilance if oversight and accountability mechanisms are to do their job properly.

The New Era

Even before the Province of Ontario called this Inquiry, the winds of change had begun to blow through the OCCO, which is the organization primarily responsible for pediatric forensic pathology in the province. Vital to this change were three individuals who found themselves in key roles well suited to their skills, temperaments, and enthusiasms.

First, Dr. McLellan became Chief Coroner for Ontario in April 2004 and served in that capacity until September 2007. Shortly after becoming Chief Coroner, he met with Dr. Smith and insisted that he resign his position as director of the OPFPU. Dr. McLellan then went on to call both the Tissue Audit at the OPFPU and the Chief Coroner's Review. He provided principled and courageous leadership to the OCCO, and the province benefited greatly from his efforts.

Second, in October 2005, Dr. Chiasson became the director of the OPFPU. After Dr. Smith resigned the position, Dr. Taylor took over as director until Dr. Chiasson, a certified forensic pathologist, was appointed. Dr. Chiasson now takes the lead on the large majority of cases at the OPFPU that raise criminal suspicions.

Finally, Dr. Pollanen became Chief Forensic Pathologist in April 2006, having been a staff member at the Provincial Forensic Pathology Unit (PFPU) since 2003. Dr. Pollanen has excellent academic credentials, along with a firm commitment to improving the science and practice of forensic pathology.

These leaders have brought about a fundamental change in the general approach to the oversight of forensic pathology in the province. The OCCO has made significant progress to correct a number of the very troubling gaps in oversight that were evident throughout the 1980s and 1990s. Perhaps most important, Dr. Pollanen and Dr. McLellan have made it clear to forensic pathologists in the province that performing a high-quality autopsy that is objective and evidence-based is the most effective way a pathologist can participate in the criminal justice system. However, as the OCCO acknowledges, much remains to be done.

The New Guidelines

An Evidence-Based, Objective Approach to Pediatric Forensic Pathology

The OCCO's approach to forensic pathology and expert evidence in recent years has focused on the need for experts to remain objective and open-minded. During Dr. McLellan's tenure, the concept of "thinking dirty" was removed from standard presentations the OCCO gave to death investigators. In 2006, the OCCO replaced the 1995 Protocol for the Investigation of Sudden and Unexpected Deaths in Children under 2 Years of Age, which had introduced the concept of "thinking dirty" into the investigation of infant deaths.

In addition to emphasizing that pathologists serving as expert witnesses must be scrupulously objective, the OCCO has endorsed and promoted the use of an evidence-based approach to forensic pathology, one that requires opinions to be firmly anchored in reviewable facts from the autopsy and the peer-reviewed medical literature. An evidence-based approach is readily amenable to scrutiny through mechanisms such as cross-examination. Moreover, it accepts that there are limits to knowledge and that, as a result, autopsies may yield an undetermined conclusion as to the cause of death. In these respects, it is quite different from the traditional experience-based approach to forensic pathology, where pathologists might feel quite justified in reaching firm opinions based only on their own experiences.

Role of the Forensic Expert in the Criminal Justice System

In the months before Dr. McLellan became Chief Coroner, a number of individuals, many from the defence bar, expressed concerns to him about a perception that the OCCO and the pathologists working under coroner's warrants were not entirely objective. Criminal defence counsel advised him that they were sometimes unable to speak with pathologists who had performed the autopsy in advance of court appearances and that they had difficulties retaining pathologists to provide opinions for the defence. Dr. McLellan was properly troubled by the perception that the OCCO and its pathologists were not fully independent of the prosecution. On July 12, 2004, therefore, he issued a memorandum to all Ontario coroners, pathologists, forensic anthropologists, and forensic dentists to address these concerns. Dr. McLellan wrote that "[t]he ultimate objective of the Crown in putting forward scientific evidence is to ensure that such evidence is presented to the court with no more or less than its legitimate force and effect." The forensic expert must make every effort to communicate to the Crown "any limitations upon the inferences to the reliability drawn from … evidence," and the Crown should advise all experts not to take an adversarial position.

