VICTORIAN INSTITUTE OF FORENSIC MEDICINE ORATION: *THE INQUIRY INTO PEDIATRIC FORENSIC PATHOLOGY IN ONTARIO, CANADA*: SOME REFLECTIONS

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Let me begin by saying how honoured I am to be invited to give this Oration. It is somewhat daunting to be added to the list of extraordinarily distinguished speakers who have preceded me. I am particularly honoured to be here as part of the Institute's anniversary celebration. As I have come to learn so well over the last 17 months, in those two decades the Victorian Institute of Forensic Medicine ('VIFM') has justly earned its reputation as a world-renowned provider of forensic pathology services and as a teaching and training facility without peer. Speaking personally, as my Commission looked around the world for the best advice and guidance we could find, all roads led to Melbourne. Your executive director, Professor Cordner, and his deputy director, Professor Ranson, have provided unstintingly of their time and wisdom. They have been invaluable, and I am greatly in their debt. It is simply icing on the cake that we have also become friends.

My chance to visit the Institute has also provided me with several moments of great personal satisfaction. In my interaction with the staff there, I have occasionally been addressed as 'Professor'. As the son of a philosophy professor, and as someone who strove fruitlessly throughout his educational life to emulate his father and join the ranks of the academy, I have always yearned to be known as 'Professor' at a world class institution, even if only fleetingly, and by mistake.

I well remember when I told my father that I was giving up my attempts to enter the academy and was settling for becoming a lawyer. He gently reminded me how philosophy professors differ not just from theologians, but even more from lawyers. I am sure you have heard it: the philosophy professor is the blind man in the dark cellar at midnight looking for a black cat that is not there. He is to be distinguished from the theologian, who finds the cat. And he is certainly to be distinguished from the lawyer, who smuggles in a cat in his coat pocket and emerges to produce it in triumph. After a lengthy smuggling career, it is a delight to be here, and a bonus to answer to 'Professor' in such a renowned institute of learning.

Tonight, I would like to talk about the public inquiry that I was appointed to conduct, the *Inquiry into Pediatric Forensic Pathology in Ontario* ('Inquiry'),[1] some 17 months ago: the tragic events that led the Ontario government to

* Justice of the Court of Appeal, Ontario, Canada; Commissioner of the *Inquiry into Pediatric Forensic Pathology in Ontario.* This paper draws from the *Inquiry into Pediatric Forensic Pathology in Ontario*, Report (2008) which the author was commissioned by the Lieutenant Governor and Executive Council of Ontario to conduct and was delivered at the *19th Australian and New Zealand Forensic Science Society Symposium* at the Victorian Institute of Forensic Medicine on 8 October 2008.

1 The Hon Stephen Goudge, *Inquiry into Pediatric Forensic Pathology in Ontario*, Report (2008) <http://www.goudgeinquiry.ca/> at 19 October 2009.

establish it; the serious systemic failings it revealed in the practice and oversight of paediatric forensic pathology in Ontario; and some of the recommendations I have put forward in response.

First, let me sketch in some background. Ontario is the largest province in Canada, with a population of about 12 million people. There are more than 80 000 deaths in Ontario each year. About a quarter of those deaths, some 20 000, are investigated and reported on by the State, through the Office of the Chief Coroner for Ontario ('OCCO'). In Ontario, unlike Victoria, coroners are rarely legally trained. By statute, they must be medical doctors, and in fact most are general practitioners. None are required to be trained or qualified in forensic pathology, and few are. It is up to the coroner conducting the individual death investigation to determine if an autopsy is required and, if it is, to issue the required coroner's warrant. In practice, an autopsy is performed in about 7000 cases each year, that is, in about one-third of the deaths formally investigated. Some 250 are ultimately deemed by the coroner to be criminally suspicious, and of these, five to 15 each year will be classified as criminally suspicious paediatric deaths. In virtually all of them an autopsy is undertaken, as in almost every criminally suspicious death.

As this audience knows well, the tragedy of a child who dies unexpectedly in criminally suspicious circumstances is a devastating event for parents, for family, and for the entire community. It is 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.

The consequences of failure are extraordinarily high. For the parent 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 it is to play the role required of it by society.

The role of the forensic pathologist is often vital in determining 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 as suspicious, 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 that 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.[2]

2 Ibid.

The Inquiry that I chaired had been triggered by the announcement of the results of a review of the work of Dr Charles Smith, a pathologist who dominated the field of paediatric forensic pathology in Ontario throughout the 1990s.[3] The review was established in April 2005 by the newly appointed Chief Coroner for Ontario to examine the criminally suspicious paediatric death cases in which Dr Smith performed the autopsy or was consulted in the years 1991 to 2001. The review of these cases, some 45 in all, was undertaken by a panel of five eminent forensic pathologists, all of whom have impeccable international reputations.

On 19 April 2007 the Chief Coroner announced the results of the review ('Chief Coroner's Review').[4] They were extremely disturbing. The reviewers concluded that in a number of the cases, Dr Smith's 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, in many cases on very serious charges.'[5]

These results were a searing indictment of someone who had, through the 1990s, grown to iconic stature in the world of paediatric forensic pathology in Ontario. In 1992, Dr Smith was appointed director of the newly-established Ontario Paediatric Forensic Pathology Unit at Toronto's world-renowned Hospital for Sick Children. Although he had no formal training or certification in forensic pathology, he soon came to dominate paediatric forensic pathology in the Province. His experience seemed to be unequalled, and his manner brooked no disagreement. He was widely seen as the expert to go to for the most difficult, criminally suspicious paediatric 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 there were also significant warning signals – signals largely ignored by those charged with the oversight of Dr Smith and his work. I will briefly describe three examples.

