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# Effective Communication with the Criminal Justice System

The evidence at this Inquiry demonstrated that opinions expressed by Dr. Charles Smith and others were not only substantively flawed but communicated in ways that promoted misinterpretation or misunderstanding on the part of police, prosecutors, defence counsel, and the courts. It is important to remember that the main purpose of forensic pathology is to serve the justice system. When the opinions of forensic pathologists, including their limitations, are not properly understood, the justice system operates on misinformation. This breakdown in communication may have serious and sometimes disastrous consequences for the administration of justice and those most affected by it, including accused persons and families of the deceased. The innocent should not be charged or convicted, or the guilty go free, on the basis of expert opinions that are misunderstood. In this chapter, I make recommendations designed to ensure, to the extent possible, that the information provided by forensic pathologists is communicated to the justice system in a way that is accurate and fully understood. Here, as in other chapters, I do not focus exclusively on pediatric forensic pathology. Although the principles have general application to forensic pathology, the effective communication of pediatric forensic pathology is of particular importance. As the cases examined at this Inquiry illustrate, pathology often plays a pivotal, if not decisive, role in pediatric death cases. That key role makes it imperative for forensic pathologists to communicate clearly and well.

I first examine the principles that should inform the communication of forensic pathology opinions, whether written or verbal, and whether in or out of court. Next, I address some of the systemic communication issues identified at this Inquiry. Finally, I consider how best to implement these proposals, with particular emphasis on writing reports and giving testimony. Not surprisingly, the themes in this chapter resonate with many of those discussed in other chapters, particularly in the sections concerned with best practices and the roles of all the

participants in the justice system, including the judiciary. Simply put, it is not just the forensic pathology community that is responsible for ensuring that opinions are well communicated and understood by others.

## General Principles

Various aspects of a pathologist's opinion may cause misunderstanding:

1 the substance of the opinion itself and the language in which it is expressed;
2 the level of confidence or certainty that the expert actually has in the opinion expressed;
3 whether the opinion addresses other explanations for the pathology findings;
4 whether the opinion is in an area of controversy within the forensic pathology community;
5 whether all or part of the opinion falls outside the pathologist's area of expertise;
6 whether the opinion is based, in whole or in part, on non-pathology information provided to the pathologist;
7 whether the opinion relies, in whole or in part, on other expert opinions provided to the pathologist; and
8 the omission of the facts and the reasoning process that the pathologist has relied on to form the opinion.

I briefly discuss each one of these aspects of a pathologist's opinion and make recommendations about them as a means of avoiding misunderstanding in future. First, however, I want to consider a number of principles that apply generally to the effective communication of pathology opinions to the criminal justice system.

Clearly, these principles must provide the foundation for the written reports prepared by forensic pathologists for the criminal justice system, whether they be post-mortem, consultation, or supplementary reports. These principles are equally relevant when forensic pathologists give evidence or communicate less formally with others in the system, such as police, prosecutors, coroners, or defence counsel.

Obviously, all these principles must be adapted to fit the needs of individual cases. For example, some causes of death may be so non-contentious and uncomplicated that there is no need to provide an elaborate explanation for the opinions reached. However, particularly in criminally suspicious pediatric cases, forensic pathology can be vital. In those cases, the need for proper communication is essential. It is with these cases most in mind that I make the recommendation that follows.

**Recommendation 84**

**Several general principles should inform the way that pathology opinions are communicated:**

a) **Pathology opinions often depend on technical knowledge and expertise that are not easily understood by lay persons. Particularly in pediatric 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 their being misunderstood, the most important parts of a forensic pathologist's opinion should be expressed in writing at the earliest opportunity.**

b) **The ability of the various consumers of a forensic pathologist's opinion – including peer reviewers, coroners, and stakeholders in the criminal justice system or child protection proceedings – to understand, evaluate, and potentially 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.**

c) **Although some of the consumers of 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 the users. It must therefore be communicated in language that is not only accurate but also clear, plain, and unambiguous.**

d) **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.**

## Sources of Misinterpretation or Misunderstanding

### The Substance and Language of the Opinion

It is clear that a pathologist's opinion about the cause of death, if it is not carefully