Dr. McLellan's memo sets out some important observations about the risk of experts aligning themselves with the Crown. Developed through familiarity with the prosecution, this bias can result in experts incorrectly believing that their function is to support the theory of the police and the Crown. As noted in the July 12 memorandum, such a misperception among experts has the potential to contribute to miscarriages of justice.

The Autopsy Guidelines

In 2005, Dr. Pollanen implemented the Guidelines on Autopsy Practice for Forensic Pathologists in Criminally Suspicious Cases and Homicides (Autopsy Guidelines), province-wide guidelines for post-mortem examinations in criminally suspicious deaths. They reflect an evidence-based, objective approach to pathology evidence and are intended to assist forensic pathologists, minimize non-reviewable errors at autopsy, and ensure proper documentation, procedures, and testing during the post-mortem examination. In October 2007, the second edition of the guidelines was released.

The Autopsy Guidelines provide directions on the importance of balanced, objective, and evidence-based opinions. They reiterate that pathologists should not think dirty but should keep an open mind and think objectively. The duty for every pathologist is to be an independent expert to the court. They must remain professionally independent of the coroner, police, prosecution, and defence bar in order to discharge their responsibilities in an objective manner.

The Autopsy Guidelines set out principles for disclosure, emphasizing the importance of reviewability of documentation, disclosure of all samples, and inclusion of all consultation reports. They also provide a number of guidelines for the forensic pathologist's opinion, with emphasis on independent reviewability, a full explanation of reasoning, and the exclusion of speculation. They are intended, in short, to ensure that reports provide readers with an understanding of the analytical process and the evidence base behind the cause of death opinion.

The 2006 Protocol Regarding Deaths of Children under Five

In 2006, the OCCO expanded the scope of its protocol regarding investigation of sudden and unexpected deaths of children under two to cover all such deaths in children five and younger. In December 2006, the OCCO issued the revised protocol that replaced the 1995 Protocol for the Investigation of Sudden and Unexpected Deaths in Children under 2 Years of Age.

The 2007 Autopsy Guidelines for Criminally Suspicious Pediatric Cases

In April 2007, the OCCO introduced Autopsy Guidelines for Homicidal and Criminally Suspicious Deaths in Infants and Children. These guidelines were subsequently incorporated directly into the October 2007 Autopsy Guidelines in a section addressing autopsies in homicidal or criminally suspicious deaths in infancy or childhood. The summary of the specific guidelines on child deaths reiterates the fundamental principles of forensic pathology generally, including the importance of keeping "an open mind to death by child abuse and diseases or conditions that may mimic child abuse," being "mindful of the pitfalls in pediatric forensic pathology by emphasizing balanced, reasonable and evidence-based expert opinions," and balancing the "role of physicians as patient or child welfare advocates and our special duty to provide unbiased evidence to the criminal justice system as expert witnesses."

Improvements in Peer Review and Quality Assurance

In recent years, the OCCO has also made important advances in designing systems for peer review and quality assurance of reports of post-mortem examination.

Although the *Coroners Act* remains silent on the role of the Chief Forensic Pathologist, policies and guidelines issued by the OCCO describe the Chief Forensic Pathologist's role in quality control. The 2007 Autopsy Guidelines mandate early central notification to the Chief Forensic Pathologist of preliminary autopsy results (including the nature of the case, necessary further testing, and a

cause of death or pending cause of death) in criminally suspicious cases. The purpose of the notification is to ensure that, within 24 hours, Dr. Pollanen or his designate can provide feedback about other issues which may need to be investigated, as well as to allow for early case conferencing. The 2007 Autopsy Guidelines also recommend consultation with the Chief Forensic Pathologist in potentially controversial matters.