The first is Jenna's case. On 21 January 1997, at about 5:00 pm, Jenna's mother went out for the evening, leaving Jenna in the care of the 14 year old boy who lived in the upstairs apartment. Jenna was 21 months old. Just after midnight, the boy realised Jenna had stopped breathing and got his mother to call an ambulance. At the hospital, an emergency physician noticed some signs of a possible sexual assault. Jenna died at 1:50 am. She had severe injuries to her abdomen. Because Jenna had been in the care of her mother up to 5:00 pm and of the 14 year old boy after that, the time of infliction of these injuries was critical. Dr Smith performed the autopsy but did not conduct a complete sexual assault examination. His first opinion, given verbally to the police at the autopsy, was that Jenna's injuries occurred within a few hours of death. A month later, after viewing the tissues

3 For further information see CBC News, 'Dr Charles Smith: The Man behind the Public Inquiry', *CBC News* (Canada), 1 October 2008, <http://www.cbc.ca/news/background/crime/smith-charles.html> at 19 October 2009.

4 Office of the Chief Coroner, Province of Ontario, *Report of the Paediatric Death Review Committee and Deaths Under Five Committee* (2008) 1.

5 Goudge, above n 1, 44.

under the microscope, he told the police that her injuries could have occurred some 24 hours before death, and, as a result, her mother was arrested and charged with murder and Jenna's older sister was taken from the family by the child protection authorities and placed in care.

At the mother's preliminary hearing, Dr Smith's evidence left the clear impression that Jenna's injuries all occurred at the same time, some 24 to 48 hours before her death. Not surprisingly, Jenna's mother was committed for trial on the murder charge. As the case proceeded towards trial, the defence gathered a number of expert opinions that concluded that the fatal injuries must have been inflicted less than six hours before Jenna's death. Faced with this, the Crown withdrew the murder charge on 15 June 1999, and a month later Jenna's sister was returned to her mother. The international experts who reviewed the case for the Chief Coroner concluded that there was simply no pathology evidence to support the opinion Dr Smith gave in evidence about the timing of the injuries. They agreed that the fatal injuries were likely less than six hours old.

Jenna's mother and Jenna's surviving sister thus lived with the consequences of flawed pathology for two and a half years. It left both of them permanently scarred. Equally important, the babysitter escaped scrutiny for too long. Once the pathology opinion had changed, the police were able to gather additional evidence with the result that the babysitter ultimately pleaded guilty to manslaughter.

The second example is Sharon's case. Sharon died in June 1997. She was seven and a half years old. She was found dead in the basement of her home. She had obviously been savagely attacked. Her body displayed dozens of penetrating wounds. Although he had very little experience with penetrating wounds, Dr Smith performed the autopsy. He told the police that the cause of death was loss of blood due to multiple stab wounds. Thus, the mother was charged with murder. At her preliminary hearing, Dr Smith was unequivocal that Sharon had suffered multiple stab wounds, possibly inflicted by scissors, despite the fact that there had been a pit bull in Sharon's house that day. He deemed as completely absurd defence suggestions that Sharon had been killed in a dog attack.

Once again, the defence was able to gather a number of reputable contrary opinions, forcing the Crown to withdraw the charge but only three and a half years after it had been laid. The expert reviewers found that Dr Smith's errors in Sharon's case were basic. He lacked the forensic pathology training and experience required to properly assess Sharon's penetrating wounds. He turned what the reviewers said were clearly dog bites into something much more sinister, at a terrible cost both to individuals and to public faith in the criminal justice system.

The final example is Valin's case. She died in June 1993, at the age of four. On the evening of 26 June 1993, she had been left in the care of her uncle, William Mullins-Johnson. The next morning, her mother found Valin dead in her bed. Dr Smith was consulted on the case and was an important witness at William's trial for murder. He testified that Valin had died of asphyxia, possibly due to manual strangulation. He also told the court there was evidence of recent sexual abuse. William was convicted of first degree murder on 21 September 1994, and was

imprisoned. Over a decade later, the expert reviewers confirmed that Dr Smith had relied for his conclusion on post-mortem artefacts and that there was no pathology evidence either of strangulation or sexual assault, indeed no pathology evidence of any crime at all. As a result, William's conviction was reversed by the Ontario Court of Appeal, and he was released, but only after more than 12 years in jail.

The human cost of flawed pathology was graphically captured when my Commission considered this case. During his testimony at the Inquiry, Dr Smith was invited to apologise to Mr Mullins-Johnson, who 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.[6]

These examples, and others that I described in my Report, caused great consternation in the Bar and attracted considerable adverse media attention. The cost to public confidence was beginning to be undeniable. The results of the Chief Coroner's Review constituted the last and most serious blow to public faith in paediatric forensic pathology and to the role it must play in criminal proceedings involving child deaths. Six days later, by an Order in Council signed on 25 April 2007, the Province of Ontario established my Commission. The Commission was tasked with conducting a systemic review of the way in which paediatric forensic pathology was practised and overseen in Ontario, particularly as it related to the criminal justice system, from 1981 to 2001, the years during which Dr Smith was involved in it. The purpose of the review was to provide the basis for recommendations to restore and enhance public confidence in paediatric forensic pathology in Ontario and its future use in investigations and criminal proceedings.

6 Goudge, above n 1, vol 2, 5.

The Inquiry was created pursuant to Ontario's *Public Inquiries Act*,[7] legislation very much like what you have in Victoria.[8] Although we did not have to use it, we had the power to summon witnesses and, as a consequence, to compel the production of information. The terms of reference prohibited me from expressing conclusions about civil or criminal responsibility and also prohibited me from reporting on individual cases. Rather, the focus was very much a systemic one. However, it was essential for me to make factual findings about the practice of forensic pathology in specific cases, particularly those that were involved in the Chief Coroner's Review that triggered the Inquiry. It was necessary, not that I fully examine all aspects of each case, but that I find the facts related to the practice and oversight of paediatric forensic pathology in those cases from which I could draw conclusions about what systemic failings they exemplify. Only then could I hope to make soundly based recommendations.

The overarching purpose of the Inquiry was to restore public confidence. To do so, I had to address three essential questions: what went wrong with the practice of paediatric forensic pathology; what failed with the oversight to allow it to go on for so long; and how do we keep it from happening again. In my Report, I described in detail the process we used, in hopes that it may provide some assistance for other inquiries.[9] Suffice it to say here that I received extraordinarily able assistance and advice. That included meeting early on with both Professor Cordner and Professor Ranson. While we did not commence our hearings until November 2007, six months after the Commission was established, that time was invested in intensive preparation – an investment of time that was essential to being able to conduct an efficient process. The hearings themselves, together with our Policy roundtables, ran until the end of February 2008. After final argument concluded, I embarked on an intensive writing regime until August. With another month to print and produce the Report, I delivered it to the provincial government on 30 September 2008 and released it publicly the next day. In due course, we will see what impact it has made.