expressed, can be a major source of misunderstanding. The best example that emerged from the Inquiry was the use of the term "asphyxia." Dr. Smith opined that asphyxia was the cause of death for a number of the cases under review. Asphyxia, based on its Greek root, literally translates as "stopping of the pulse." However, the evidence at this Inquiry demonstrated that the term has commonly been used to mean simply that the deceased stopped breathing or was deprived of oxygen. It has also been used frequently to denote mechanical asphyxia through the intervention of a third party. The latter meaning is radically different from the former, in that it generally implies non-accidental injury. One of the problems identified at the Inquiry was that Dr. Smith used the term "asphyxia" in inconsistent ways. At times he used it in its more inculpatory sense as indicating mechanical asphyxia through the intervention of a third party. At other times he used it in its more benign sense, although this distinction would not always be apparent to the police and others who received the opinions. The situation was compounded by Dr. Smith's testimony. He sometimes explained what asphyxia meant in ways that were, at best, confusing and nearly incomprehensible. The varied meanings that can be given to the term asphyxia not only invite caution in its use but present a compelling argument to avoid its use altogether, if confusion and misunderstanding are to be avoided.

The Inquiry revealed an equally significant systemic problem associated with the use of the term. Even if asphyxia were to be used precisely, to refer only to the stoppage of breath, it is unhelpful and unlikely to enlighten anyone on the issues of importance for the criminal justice system. Indeed, all the forensic pathologists who testified or participated in the Inquiry's roundtables held the view that asphyxia is not properly characterized as a cause of death. This conclusion was also supported by a helpful study prepared by Dr. Stephen Cordner, the director at the Victorian Institute of Forensic Medicine (VIFM), and his associates, who stated:

> "[A]sphyxia" of itself is a relatively non-specific term as regards a particular mechanism interfering with breathing and, with the exception of throttling, non-specific as to the manner of its cause (whether natural, accidental, or homicidal). Already we can sense that, for the word to be useful in a technical sense, it has to be explained and specified.[1]

[1] 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), 57.

In fairness, it was not Dr. Smith alone who used the term asphyxia as a cause of death. However, he was prepared to diagnose a death as asphyxial (in its more inculpatory sense) when the pathology findings did not support it, and he was dangerously imprecise in his use of the term, even when he was not prepared to draw inculpatory conclusions.

The potential for misunderstanding the substance of an opinion is not confined to asphyxial cases. It arises whenever the articulated cause or mechanism of death invites confusion, either because the language used is susceptible to varied meanings or because it truly says nothing at all that elucidates the cause of death.

The Office of the Chief Coroner for Ontario (OCCO) has since addressed this issue to some extent in its October 2007 Guidelines on Autopsy Practice for Forensic Pathologists: Criminally Suspicious Cases and Homicides (Autopsy Guidelines), which state, "The cause of death must not be speculative. In the cause of death statement, avoid terms such as: *asphyxia* [and] *consistent with asphyxia* ..." I endorse this approach.

**Recommendation 85**

**a) The use of the term "asphyxia" should be avoided as an articulated cause of death. If it must be used to describe the mechanism of death, it should be elaborated on to avoid confusion.**

**b) Forensic pathologists in Ontario should be educated as to the dangers associated with the term "asphyxia" and, under the auspices of the Chief Forensic Pathologist, reach a common understanding as to when it should and should not be used.**

**c) More generally, forensic pathologists should be careful to express their opinions in terms that are not susceptible to varied meanings, but that do elucidate the issues addressed by the opinions.**

## The Level of Confidence or Certainty in the Opinion

During the Inquiry, I had the benefit of hearing from a number of eminent forensic pathologists from around the world. Through their participation, it became apparent that there is no common understanding of how forensic pathologists think about their level of confidence or certainty in their opinions; how they articulate this level, if at all, when communicating their opinions; and how they might strive to sharpen their perception and articulation of the level of certainty

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

There was some suggestion in the evidence that Dr. Smith based his opinions on a balance of probabilities, although, if accurate, that would not have been readily apparent from much of his testimony in court or communications with the police. Even more troubling, he often used language that overstated the level of confidence he now says he had. Dr. David Chiasson, the director of the Ontario Pediatric Forensic Pathology Unit (OPFPU) at SickKids in Toronto, said that he employs a balance of probabilities test. One difficulty in using such a standard is that, unless it is clearly articulated, the pathologist's level of confidence or certainty in the opinion may remain unknown or be misinterpreted. Indeed, it could well be assumed that the pathologist's level of confidence as a Crown witness parallels the criminal standard of "beyond a reasonable doubt." Thus, the trier of fact in the case would mistakenly conclude that the opinion was held more firmly than it actually was.