Peer review of autopsy reports is central to the current quality assurance system for criminally suspicious cases. As of August 2004, the regional directors assumed responsibility for review of autopsy reports in their regions. As set out in the Autopsy Guidelines, all autopsy reports in criminally suspicious cases are now peer reviewed by the Chief Forensic Pathologist, by a regional director, or by a forensic pathologist at the PFPU before release to the coroner and the criminal justice system. The regional directors review the reports of other pathologists within their units, and the Chief Forensic Pathologist reviews the reports of the regional directors. The Chief Forensic Pathologist's reports are reviewed by either a colleague at the PFPU or a regional director. Within the PFPU, staff forensic pathologists provide peer review of their colleagues' reports. In cases performed outside a forensic pathology unit, such as at the Winnipeg Health Sciences Centre, the Chief Forensic Pathologist reviews reports in criminally suspicious cases. The main issues assessed in peer review are the independent reviewability of the report and the cause of death opinion.

The extent of the current peer review of each individual report of post-mortem examination is more comprehensive than Dr. Chiasson's paper review in the 1990s. The originating pathologist must submit the report, background information, images from the gross examination and ancillary reports, and, in some cases, histology slides to the peer reviewer. If necessary, such as in most pediatric homicides, examination of the histology is undertaken. The peer review form provided in the Autopsy Guidelines requires the reviewing pathologist to indicate whether he or she agrees with the cause of death and the other medico-legal opinions, not merely whether the original opinions are "reasonable."

The Autopsy Guidelines also incorporate a process for further examination where there is a difference of opinion between the originating and the reviewing pathologist. If there is a significant difference of opinion about the cause of death or other major forensic issues, the Chief Forensic Pathologist is notified and must then both undertake a comprehensive review and prepare a written report.

The Autopsy Guidelines process for review of reports of post-mortem examination applies only to reports in cases giving rise to criminal suspicions. The Autopsy Guidelines define a criminally suspicious case broadly as a death "that

may be related to the action of another person or persons." Within the regional forensic pathology units, peer review in non-criminally suspicious cases is undertaken at the discretion of the regional directors, and reviews vary in their scope and procedures. Some of the regional directors review all coroner's cases, while others conduct only random or sporadic reviews. In practice, it appears that all pediatric cases are subject to some form of review within the units performing pediatric cases. In addition, all autopsy reports in the deaths of children under five are subject to review by the Deaths under Five Committee, which includes a number of pathologists among its members.

For its part, for example, the OPFPU has implemented a more rigorous process for peer review of all reports of post-mortem examination before they leave the unit. In 2004, when Dr. Taylor became the director of the unit, he continued to review his colleagues' forensic autopsy reports. As a quality assurance measure, he then implemented a system whereby his own reports were reviewed by Dr. Chiasson. This system continues under the current director, Dr. Chiasson, with Dr. Taylor reviewing Dr. Chiasson's reports. Where necessary, Dr. Chiasson reviews the images and slides that are available. SickKids now also has a form for comments regarding the review. These forms are kept as part of the pathologist's permanent file on the matter, though they are not submitted with the report to the coroner's office.

With Dr. Chiasson's assistance, Dr. Taylor also began to hold regular rounds to review forensic cases. Since October 2003, the OCCO has granted permission for all criminally suspicious cases to be presented at SickKids forensic pathology rounds, which are attended by SickKids pathologists and representatives of the OCCO. Currently, the results of all post-mortem examinations are presented by the pathologist at either a weekly clinico-pathological round or a monthly forensic pathology round, depending on the nature of the case and whether the decedent was a hospital patient. The rounds do not provide an in-depth review of all the slides and circumstantial evidence, but they are very valuable in confirming whether peers think the pathologist is on the right track. Alternative interpretations, suggestions, and additional areas of study are discussed at rounds, where there is both an educational and a peer-review component.

Death Investigation Communications Regarding Forensic Pathology

In September 2002, Dr. McLellan issued a memorandum to all coroners, pathologists, and chiefs of police, among others, regarding case conferences for homicides and criminally suspicious cases. For the first time, the OCCO recommended

that a case conference be held within two weeks of the autopsy for every homicide and criminally suspicious death.

In 2003, the OCCO issued the first written Guidelines for Death Investigation to develop consistent expectations for coroners across Ontario. The OCCO released a second edition in April 2007. Before the introduction of the first edition, the main guidance for coroners, apart from the Coroners' Investigation Manual, was the legislation.