Let me then turn to what my systemic review revealed about the failings in the practice and oversight of paediatric forensic pathology in Ontario in the last two decades of the 20th century. To start with, several points must be made immediately. First, very few of the failings were confined only to paediatric forensic pathology. They were common to all of forensic pathology at the time and have to be addressed as such. Second, my examination of the practice of forensic pathology was done largely by looking at the work of Dr Charles Smith, particularly in those cases examined by the Chief Coroner's Review. While I heard that many of the practices he used were common to other pathologists, it would have been risky to conclude that the mistakes he made were seen in all his cases or in most pathology work of the day. What I can and did conclude was

7 *Public Inquiries Act*, RSO 1990, c P41.

8 *Royal Commissions Act 1902* (Cth); *Evidence Act 1958* (Vic).

9 Goudge, above n 1.

that these flawed practices were ways in which the practice of forensic pathology 'could and did go badly wrong'[10] in those years.

Before discussing oversight, my Report described a number of aspects of the practice of forensic pathology that were deeply flawed. Let me highlight four of the most important ones. First, like many pathologists doing forensic work at that time, Dr Smith had neither formal forensic pathology training nor Board certification in that field. Nonetheless, in 1992, the Hospital for Sick Children appointed him Director of the Ontario Pediatric Forensic Pathology Unit, and, with time, he came to be known as the Province's leading expert in paediatric forensic pathology. In giving evidence at the Inquiry, Dr Smith acknowledged that his forensic pathology training was woefully inadequate and that this gap contributed significantly to his mistakes. In the 1980s and 1990s, no formal forensic pathology training or certification was offered in Canada. Fortunately, today change is on the way, spearheaded by people like Dr Michael Pollanen, Ontario's current Chief Forensic Pathologist. However, in those days, doctors doing forensic work in Canada were largely self-taught, apart from those few who had trained abroad (mostly in the United States or the United Kingdom). Moreover, at the time, the prevailing Canadian view was that paediatric pathologists were best situated to perform forensic autopsies on children despite the fact that, at least for criminally suspicious deaths, these are often the most difficult in all of forensic pathology. This failure to recognise the importance of forensic pathology expertise was not only misguided but, as we saw, had tragic consequences.

By comparison to those with forensic training, paediatric pathologists lack expertise in wound interpretation or injury identification, have no training or experience in presenting their opinions in a legal setting, and lack an understanding of the needs of the criminal justice system, such as the importance of maintaining continuity of evidence, documenting samples and historical information and even knowing what the system requires of an expert witness. The consequences were on full display in the cases I examined at the Inquiry. In Dr Smith's case, the general deficiency in forensic training and experience had the compounding effect of encouraging his tendency to work in isolation. At his hospital, the pathology was largely clinical. There was no forensically trained peer group to counterbalance his natural tendency. Inadequate training and working in isolation proved to be an unfortunate mix. Thus, the absence of any domestic forensic training program became an important systemic failing that I had to address in my recommendations.

A second area of concern involved the practices used by Dr Smith, and, in many cases, by others, in connection with the actual conduct of the autopsy. To begin with, he almost never visited the scene, even in criminally suspicious cases. That was the prevailing practice in the 1980s and 1990s. The result was failure to take advantage of an important potential source of information. There were also problems with the obtaining of relevant information by the pathologist prior to autopsy. There were no formal systems in place to ensure that this was done.

10 Ibid 116.

The coroner's warrant ordering the autopsy was typically cryptic, providing little information and few details. Even the relevant medical records were not always made available or sought out by the pathologist. The performance of the autopsy itself was another source of difficulty. Until the mid 1990s, there were no standardised procedures in Ontario for the performance of paediatric forensic autopsies. In 1995, a protocol was introduced for sudden and unexpected deaths of children under two. This was a start. In recent years, much more has been done on this front. However, the consequences of an inadequate post-mortem examination were clear in a number of the cases we examined.

The third and fourth aspects of the practice that I would like to address concern the forensic pathologist's post-mortem report and the giving of expert evidence in court. Both involve the interface of forensic pathology with the criminal justice system. At the Inquiry, there was no question about the importance of doing everything possible to ensure that the pathology work done by forensic pathologists in the autopsy suites in Ontario is first class. However, it is also vital that the opinions that result should be effectively communicated to the criminal justice system. The world of forensic pathology and the world of criminal law must be able to talk to each other. My systemic review provided a clear demonstration that this has often not happened. There are cultural differences between the two worlds. Forensic pathologists do not – most people would say thankfully – think exactly like lawyers. The old joke is not without a kernel of truth:

> Counsel: Doctor, how many autopsies have you performed on dead people?
>
> Doctor: All my autopsies are performed on dead people.

This challenge of effective communication became a principal focus of the Inquiry. I turn first to the post-mortem report. Its purpose is to convey in writing the findings at autopsy and the forensic pathologist's opinion as to the cause of death. In the 1980s and 1990s, the reports prepared by many Ontario pathologists had a number of serious shortcomings.

Until 1999, the format for the report was prescribed by the regulations to the *Coroners Act*.[11] The form invited the recording of certain findings at autopsy and a final statement setting out the pathologist's opinion on the cause of death. As a result, reports typically included a list of observations, a final conclusion on the cause of death and nothing more. This left obscure any reasoning that led the pathologist from the former to the latter. Not only did this impede independent reviewability, it made comprehension by lay readers in the justice system very difficult. It simply required acceptance of the forensic pathologist's ex-cathedra expressions of opinion.

In reaching his opinion on the cause of death, Dr Smith exemplified further shortcomings. In several cases, he failed to account for contradictory evidence in arriving at his opinion. Nor did he adjust his opinion to take new information into account. This contributed to misdiagnoses that carried significant consequences.