Various options have been discussed at this Inquiry. Some pathologists eschew reliance on standards such as "balance of probabilities" or "to a medical degree of certainty." Rather, they feel either that they are able to express an opinion or they are not, based on the available evidence. Simply put, they express opinions when the evidence reaches a threshold that they feel enables them to do so.

Other pathologists, such as Dr. Christopher Milroy, the Chief Forensic Pathologist in the United Kingdom's Forensic Science Service, recognize that some opinions may be more strongly held than others, and they have used expressions such as "highly probable" or "highly unlikely" to articulate those differences, but without uniformity in their own approach. Dr. Milroy, who also holds a law degree, rejected the idea that pathologists should provide an opinion only after they are satisfied "beyond a reasonable doubt." He stated that proof "beyond a reasonable doubt" was a legal, not a scientific, standard and that it properly applied only to the totality of the evidence (pathology and non-pathology) in determining whether an accused is guilty or not. Dr. Milroy's view accords with Canadian jurisprudence. He invited me to consider a uniform scale of confidence that should be applied by pathologists generally in their forensic work. Dr. Jack Crane, the state pathologist for Northern Ireland, agreed that it would be a worthwhile exercise to try to develop a common language to articulate levels of certainty.

In some jurisdictions, efforts have been made to codify a scale of confidence for forensic pathologists. Dr. Pekka Saukko, a highly respected Finnish forensic pathologist, indicated that, "if possible, a ranking order of probability of the

various alternatives can be offered." Although it is not possible to rank in all cases, he uses a five-grade ranking system, as do pathologists in Germany. The five categories are very probable, somewhat probable, possible, somewhat improbable, and very improbable.

In other disciplines, work has been done to create such scales. For example, the American Board of Forensic Odontology has adopted standard language to set out the degree of confidence on whether an injury is a bite mark. The options are: not a bite mark, possible bite mark, probable bite mark, and definite bite mark. Those categories are defined as follows:

- *Not a bite mark.* The phrase is self-explanatory.
- *Possible bite mark.* The marking under examination may or may not have been caused by the teeth, though other factors cannot be ruled out. The general shape and size are present, but distinctive features such as tooth marks are missing, incomplete, or distorted.
- *Probable bite mark.* The marking in question has a pattern strongly suggestive or supportive of originating from the teeth. The pattern shows some basic characteristics of teeth arranged around arches.
- *Definite bite mark.* There is no reasonable doubt that teeth created the pattern. Other possibilities were considered and excluded. The pattern conclusively illustrates classic features and all the characteristics of dental arches and human teeth in their proper arrangement, so it is recognizable as an impression of a human dentition.

The use of any one of these categories for bite marks is, of course, no guarantee that the underlying opinion is correct.

A uniform scale of confidence has some obvious attractions, but Dr. Michael Pollanen, Ontario's Chief Forensic Pathologist, described some of the difficulties in its use. First, it may mask very real differences between pathologists as to what evidence is sufficient to form the opinion that a particular cause or mechanism of death is "highly likely" or "highly unlikely." Professor Gary Edmond, an Australian expert on law and science, sounded another cautionary note at the Inquiry. Scales of confidence, or even statistical percentages (as have been adopted in some American jurisdictions), he said, may be attractive because they appear to be precise. However, they may not be evidence based. The true limitations on the opinions expressed may again be masked, this time not by failing to articulate a level of confidence or certainty but by articulating a level that cannot survive scientific scrutiny.

There is no easy solution to how degrees of confidence or certainty in forensic

opinions should be articulated. Professor Erica Beecher-Monas, a U.S. expert on evaluating scientific evidence, made the important observation during our roundtables that the justice system should be less fixed on the pathologist's level of confidence in the opinion expressed than on the reasons the pathologist gives for that opinion. Reasons are what can be evaluated, debated, and challenged, particularly when it is acknowledged – as it must be – that forensic pathology is an interpretive discipline in which degrees of certainty are not easily quantified or may not even be scientifically supportable.

Although I recognize the challenges inherent in the process, it is, in my view, a worthwhile and important exercise to try to develop some common or uniform language for pathologists to use in describing what they have to say to the criminal justice system about their levels of confidence in the opinions they express. That exercise is best done jointly by forensic pathologists (who know what needs to be said) and the legal profession (which knows the needs of the criminal justice system). The objective is to develop language that can be generally used by forensic pathologists and properly understood by the participants in the justice system. This exercise addresses levels of confidence, but can profitably extend to all aspects of the pathologist's opinion.