The Guidelines for Death Investigation require the investigating coroner to contact the regional coroner in cases involving the deaths of children under five years of age or children who have had previous CAS involvement, and in homicides or deaths with suspicious circumstances. They set out the desirability of discussion between the coroner and the pathologist and outline elements that should be included in the warrant for post-mortem examination issued to the pathologist. They also emphasize the importance of attendance at the scene wherever possible.

Policies and Oversight Mechanisms Regarding Timeliness of Reports

According to the job description prepared by the Ministry of Community Safety and Correctional Services, the Chief Forensic Pathologist is responsible for all forensic autopsies in the province. This responsibility includes the timely completion of reports of post-mortem examination. However, the Chief Forensic Pathologist lacks the adequate tools to ensure this timely production. The OCCO, for example, still does not have a central mechanism to track incomplete autopsy reports.

In July 2004, the OCCO first developed a policy requiring reports of post-mortem examination to be completed within certain timelines. Memorandum 04-13 decreed that, where there are no other outstanding reports (such as toxicology reports), autopsy reports should be completed within 12 weeks of the autopsy. In cases where the completion of reports is dependent on other reports and/or investigation materials, autopsy reports should be completed within four weeks after receiving the requisite reports or relevant investigation materials. Despite this policy, the OCCO continues to experience delays by many pathologists in producing their reports. There are a number of reasons for delays, including volume of work, and delays in ancillary testing such as toxicology studies at the Centre of Forensic Sciences (CFS) in Toronto. The senior management committee of the OCCO has been involved in continuing discussions with the CFS about improving its turnaround times.

The Expertise of Pathologists Performing Autopsies

The major change in the performance of pediatric forensic autopsies since the 1990s is that all of them must be performed at specified regional pediatric centres, with the exception of some limited cases such as those where a child had numerous congenital problems or where an older child was hit by a car. On March 1, 2002, the OCCO announced in Memorandum 02-03, "Paediatric Medicolegal Autopsies," that forensic autopsies of children under the age of two were to be conducted in one of four pediatric subspecialty centres – at the regional forensic pathology units in London, Hamilton, or Toronto (the OPFPU), or in Ottawa at the Children's Hospital of Eastern Ontario (CHEO). In practice, almost all deaths of children, regardless of their age, are sent to these centres. Where pediatric deaths occur outside a defined catchment area for one of the regional centres, they are generally sent to the OPFPU. Approximately 50 per cent of pediatric forensic autopsies are performed there. Cases in Northwestern Ontario near the Manitoba border are sometimes directed to Dr. Susan Phillips, a pathologist at the Winnipeg Health Sciences Centre, an academic teaching hospital in Manitoba.

The leadership of the OCCO has continued to monitor the quality of pediatric forensic autopsies being performed at these four Ontario locations. For example, since the fall of 2007, criminally suspicious pediatric autopsies have not been performed at CHEO in Ottawa because Dr. Pollanen had developed some concerns about quality there.

In the 2005 Autopsy Guidelines, the OCCO additionally stated that only a forensic pathologist – a certified anatomical or general pathologist with specific training or certification in forensic pathology and/or recognized experience as a forensic pathologist – may perform autopsies in criminally suspicious cases. The 2007 Autopsy Guidelines added that only those forensic pathologists with pediatric experience or pediatric pathologists with significant forensic experience may perform the autopsy in the criminally suspicious death of an infant or child.

At the OPFPU, the director is responsible for triaging its cases. If he or she is not available, the pathologist on duty will triage the case. The pathologists apply the Autopsy Guidelines to determine whether a case is criminally suspicious. In July 2007, the OPFPU developed its own Autopsy Guidelines in Sudden Unexpected Deaths of Infants and Children under 5 Years, which adopted the OCCO criteria for determining if a case is criminally suspicious and provided its own guidelines for cases that are not. If a case is considered criminally suspicious under the Autopsy Guidelines, Dr. Chiasson or Dr. Pollanen performs the post-mortem examination; for all other cases, the pathologist on duty will be

responsible. If there are any concerns, the pathologist will contact Drs. Chiasson, Taylor, or Pollanen.