11 Ontario Regulation 264/99, *Fees, Allowances and Forms*, made under the *Coroners Act*, RSO 1990, c C37.

It also raised the spectre of confirmation basis, something that forensic pathologists, like all scientists, must guard against. Dr Smith's reports sometimes made use of default diagnosis. For example, in one case, he concluded: 'In the absence of a credible explanation, in my opinion, the post-mortem findings are regarded as resulting from non-accidental injury'. It is clearly problematic for a forensic pathologist to use such an approach. Just because there is no evidence to exclude a diagnosis, does not mean it is the only possible conclusion. In this sense, relying on a default opinion is simply unscientific.

The terms employed in the post-mortem report were also a source of difficulty. For example, Dr Smith frequently used the term 'asphyxia' to describe his opinion on the cause of death. In the years I reviewed, it is clear that he was not alone in this. There is also no doubt that asphyxia can be a confusing term.[12] In the 1980s and 1990s, it was sometimes used in post-mortem reports to mean 'mechanical deprivation of oxygen that may be accidental'. At other times, it appeared to imply that another person caused the lack of oxygen deliberately. As Professor Cordner said in one of the two excellent research papers he and his associates authored for us,[13] the ordinary dictionary meaning of asphyxia is quite non-specific about a particular mechanism interfering with breathing.[14] Unaccompanied by further explanations, as a cause of death in an autopsy report, it tells the reader little, and can easily result in confusion. Professor Cordner concludes:

> Asphyxia unqualified is not meaningful if it purports to be the cause of death. If it is qualified perhaps as 'mechanical asphyxia', then it needs to be further specified as it is not possible to diagnose post-mortem a condition called simply and solely 'mechanical asphyxia'.[15]

Thus, one of the failings of communication between forensic pathology and the criminal justice system was in the choice of language used to express opinions.

The last aspect of practice involves the forensic pathologist as expert witness. A child's 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 critical. The pathologist's role as an expert witness is to remain impartial: 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.

12 Goudge, above n 1, 409.

13 Stephen Cordner et al, 'Pediatric Forensic Pathology: Limits and Controversies' (2008) Inquiry into Pediatric Forensic Pathology in Ontario, Policy and Research <http://www.goudgeinquiry.ca/> at 19 October 2009. See also Stephen Cordner et al, 'A Model Forensic Pathology Service' (2008) Inquiry into Pediatric Forensic Pathology in Ontario, Policy and Research <http://www.goudgeinquiry.ca/> at 19 October 2009.

14 Cordner et al, 'Pediatric Forensic Pathology: Limits and Controversies', above n 13, [60].

15 Ibid [66].

My review revealed very serious failings in the way Dr Smith performed this aspect of his role. Problems with his testimony permeated many of the cases I examined. They ranged from his misunderstanding of his role, his inadequate preparation, to the erroneous, unscientific or unclear opinions he offered in court, and perhaps most importantly, 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. Each demonstrated a way in which the practice of paediatric forensic pathology in Ontario in those years went badly wrong. Tragic outcomes were hardly surprising. In my Report, I discuss in detail the 10 most important ways in which Dr Smith failed in his role as expert witness.[16] Let me simply highlight them here:

(1) *The Expert as Advocate*. Dr Smith failed to understand that his role as an expert witness was not to support the Crown. He never received any formal training in giving expert evidence. He was candid that, when he began, he thought his role was to make the Crown's case look good. Even after he came to understand, by the mid-1990s, that this was not his function, there were examples when he failed, and returned to his earlier ways of serving as an advocate for the Crown's case.

(2) *The Inadequately Prepared Expert*. Dr Smith did not review his file or the autopsy materials before attending court. His preparation consisted of printing off a copy of his post-mortem report and reading it over. It is hardly surprising that he made mistakes in testifying.

(3) *The Overstated Expertise of the Expert*. Rather than acknowledging the limits of his expertise, Dr Smith sometimes misled the court by overstating his knowledge in a particular area. For example, in Sharon's case, he 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 ... near the North Pole and had occasion to ... look at patterns of wounding from polar bears'. In fact, when he performed the post-mortem examination in this case, he had little if any experience with either dog bites or stab wounds.

(4) *The Expert and Unscientific Evidence*. On several occasions, Dr Smith gave inappropriately unscientific evidence by resorting to his own experiences as a parent. For example, he supported his view that short household falls are not fatal by relying on his own experiences of watching his children tumble downstairs and live.

(5) *The Expert and Unbalanced Evidence*. Dr Smith often presented his opinion of, for example, Shaken Baby Syndrome, with no acknowledgement of the existence of the controversy on the subject. He presented his opinion in a dogmatic and certain manner when the evidence on this kind of issue falls far short of certainty.

(6) *The Expert's Attacks on Colleagues*. In several cases, Dr Smith offered unprofessional and unwarranted criticism of professional colleagues. He expressed views of other experts that were disparaging, arrogant and, most importantly,

16 Goudge, above n 1, 179-89.

unjustified. It was not helpful for Dr Smith to respond to criticism from a defence expert by referring to that expert as a 'paid mouth'.[17]

(7) *The Expert and Evidence beyond His Expertise*. On occasion, Dr Smith testified to matters well outside his area of expertise. For example, he provided his opinion to the court on the 'profile' or personal characteristics of perpetrators of shaking and blunt head injuries as follows: 'likely ... 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'.[18]

(8) *The Speculating Expert.* There were also instances where Dr Smith offered opinions that were speculative, unsubstantiated, and not based on the pathology findings. For example, without any underpinning in the pathology findings, he testified in several cases that he was 'highly suspicious' that suffocation caused the asphyxia.

(9) *The Expert and Casual Language.* From time to time, Dr Smith testified in language that was loose and unscientific. In one case for example, he testified: 'If I were a betting man, I would say suffocation was a better explanation for the death than manual or ligature strangulation'.[19]

(10) *The Expert Who Misleads.* Finally, Dr Smith did not always testify with the candour required of an expert witness. For example, when confronted, he was not above simply misstating judicial criticism that had been made of him in a previous case.