This discussion also raises the related question of whether the pathologist's level of confidence should be affected by the type of judicial proceeding (e.g., civil, criminal, child protection) in which the opinion is expressed. In my view, the pathologist's level of confidence should remain the same, regardless of the judicial proceeding in which it is given. This view accords with the perspective offered by the forensic pathologists who testified at this Inquiry. It must be recognized that, while the essential opinion will not change, its implications may vary depending on the nature of the proceedings. That, however, is a matter for the particular tribunal, not the expert witness.

### Recommendation 86

**a) Forensic pathologists should analyze the level of confidence they have in their opinions and articulate that understanding as clearly as they can. Pending the development of a common language for this purpose, pathologists should use their own formulations to capture, as accurately as possible, their own level of confidence.**

**b) Under the auspices of the Chief Forensic Pathologist, work should be done, in a multidisciplinary setting, to develop, to the extent possible, some common language to describe what forensic pathologists have to say. That multidisciplinary setting should include leading practitioners and academics from both forensic pathology and the legal profession.**

**c) One objective should be to build consensus on how levels of confidence should be articulated.**

**d) The results of this work should be reflected in a proposed Code of Practice and Performance Standards for forensic pathologists.**

**Recommendation 87**

**a) Proof beyond a reasonable doubt is a legal standard applicable to the totality of evidence, and it has no correlation with science or medicine. Forensic pathologists should be educated and trained not to think in terms of "proof beyond a reasonable doubt," and they should not formulate or articulate their opinions in terms of this legal standard.**

**b) Participants in the justice system should similarly be educated to avoid efforts to compel forensic pathologists to express their opinions in terms of this legal standard.**

**Recommendation 88**

**Forensic pathologists should be educated and trained so that their level of confidence or certainty in their opinions remains essentially the same and not dependent on the forum in which those opinions are expressed.**

## Failure to Address Other Explanations for the Pathology Findings

Evidence presented at this Inquiry showed that Dr. Smith sometimes formulated his opinions in terms such as the following template: "In the absence of a credible explanation, in my opinion the post-mortem findings are regarded as resulting from non-accidental injury."

It is clear that this wording can create very different understandings about what it means for the criminal justice system. In Nicholas' case, for example, when Dr. Smith used this expression, the police and the prosecutor both believed that, if charges were laid, an acquittal would be inevitable.[2] They felt that his particular wording suggested that a credible explanation (and hence a reasonable doubt) might well be available on the evidence.

[2] See Appendix 28 at the end of Volume 4 for summaries of the 20 cases.

Representatives of the defence bar at this Inquiry, however, argued that this formulation, contrary to the presumption of innocence, improperly places the burden of disproving non-accidental injury on the suspected parent or caregiver. The fact that such diametrically opposed understandings could be taken from the same words eloquently underscores how an imprecise use of language can breed misunderstanding.

For yet another fundamental reason, this particular formulation should not be used. Whether intended or not, it too easily leads to an unscientific diagnosis by default rather than an evidence-based determination of a cause of death. As Dr. Pollanen stated at the Inquiry:

> The difficulty here is that the pathologist needs to situate the evidence as best they can into a level of certainty or … illustrate the degree of the limitations of the medical evidence in coming to a positive conclusion about non-accidental injury, as opposed to simply saying, "Unless you can find some reason to think otherwise, you should think of non-accidental injury." [This] is not really sufficient to communicate what the medical evidence is telling you …
>
> For example, in pathology, in general, when somebody goes to a … surgeon with a lump … a tumour, and the pathologist is given a biopsy of the tumour … and when we look at the section under the microscope and we're uncertain if it's cancer or not, we don't say, "In the absence of evidence to the contrary, this is cancer." What we say is, "The findings of the histology are not sufficient to come to a diagnosis; re-biopsy. Do more investigations to find out."

Pathologists should be entitled to express their opinions, if the science permits them to do so, as to whether explanations given for the deceased's injuries or condition can be excluded or, conversely, are supported by the pathology evidence. Subject, again, to the limits of the science, they can properly express their levels of confidence or certainty in their opinions about these explanations. If none is supportable, that must be said. But that is very different from allowing the absence of a credible explanation to serve as a substitute for pathology findings sufficient to support a cause of death. If the evidence is insufficient to support a cause of death, the death should be characterized as "undetermined."[3] The same reasoning applies to opinions about issues other than the cause of death which may be within the forensic pathologist's expertise.