Development of Regional Forensic Pathology Units

As I discuss in Chapter 7, Organization of Pediatric Forensic Pathology, the original agreement establishing the OPFPU contained no provisions regarding oversight of, or accountability for, its activities. The original 1991 agreement remained in place until 2004.

That year, a much more detailed agreement was signed between SickKids and the ministry regarding the OPFPU, and the parties have ratified a similar agreement every year since 2004. The revised agreement adds considerable clarity to the relationship. It speaks to the responsibilities of the director and the Chief Coroner. It specifies that the director would be appointed by the Chief Coroner, with the approval of the local hospital administration and the head of the pathology department at SickKids. The revised agreement provides for a governance mechanism in the form of an executive team comprising SickKids representatives, the OPFPU director, and, more recently, a representative of the OCCO. The 2004 agreement also provides that the unit be staffed by "dedicated pathologists, acceptable to both the local hospital and the university, with appropriate training (American Board of Pathology accredited fellowship in forensic pathology, pediatric pathology or equivalent) and/or concentrated case experience in forensic pathology. American Board of Pathology Subspecialty Certification in forensic pathology, pediatric pathology, or equivalent formal certification is highly desirable."

However, the revised agreement for the OPFPU failed to delineate the role of the Chief Forensic Pathologist to provide for the oversight of the work of the director, and to give the director responsibility for oversight of the professional work of the unit. Indeed, after 2001, with the absence of an appointed Chief Forensic Pathologist, the agreements regarding the London, Ottawa, and Kingston units were amended to reallocate the oversight responsibilities of the Chief Forensic Pathologist to the Deputy Chief Coroner, Forensic Services, and, subsequently, to the Chief Coroner. Therefore, as of 2007, the agreements suggest that responsibilities for providing direction regarding accepted standards of forensic pathology and ensuring quality control measures rest with the Chief Coroner, as does the responsibility to review all homicide and suspicious death reports before release. Even with the appointment of the current Chief Forensic Pathologist, the agreements were not revised to reflect the Chief Forensic Pathologist's role in oversight of the work of the units. Nor do they set out that

the regional directors should have responsibility for professional oversight of the forensic pathology work of the units. The agreements should reflect the role of the Chief Forensic Pathologist and the regional directors in overseeing and being accountable for the work of the units.

Unlike the agreements regarding the other regional units, which, as discussed in Chapter 7, Organization of Pediatric Forensic Pathology, were revised to clarify accountability and reporting relationships, the agreement establishing the Hamilton unit has remained largely unchanged since the 1990s. It does not incorporate any clarification of accountability and reporting relationships as set out in the other agreements.

In addition to the regional forensic pathology units in place since 2000, all of which are established through contractual agreements between the hospitals in which they are housed and the ministry, the Northeastern regional forensic pathology unit was developed under the OCCO's new leadership. The Northeastern unit, located at Sudbury Regional Hospital, is an informal unit because it is not the subject of a contractual agreement with the ministry, and thus does not receive any additional funding. The Northeastern unit performs autopsies for the Sudbury Manitoulin regions, as well as North Bay and Thunder Bay. Dr. Martin Queen, a certified forensic pathologist, performs the criminally suspicious cases at the unit. The Northeastern regional unit does not, however, perform pediatric cases, which are sent to the OPFPU.

Mechanisms for Review of Participation in the Justice System

The OCCO currently does not have any mechanism in place to review the testimony of forensic pathologists. There is also no mechanism allowing the Chief Forensic Pathologist or the OCCO to monitor the opinions that a pathologist provides to the Crown or the police, apart from the post-mortem report. In addition, the OCCO has limited ability to locate, let alone review, supplementary reports produced after the final report of post-mortem examination is released by the OCCO to the criminal justice system. The Autopsy Guidelines have, however, introduced a clear requirement that, in cases where a pathologist's previous conclusions can no longer be substantiated, the pathologist must clearly state his or her amended opinion, and should also provide a supplementary letter or amended report of post-mortem examination to the coroner. The coroner or the regional coroner forwards such supplementary opinions to the appropriate actors in the justice system.