These areas of concern highlight the systemic failings in the practice of forensic pathology in Ontario in those years that were spotlighted at the Inquiry. The adverse consequences were all too clear. However, the tragic story of paediatric 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 inadequate to the task. And those mechanisms that did exist were inadequately employed by those responsible for using them.

To begin with, the legislative framework provided no foundation for effective oversight of forensic pathology in Ontario. State mandated death investigation in Ontario was conducted pursuant to the *Coroners Act*.[20] It created the structure by establishing the OCCO[21] and the positions of the Chief Coroner, Deputy Chief Coroner, regional coroner and local coroner – the one who is responsible for the individual death investigation. It empowered the coroner in an individual case to issue a warrant for a post-mortem examination.[22] However, there was no mention whatsoever in the legislation of forensic pathology, or of a forensic pathology

17 Ibid 185.

18 Ibid 186-7.

19 See ibid 188.

20 *Coroners Act*, RSO 1990, c C37.

21 Ontario Ministry of Community Safety and Correctional Services, *Mission Statement* (2009) <http://www.mcscs.jus.gov.on.ca/english/office_coroner/about_coroner/about_coroner.html> at 19 October 2009.

22 *Coroners Act*, RSO 1990, c C37, s 28(1).

service, or of those who might run it, such as the Chief Forensic Pathologist. There was not even a requirement that the post-mortem examination be conducted by a pathologist, much less a forensic pathologist.

While not established by legislation, there was in fact a Chief Forensic Pathologist for Ontario working in the OCCO. However, his supervisory role in connection with post-mortem examinations done in the province was left very unclear in OCCO policies and procedures. In almost every case, those doing the examinations were not employees of the OCCO but doctors on staff at hospitals, doing the autopsies on a fee for service basis. Through the 1990s, the OCCO did establish five regional forensic pathology units at leading teaching hospitals around the Province to do the bulk of the forensic work. One of these was the unit that Dr Smith was the director of, at the Hospital for Sick Children in Toronto. However, the relationships between the OCCO and these units were ill-defined and failed to assign clear oversight responsibilities or draw clear lines of accountability. The directors of these units (including Dr Smith) were subject to no expressly articulated oversight whatsoever. In Dr Smith's case, this situation was exacerbated because his hospital viewed the work done by his unit as being done for the OCCO and therefore none of their responsibility.

These weaknesses in institutional arrangements left the working relationships in individual cases largely between the local coroner heading the particular death investigation and the individual pathologist doing the post-mortem examination. Since most local coroners were general practitioners, they simply did not have the expertise to provide any quality control over the pathologist's work, particularly in the more difficult cases. Even so, through the late 1990s, the Chief Forensic Pathologist did try to introduce some quality control measures for the forensic pathology performed in individual cases. But best practice guidelines were limited, peer review by colleagues in individual cases was cursory, and the review he himself conducted of post-mortem reports in criminally suspicious cases was a relatively superficial paper review only. There was no review whatsoever of a pathologist's interactions with the criminal justice system. 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 few who might have done something about his mistakes. The Chief Forensic Pathologist had no clear oversight responsibility 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 by the mid-1990s had acquired a formidable reputation. And Dr Smith never asked him for advice or assistance.

Equally important, Dr Smith had already developed close working relationships with his superiors at the OCCO, Dr James Young, the Chief Coroner for Ontario, and his Deputy Chief Coroner, Dr James Cairns. Dr Smith was clearly used to working directly with both of these senior officials. There is no doubt that he viewed them as the supervisors of his paediatric forensic pathology work, and through the 1990s that was the essential oversight reality. Through the decade, as the problems became more serious and impossible to ignore, Dr Cairns and Dr

Young, finally, though far too late, moved to exercise this oversight responsibility and to hold Dr Smith accountable.

In my Report, I detail the obvious and unmistakable danger signals that arose about Dr Smith's work through the 1990s. By the end of the decade, his mistakes as a forensic pathologist and his failure to understand his proper role in the justice system were clearly apparent. However, Dr Young and Dr Cairns, the de facto overseers of Dr Smith's work, failed to recognise many of these ominous signals and the signals they did recognise prompted only inadequate responses. While they could have removed him from individual cases and from his position as unit director, they never did the latter at all, and did the former only much too late.

In addition to the institutional weaknesses I have described, a number of factors contributed to this failure. Perhaps most important, neither Dr Young nor Dr Cairns had any specialised training in pathology, let alone forensic pathology, and they clearly did not understand the deficit position that this lack of expertise put them in. It meant that many of the problems the expert reviewers made so glaringly obvious did not shake their absolute faith in Dr Smith until the very end, and only after much damage had been done.

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 paediatric 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 was 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 organisation. 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. Thus, the story of failed oversight in Dr Smith's years is the story of Dr Young's and Dr Cairns's failures and of the context in which that happened – the completely inadequate mechanisms for oversight and accountability. This, then, gives an outline of the main findings of my systemic review of the failings in the practice and oversight of paediatric forensic pathology in Ontario from 1981 to 2001.

Now let me turn to some of the principal changes I think are necessary to ensure, so far as possible, that the public can once again trust that paediatric forensic pathology will play its vital role in helping the criminal justice system address the very difficult and troubling cases involving a child's death in suspicious circumstances. While some of the required responses can be targeted at paediatric forensic pathology specifically, in many instances effective responses require broader change, often to forensic pathology as a whole. I do not propose to burden you with a recitation of all 169 recommendations I have put forward. Rather, I will try to highlight the main ones by discussing the main themes for change that I think must be addressed. Some of the themes focus on forensic pathology itself, while others deal with the interaction between forensic pathology and the criminal justice system.

Perhaps the most important and fundamental challenge is to create a truly professionalised forensic pathology service in Ontario: Ontario Forensic Pathology Service ('OFPS'). There is an urgent need for more, and properly trained, forensic pathologists. We cannot again risk having pathologists, whose forensic training and experience is woefully inadequate, engaged in difficult criminally suspicious paediatric death cases and working essentially in isolation – without properly trained colleagues to provide balance and peer review.