To be clear, the characterization of the cause of death as unascertained or

[3] The OCCO uses the term "undetermined," although "unascertained" has also been used in Ontario and elsewhere.

undetermined does not mean that there is no scope for the forensic pathologist to give expert testimony. It may be important for the judge or the jury to understand the limits of the forensic pathology and why the cause of death is unascertained or undetermined. It may also be important to discuss which causes of death are excluded or not excluded by the available evidence, provided they are properly based opinions and not simply speculation.

Dr. Saukko told us that when the findings are less clear-cut, the pathologist should discuss the alternative conclusions that the empirical evidence could support and provide an opinion on the respective strengths of each of them. Dr. Milroy and Dr. Crane agreed. Similar reasoning applies to alternative causes of death that the pathologist believes can be ruled out. Dr. David Dexter and Dr. Chitra Rao, directors of forensic pathology units, stated that any complete report should explain why the pathologist ruled out certain causes of death where certain facts existed that might point in those directions.

I agree with these views. In addition to providing the primary conclusions, the forensic pathologist should outline and evaluate, where applicable, the alternative explanations that are raised by the pathology or by the reported history associated with the individual's death. The pathologist should explain why alternative explanations can or cannot be ruled out. This approach applies not only to the cause of death but also to other issues within the forensic pathologist's expertise that clearly arise in the case.

Joshua's case shows that this approach would best serve the justice system. In that case, the investigating officer conscientiously collected information relating to the possibility that mould caused the child's death. This possibility had been raised by Joshua's mother and by other information obtained by the officer. The investigating officer requested that Dr. Smith address this issue in his report. Dr. Smith initially refused. Forensic pathology is designed to serve the justice system and respond to the issues raised by it. In this instance, that included open-minded consideration of the mould issue as an alternative explanation.

Jenna's case illustrates the general point in another way. It was readily apparent from the early stages of the investigation that the real issue was the timing of the fatal injuries. Dr. Smith's report was silent on that issue. That is not a criticism of Dr. Smith per se but of a systemic approach to report writing that failed to meet the needs of the justice system. Forensic pathologists cannot be expected to foresee every issue that might develop in a case and, moreover, must be allowed to exercise some discretion as to whether or not to address issues other than the cause of death in their reports. But the overriding theme here is that forensic pathologists' opinions must be responsive to the needs of the justice system. This requirement means that their reports should address the live issues in

each particular case and articulate in a transparent way what the pathologists have to say about those issues and why.

**Recommendation 89**

**a) Forensic pathologists should not engage in "default diagnoses." The absence of a credible explanation is not a substitute for sufficient pathology findings to support the existence of abuse or non-accidental injury. In particular, a formulation such as "in the absence of a credible explanation, the post-mortem findings are regarded as resulting from non-accidental injury" should not be used.**

**b) If the evidence is not sufficient to support a cause of death, it should be characterized as "undetermined."**

**Recommendation 90**

**a) Forensic pathologists should outline in their post-mortem or consultation reports the alternative or potential diagnoses that may arise in a case. They should also evaluate alternative explanations that are raised by the pathology or by the reported history associated with the deceased's death. They should describe precisely what alternative explanations have been considered and why they can or cannot be ruled out. The same principles should inform all forensic pathologists' communications, including their testimony.**

**b) More generally, forensic pathologists' opinions, written or verbal, should be responsive to the needs of the justice system. They should address the live or pertinent issues in the case, for instance, and articulate in a transparent way what they have to say about those issues and why.**

## Opinions in Areas of Controversy within Forensic Pathology

Earlier in this Report, I describe some of the controversies that exist in pediatric forensic pathology. The most pronounced is that surrounding shaken baby syndrome and related issues. In those cases where there is potential 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. 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 and independent assessment of the strength of the Crown's case more

likely. Ultimately, this information is clearly relevant for the judge or the jury as they try to understand and evaluate the quality of the positions of the Crown and the defence. In those cases where the pathologist expresses an opinion as well as the context of the relevant controversy, the judge or the jury is better able to appreciate where the opinion falls within a spectrum of views in the forensic pathology community and, therefore, to evaluate it properly. Without this context, misunderstandings can easily arise.