Committee Development

By 2004, the OCCO had a well-developed system of committees for review of pediatric cases – the PDRC and the Deaths under Two Committee. Under the new leadership, there has been an expansion of the mandate of the Deaths under Two Committee (renamed the Deaths under Five Committee as of October 2006) to include a review of all death investigations relating to children under the age of five years.

More broadly, Dr. McLellan's tenure saw the development in 2004 of the Forensic Services Advisory Committee (FSAC), a multidisciplinary committee designed to provide independent and external advice to the Chief Coroner and, in so doing, ensure the quality and independence of post-mortem examinations in coroner's cases. The FSAC was created in part to respond to the concerns raised by criminal defence lawyers about the OCCO's perceived lack of objectivity. The FSAC comprises representatives from the OCCO, the CFS, the Crown, and the police, as well as criminal defence lawyers and forensic pathologists.

The FSAC has generated a list of forensic pathologists willing to provide opinions to the defence. It addresses issues around the education of forensic pathologists and the need for standardized electronic records for autopsy reports. And, as I describe in Chapter 2, Growing Concerns, it played a central role in determining the scope and process of the Chief Coroner's Review.

Educational Activities

Throughout most of the 1990s, the OCCO ran some educational programs for coroners and pathologists, a few of which engaged forensic pathology issues. The new leadership team at the OCCO has built on these endeavours. Recently, Dr. Pollanen developed an expert witness workshop to provide education and mock trial experience to forensic pathologists. Crown and defence experts assist in teaching the workshops. Dr. Pollanen also instituted bimonthly seminars for pathologists and coroners about difficult issues in forensic pathology. Recent topics have included autopsy pitfalls and miscarriages of justice.

New Physical Facilities

The OCCO advised the Inquiry that it is working toward the development of a new forensic sciences complex because the current facilities are inadequate for the size and demands of death investigations. Dr. Porter stated that the OCCO's current facilities are too small and cannot adequately respond to changing demands.

Similarly, Dr. McLellan commented that the current physical plant facilities, which are more than 30 years old, are too small and make performance of high-quality work much more difficult. Indeed, Dr. Stephen Cordner, the director of the Victorian Institute of Forensic Medicine in Australia, described the OCCO's current facilities as cramped and outdated when he toured them. The proposed complex would replace the current PFPU and the OCCO, and house the CFS, the PFPU, the administrative offices of the OCCO, and the Inquest Courts. The complex would provide increased body storage capacity and physical space for pathology. Suffice it to say that it is vital that the OCCO be properly housed if it is to provide the services that the criminal justice system and the people of Ontario deserve.

Conclusion

The story of the oversight of pediatric forensic pathology in Ontario during the Dr. Smith years is unsettling. In previous chapters, I explore the inadequate institutional and legislative structures surrounding pediatric forensic pathology from 1981 to 2001. In this chapter, I have traced how the deeply flawed oversight of Dr. Smith contributed to many serious errors in the practice of pediatric forensic pathology in the province. At the OCCO, the de facto oversight of Dr. Smith was conducted by Dr. Cairns and Dr. Young, neither of whom had the expertise to oversee forensic pathology work. Both failed to heed danger signals about Dr. Smith's work, even when the errors became obvious and demanded a response. To the extent that Dr. Young took any action, it was largely to protect the reputation of his office and Dr. Smith, rather than to serve the public interest.

Although the deficiencies revealed by my review of the oversight of pediatric forensic pathology between 1981 and 2001 are deeply disturbing, I am heartened by the significant progress that has been made in the last few years. The new leaders of the OCCO have adopted policies and practices that will move the organization in the right direction. However, they continue to be constrained by an inadequate legislative framework, limited resources, and a serious shortage of forensic pathologists.

More can and must be done. In Volume 3, I detail my recommendations for comprehensive changes to the legislative and institutional arrangements for oversight of pediatric forensic pathology. Only through comprehensive systemic changes can confidence in the oversight of pediatric forensic pathology in Ontario truly be restored.