In my view, the professionalising of forensic pathology must be built on four cornerstones. First, the *Coroners Act*[23] must provide both proper recognition of the vital role that forensic pathology plays in death investigation and the foundation for proper organisation of a forensic pathology system. It must provide for an OFPS and give legislative recognition to the roles and responsibilities of its leaders, beginning with the Chief Forensic Pathologist. Second, there must be a commitment to providing forensic pathology education, training, and certification in Canada. We in Ontario are competing with the world for a scarce resource and we must grow our own. I am pleased to say that, entirely apart from my Inquiry, this goal is now within sight. Third, to address the competition for students among various medical specialities, there must be a commitment to recruitment and retention of forensic pathologists. This requires proper remuneration and satisfying career paths for those who choose forensic pathology. Fourth, the Province of Ontario must commit to adequate and sustainable funding sufficient to train and grow the profession in Ontario.

My systemic review also demonstrated that effective oversight of forensic pathology in Ontario requires significant reorganisation of the institutional arrangements within which forensic pathology is practised. The OFPS that I propose must be the embodiment of a highly skilled service with a structure that advances quality and facilitates accountability. Central to this must be an enhanced and clearly defined position of Chief Forensic Pathologist. The Chief Forensic Pathologist for Ontario, who must in future be a qualified forensic pathologist, will direct the OFPS and be professionally responsible for the service it provides. His or her duties and responsibilities should parallel those of the Chief

23 *Coroners Act*, RSO 1990, c C37.

Coroner for Ontario who will have professional responsibility for the coronial service. No longer should professional supervision of forensic pathologists be left to coroners, even the Chief Coroner for Ontario. They simply lack the training and expertise required for the role. Nonetheless, in my view, the OFPS should remain a part of the OCCO. The forensic pathology service must remain an integrated component of the death investigation service provided by the OCCO. Separating the OFPS institutionally from the OCCO would put this at risk and encourage the creation of two silos with all the problems that could entail.

My systemic review raised squarely the flawed governance structure of the OCCO itself. Those in charge of the OCCO failed badly in the discharge of their overall responsibility for the forensic pathologists doing work for the OCCO. This was due not only to their lack of expertise but, in Dr Smith's case, to their professional closeness. The consequence was the loss of public confidence in the governance capability of the OCCO itself. It is essential that this be addressed.

In my view, the Chief Coroner should no longer be the ultimate level of responsibility. Rather, I have recommended the creation of a Governing Council to provide institutional oversight for both the coronial service and the forensic pathology service, and to which both would report. I have drawn heavily on the VIFM model for both the concept and the structure. The Governing Council should be composed of ex-officio members including the Chief Coroner and the Chief Forensic Pathologist and nominees of the Chief Justice of Ontario and various Ministries who are stakeholders in the work of the OCCO. There should be senior decision makers from related public institutions with experience of acting in the public interest. This will provide the experience, independence, and objectivity necessary for independent oversight.

I have also recommended a large number of other changes to the institutional arrangements affecting forensic pathology. For example, the agreements between the OFPS and the regional units must be much clearer and must provide for meaningful lines of accountability. While the unit that Dr Smith headed should continue in order to take advantage of its paediatric expertise, it must be integrated much more closely with the OCCO itself. It is true that single site forensic pathology such as you have in Victoria would be optimal. However, Ontario is simply too big geographically and the regional unit approach is too deeply embedded to justify changing to a single site. But to be a viable alternative, technology will be required to link the units into a virtual single site. There should be also a much more formal recognition of quality through the creation of a registry of those who are found to be qualified to do forensic pathology in Ontario and a full-time quality assurance unit for the OCCO itself.

Turning to the conduct of the individual post-mortem examination, I have made a number of recommendations to address the various aspects of autopsy practice that went wrong with Dr Smith. Principal among these is the need for a clear protocol that provides for forensic pathologists rather than paediatric pathologists to take the lead in criminally suspicious paediatric cases. They are simply better qualified to conduct these autopsies. They begin each case with the relevant training in injury identification and the proper preservation of evidence. The expertise

of other paediatric pathology specialists can be engaged at almost any point thereafter. A second important aspect of the practice is the need for proper peer review of the forensic pathologist's work in individual cases, particularly those that are criminally suspicious. It must be said that excellent work has been done by the OCCO in the last few years to create detailed guidelines on this subject, but more can be done. Other aspects of forensic pathology from scene attendance to the timeliness of reports can similarly be improved with better guidelines.

In making recommendations on these detailed aspects of the practice, I have proposed a number of principles to be used to guide all of them. They are as follows:

- At autopsy, the forensic pathologist should 'think truth' rather than 'think dirty'. To do so requires an independent and evidence-based approach that emphasises the importance of thinking objectively. The pathology evidence must be observed accurately and must be followed wherever it leads, even if that is to an undetermined outcome. This approach guards against confirmation bias, where evidence is sought or interpreted in order to support a preconceived theory.
- In performing autopsies, forensic pathologists must remain independent of the coroner, the police, the prosecutor, and the defence to discharge their responsibilities objectively and in an impartial manner. The role required of them in the criminal justice system necessitates this independence.
- The forensic pathologist's work at autopsy must be independently reviewable and transparent. This objective requires care in recording and preserving the information received pre-autopsy, the steps taken at autopsy, and the materials preserved after autopsy. This transparency is necessary to ensure that the pathologist's opinions can be properly reviewed and confirmed or challenged.
- The forensic pathologist's work at autopsy must be understandable to the criminal justice system. The autopsy must be performed so that it can be described in clear and unambiguous language to lay people.
- The teamwork principle is fundamental for sound autopsy practice. This includes teamwork between forensic pathologist and coroner, and between forensic pathologist and colleagues in the same and associated specialties. Particularly in difficult cases, the forensic pathologist must seek assistance and consult with colleagues. As in all branches of medicine, in forensic pathology, teamwork promotes excellence.
- Fundamentally, the forensic pathologist's practices at autopsy must be founded on a commitment to quality.