Dr. Pollanen indicated that, in addition to identifying the controversy in a report, an evidence-based approach might, in some cases, require a mini-review of the literature to provide a balanced view of the knowledge in the area and to apply that knowledge to the various diagnoses that could be drawn from the evidence. Although epidemiological data might also assist in determining the likelihood of one potential mechanism over others (for example, shaking compared with short falls), it must be remembered that epidemiological studies are done on populations, while pathologists work on individual cases.

Of course, the obligation for forensic pathologists to acknowledge the relevant controversies in their area has equal importance when they are giving expert testimony. They should describe the particular controversy to the judge or the jury and explain how and why they came to the conclusion they did. The English Court of Appeal in *R. v. Harris and others* adopted the comments of Lord Justice Nicholas Wall concerning an expert's duty when advancing a controversial hypothesis:

> In my view, the expert who advances such a hypothesis owes a very heavy duty to explain to the court that what he is advancing is a hypothesis, that it is controversial (if it is) and place before the court all material which contradicts the hypothesis.[4]

Earlier in this Report, I describe the limits on both pediatric forensic pathology and forensic pathology generally. These limits may not be controversial, but they are equally important for forensic pathologists as they form their opinions and define the level of confidence or certainty they have in them. Accordingly, pathologists have a corresponding obligation to ensure that the limitations that exist for the science generally and for each opinion specifically are clearly communicated and understood.

[4] *R. v. Harris and others*, [2005] EWCA Crim 1980 at para. 272.

**Recommendation 91**

**a) Forensic pathologists should clearly communicate, where applicable, areas of controversy that may be relevant to their opinions and place their opinions in that context.**

**b) They should also clearly communicate, where applicable, the limits of the science relevant to the particular opinions they express.**

**c) They should remain mindful of both the limits and the controversies surrounding forensic pathology as they form their opinions and as they analyze the level of confidence they have in those opinions.**

**d) These obligations extend to the content of post-mortem or consultation reports, to verbal communications, and to testimony.**

## The Limits of the Pathologist's Expertise

Experts have a positive obligation to identify and observe the limits of their particular area of expertise. This restriction is true for forensic pathologists from the time of their first involvement at the autopsy. They should not offer any opinions outside their specialty and, when testifying, should clearly state when particular questions or issues fall outside their expertise.

The evidence given at this Inquiry illustrates the importance of these obligations. In Sharon's case, Dr. Smith mistook dog bites for stab wounds. As he acknowledged at the Inquiry, that opinion was beyond his area of expertise. A number of his other diagnostic errors resulted from the same cause. In Jenna's case, he wrongly described the window of opportunity for inflicting the fatal injuries so broadly that he included the mother as a suspected killer. Dr. Milroy testified that a properly trained forensic pathologist would not have erred in this way.

Dr. Smith not only exceeded his expertise but presented himself in a way that masked his lack of expertise. In Sharon's case, he dismissed suggestions in cross-examination that his lack of training as a forensic pathologist made his opinion problematic. He claimed an expertise in animal bites that he simply did not have. Indeed, he stated that he was better situated than a forensic pathologist to diagnose stab wounds in children, a claim the expert reviewers clearly dismissed in their evidence.

In his testimony in other cases, Dr. Smith went well beyond his expertise as a pathologist when he repeatedly described the sociological or psychological profile of a baby shaker or relied on circumstantial evidence alone. Because he failed to

disclose that his opinions were based on circumstantial evidence, not pathology findings, the fact that he was outside his expertise remained unknown. If experts do not have an accurate understanding of the limits of their own specialty, others are likely to be misled, whether intentionally or not, into believing that the opinions expressed fall within the pathologist's area of expertise.

If pathologists identify the limits of their expertise accurately, they will know when to seek further assistance. Two situations illustrate this point.

First, in a number of the cases examined at this Inquiry, a child had died from a head injury, although the specific cause of that injury was contentious. In these circumstances, it was important that the forensic pathologist recognize the specialized expertise a neuropathologist could contribute to determining the cause and the mechanism of death. As a second example, forensic pathologists have less familiarity than pediatric pathologists with pediatric diseases. A study by Dr. Jean Michaud, the head of the Department of Pathology and Laboratory Medicine at the Ottawa Hospital and the Children's Hospital of Eastern Ontario, indicates that forensic pathologists, compared with pediatric pathologists, are more likely to over-diagnose sudden infant death syndrome (SIDS). It is best, then, for forensic pathologists to consult with pediatric pathologists in cases that present as SIDS.