Let me now turn to my recommendations designed to improve communications between forensic pathology and the criminal justice system. These address the evidence I have heard that opinions expressed by Dr Smith and others have been communicated in ways that promoted misunderstanding or misinterpretation on the part of police, prosecutors, defence counsel and the courts. It must be remembered that the main purpose of forensic pathology is to serve the justice system. When

these opinions are not properly understood, the justice system operates on misinformation. The breakdown in communication can have serious and sometimes disastrous consequences for those most affected by it, whether accused persons or families of the deceased. The innocent should not be charged or convicted or the guilty go unpunished on the basis of expert opinions that are misunderstood.

Here too I have proposed several general principles that should inform the way that forensic pathology opinions are communicated:

- Pathology opinions often depend on technical knowledge and expertise that are not easily understood by lay persons. Particularly in paediatric forensic pathology, opinions may be highly nuanced. However, the criminal justice system in which these opinions are used craves certainty and simplicity. This divergence in the cultures of the two professional areas poses a serious risk of misunderstanding between them, one that is further increased by an adversarial process designed to push and pull these opinions in different directions. To reduce the risk of being misunderstood, the most important parts of a forensic pathologist's opinion should be expressed in writing at the earliest opportunity.
- The ability of the various parties interested in a forensic pathologist's opinion – including peer reviewers, coroners, and stakeholders in the criminal justice system or child protection proceedings – to understand, to evaluate, and potentially to challenge the opinion requires that it be fully transparent. It should clearly state not just the opinion but the facts on which the opinion is based; the reasoning used to reach it; the limitations of the opinion; and the strength or degree of confidence the pathologist has in the opinion expressed.
- Although some of the parties interested in a forensic pathologist's opinion are experts, such as peer reviewers, many are lay persons who have little or no understanding of technical language. It is essential that the pathologist's opinion be understood by all users. Therefore, it must be communicated in language that is not only accurate but also clear, plain, and unambiguous.
- In expressing their opinions, forensic pathologists should adopt an evidence-based approach. Such an approach requires that the emphasis be placed on empirical evidence and its scope and limits, as established in large measure by the peer-reviewed medical literature and other reliable sources. This approach places less emphasis on authoritative claims based on personal experience, which can seldom be quantified or independently validated.

In light of these principles, I discuss in the Report a number of aspects of the forensic pathology opinion that can cause misunderstanding. I would like to briefly describe three that I think are particularly important. The first is the level of confidence or certainty with which the opinion is expressed. There was much discussion of this at the Inquiry but little unanimity on the correct approach. There appeared to be no common understanding of how forensic pathologists think about their level of confidence in their opinions; how they articulate this level, if at all, when communicating their opinions; and how they might strive to sharpen both their perception of and their articulation of the level of certainty

in their views. Misunderstanding can arise from this in a number of ways. Of greatest concern is the possibility that the criminal justice system, with its enormous desire for certainty, will interpret the opinion as reflecting a higher level of confidence than the expert intended.

We have heard about a variety of approaches – from the approach that allows the opinion to be offered when the evidence reaches a subjective threshold, that the expert feels enables him to do so, to one where the expert has a gradation of certainty levels he or she attempts to capture with phrases like 'highly probable' or 'highly unlikely', or by using that troublesome expression, 'consistent with'. There is no easy solution to this conundrum. However, despite the challenges, I think it is a worthwhile and important exercise to try to develop some common language to describe levels of confidence in the opinions expressed. This is best done jointly by forensic pathologists (who know what needs to be said) and the legal profession (which knows the needs of the legal provision). The goal is to develop language that can be generally used by forensic pathologists and properly understood by the participants in the justice system.

A second issue arises when the opinion is in an area of controversy within forensic pathology. The most obvious one is probably that surrounding Shaken Baby Syndrome and related issues. The Inquiry examined a number of instances where the forensic pathology opinion was offered in terms that appeared certain, but with no reference to the active controversy that exists among very distinguished forensic pathologists around the world. In my view, in those cases where there is known controversy, pathologists should identify the particular area in dispute early on, and place their own opinions within that context. This approach enables the police to make fully informed decisions about the direction of their investigation, the need for additional expertise and the existence of reasonable and probable grounds to charge. It permits prosecutors to make informed evaluations about the reasonable prospects of conviction. When charges are laid, this context educates the defence and makes an informed assessment of the Crown's case possible. Ultimately, where the opinion is located within the area of controversy, the court is able to evaluate the opinion in its proper context. Without this, misunderstandings can easily arise.

Perhaps the most important aspect of the forensic pathology opinion that I address in the Report is the need to exemplify what has been called by many at the Inquiry 'an evidence-based approach'. That is, the opinion should carefully set out the facts found at autopsy, followed by a full explanation of the reasoning, together with the literature in the field that was relied on, leading to the ultimate opinion on the cause of death. This approach is to be contrasted with opinions that recite the autopsy facts and then state a bald conclusion (a pattern seen repeatedly in the cases I have looked at), or, alternatively, opinions based only on the personal experience of the individual pathologist – again, an approach seen in the past.

The evidence-based approach has many advantages. Not only does it provide transparency and independent reviewability, it serves as guard against confirmation bias. It promotes ease of understanding by the lay actors in the justice system. Perhaps most importantly, it encourages pathologists to make

their findings carefully, then reason clearly and logically to their conclusions – both qualities that accompany good science. These, together with the other issues I address concerning effective communication with the criminal justice system, are designed to improve the interface between these two professional cultures. While practising sound forensic pathology in the autopsy suite is essential, so too is the effective transmission of the thrust of that work to the justice system. It is my hope that this vital dimension of forensic pathology, which I think has been significantly undervalued in Ontario in the period that I have examined, will in the future receive the attention it deserves.

The mandate of my Inquiry was to make recommendations designed to restore and enhance public confidence in paediatric forensic pathology and its future use in the criminal justice system. That required much of the focus to be on forensic pathologists and their training, education, oversight, and accountability. However, it is important to recognise that other participants in the criminal justice system have important roles to play in protecting the public against the introduction of flawed or misunderstood paediatric forensic pathology into the system. Let me focus particularly on three I address in my Report: (1) Crown prosecutors; (2) defence lawyers; and (3) the Court itself.

During the course of my Inquiry, the Ministry of the Attorney-General presented a proposal for a series of initiatives designed to enable Crown prosecutors to better perform their role in criminally suspicious paediatric death cases. I have endorsed all of them. The Ministry will create a specialised Child Homicide Resource Team of senior Crown prosecutors to offer close assistance and support to Crown prosecutors across Ontario who may have to deal with these cases. A central database of all such cases will be compiled. A mandatory reporting process will be implemented for Crown prosecutors where there is adverse judicial comment regarding a paediatric forensic pathology expert witness. Finally, the Ministry will commit to enhanced education on paediatric forensic pathology issues for those in the Ministry engaged in this area.

I have also made recommendations to underscore the necessity, where the Crown is to call such an expert, to meet with the witness well in advance to prepare him or her to testify. In doing so, the Crown prosecutor must develop a clear understanding of the limitations of both the witness's expertise and his or her opinions. Indeed, this obligation applies equally to defence counsel. Both Crown and defence should be vigilant in their questioning to observe these limitations, to avoid inviting the witness to speculate, and to avoid introducing, through their questioning, terminology that breeds misunderstanding or misinterpretation. As well, it is vitally important that both prosecutors and defence receive continuing education in forensic pathology. The science is developing and evolving, and, to deal properly with these challenging cases, lawyers need to upgrade continually their knowledge base. In addition, legal aid must be funded sufficiently to provide skilled defence counsel in these difficult cases. Ultimately, effective and informed cross-examination of the forensic pathology expert, either by the prosecutor (of the witness for the defence), or by defence counsel (of the witness called by the

Crown), is a necessary safeguard against flawed forensic pathology damaging the criminal justice system.

Finally, let me turn to the role of judges in protecting the legal system from the effects of flawed scientific evidence. Judges must serve as the ultimate gatekeeper. The importance of this task was on full display at the Inquiry. Dr Smith was allowed to give expert evidence in paediatric forensic pathology, often without challenge or only with a limited review of his credentials. He was an apparently well-accredited expert from a world-renowned institution. He was a commanding presence who often testified in a dogmatic style. An expert like this can all too easily overwhelm the vigilance and scepticism of the gatekeeper. My recommendations about how better to discharge this gatekeeper duty are written with the benefit of 12 years of observing all too closely the sensitivity of trial judges to being told what to do by appellate judges. My thoughts are, I hope, offered in the spirit of gentle advice that might prove to be of assistance in one of the most difficult tasks faced by a trial judge.

I have provided three main messages to trial judges. All address aspects of Dr Smith's testimony about which I have heard a great deal at the Inquiry. First, the trial judge must insist on clearly defining the limits of the witness's expertise right at the beginning of his or her evidence, and must then police those limits vigilantly as the evidence is given. This addresses the significant problems, seen at the Inquiry, of experts straying beyond their area of expertise. Second, the trial judge has the obligation to ensure that expert evidence is admitted only if it meets a threshold standard of reliability. In my Report, I review the Canadian case law that makes this clear and I then outline some practical tools that can be used by trial judges in discharging this responsibility – even if the opinion is in an area of science, such as forensic pathology, about which the trial judge has little substantive knowledge. Many of these tools are closely analogous to the guidelines that forensic pathologist should follow in preparing their opinions. For example, the trial judge should see whether the expert acknowledges that the opinion is in an area of controversy in the science and has located the opinion within the area, or whether the expert has clearly identified the facts relied on and the reasoning used to reach the opinion, or whether the expert has used simple, clear language that can be understood by lay triers of fact, and so on. Third, as an overall admonition, the trial judge must retain a vigilance and healthy scepticism in performing the gatekeeper function.

In addition to recommending how in future forensic pathologists, Crown prosecutors, defence counsel, and courts can perform better, I was asked by a number of parties at the Inquiry to make recommendations about cases involving paediatric forensic pathology that have already been dealt with by the criminal justice system. This was argued to be required as another essential component of the restoration of public confidence. Ultimately, I determined that there was no basis for recommending a further review of past cases beyond the one already conducted, with one significant exception. My systemic review clearly demonstrated the changes that have occurred in the last 20 years in pathology knowledge and thinking concerning Shaken Baby Syndrome and paediatric head

injuries. These changes raise the real possibility that some cases have proceeded on the basis of error. In other words, there may be cases where convictions were registered on the basis of paediatric forensic pathology that would be seen today as unreasonable whether in a substantive sense (for example, by categorically dismissing shortfalls as a possible cause of fatal injury) or in a procedural sense (for example, by not explaining an area of controversy to the trier of fact).

In addition to this reality, I was conscious that a similarly motivated examination has taken place in England and a number of responsible leaders in the field told me that they thought such a review should be carried out in Ontario. I concluded that removal of this cloud over past cases involving paediatric forensic pathology must be part of restoring public confidence. I have therefore recommended a carefully constructed and circumscribed review to identify those Shaking Baby Syndrome or paediatric head injury cases decided in the last 20 years in which the forensic pathology opinion can be said to be unreasonable in light of the understandings of today and in which the pathologists' opinions were sufficiently important to the case to raise significant concerns that the convictions were potentially wrongful. I am confident that such a review is not only manageable, but will make an important contribution to restoring public confidence in paediatric forensic pathology and its vital role in the criminal justice system.

Let me close the oration by offering a brief personal reflection. Over the last 17 months, I have found it extraordinarily interesting to learn about the science of forensic pathology and the challenges it faces in interacting with the criminal justice system. I have also developed a profound respect for those of you who are engaged daily in rising to those challenges. They arise, almost always, in the most difficult cases that face all of us who are part of the justice system. You, who work in the field of forensic pathology, provide an invaluable service to that system and the important public interest it serves. You do so expertly and often in the face of significant obstacles.

None of this can be obscured by the reality of what occurred in Ontario due to Dr Smith and his overseers, as tragic as that was. Rather, what happened there will hopefully provide the opportunity for changes to be made in Ontario – and perhaps elsewhere – to enhance the work of paediatric forensic pathology and the essential contribution it makes to criminal justice and, therefore, to the public interest. So far as I have been able to contribute to that, it will simply increase the privilege it has been to serve as the Commissioner of the Public Inquiry into Pediatric Forensic Pathology in Ontario.