At times, Dr. Smith exceeded the scope of his expertise at his own initiative, but on other occasions he was invited to do so by Crown or defence counsel. Forensic pathologists have the obligation to resist pressure from police, counsel, and even the court to go beyond the legitimate scope of their expertise, either when they are asked questions about subjects in which they are not expert or, more typically, when they are pushed to be more certain than the science permits. There is therefore a shared responsibility of all participants in the justice system to ensure that forensic pathologists remain firmly within their expertise.

**Recommendation 92**

**Forensic pathologists have a positive obligation to recognize and identify for others the limits of their expertise. They should avoid expressing opinions that fall outside that expertise. When invited to provide such opinions, they should make the limits of their expertise clear and decline to do so.**

## Misplaced Reliance on Non-pathology Information

In some cases, Dr. Smith relied heavily on non-pathology information in forming his opinions. However, this dependence was often not apparent, either in his writ-

ten reports or in his testimony in court. It should have been, to meet the standard of transparency. But reliance upon non-pathology evidence does not merely raise the issue of transparency. The extent to which pathologists' opinions should be based, in whole or in part, on non-pathology information or "circumstantial evidence" is another difficult issue.

There is some debate within the pathology community over the amount of circumstantial information the pathologist should use in determining the cause of death. Dr. Pollanen referred to this issue as a "sliding scale." At one end of the scale is reliance on circumstantial information in the absence of any pathology evidence to suggest a cause of death. At the other end is reliance only on pathology evidence, with no need even to consider the circumstantial evidence. Although the experts generally agreed that pathologists should take circumstantial evidence into account, because it is helpful in steering them in the right direction, the question remains, to what extent?

In Dr. Crane's view, it is appropriate for a pathologist to state a cause of death where the pathology is not definitive, but where the history and circumstances might help to provide an answer, as long as the pathologist makes it explicit in the report the extent to which the conclusion is based on circumstantial – and not pathology – evidence.

Dr. Saukko took a different approach. A pathologist should consider the circumstantial evidence in arriving at a diagnosis, he testified, but not base a diagnosis on such evidence. So, even in cases where the circumstantial evidence as to how the death occurred is overwhelming (for example, Delaney's case and Katharina's case), Dr. Saukko would list the cause of death as unascertained if there was no pathology evidence to support a conclusion. He would raise the possibility that the circumstantial evidence could point to a cause of death. In his view, while there might be a sliding scale in terms of pathologists' comfort level with using circumstantial evidence, there is a definite limit – they should not base a diagnosis solely on circumstantial evidence.

Dr. Saukko also testified that pathologists should exercise caution before they ever use circumstantial evidence because it can contribute to the misinterpretation of pathology findings. Similarly, Dr. Crane testified that he is more careful in his commentary when relying on information that he has not observed himself at the autopsy but has come from another source.

In my view, there is no bright line that dictates when non-pathology information can be used in forming pathologists' opinions. However, some guidance can be provided. First, circumstantial evidence should never be asked to bear the entire burden of supporting the pathologist's opinion. Delaney's case and Katharina's case are instructive. The causes of death were properly characterized

as unascertained because the pathology did not support any cause of death. It was only the overwhelming circumstantial evidence that explained what had happened. Simply put, Dr. Smith's expression of opinions in those cases ran afoul of the basic principle that the opinion must fall within the expertise of the pathologist. Otherwise, the pathologist, under the guise of scientific opinion, is simply presenting a conclusion drawn from the circumstantial evidence.

Second, there is some scope for pathologists to use non-pathology or circumstantial evidence in forming their opinions. They need not operate in complete isolation. So, for example, they might consider evidence of resuscitation in evaluating the existing pathology and formulating a cause of death. The extent to which the use of non-pathology evidence can be considered in forming an opinion may well be affected by the potential unreliability or contentious nature of the circumstantial evidence and by how close it comes to the ultimate issue that the court must decide.

I endorse the October 2007 Autopsy Guidelines, which caution that "the pathologist must not base any expert opinion on untested / untestable evidence such as reported confessions, or assumptions that cannot be independently validated or corroborated by other evidence." I elaborate on the limited use that forensic pathologists should make of confessions, consistent with the October 2007 Autopsy Guidelines, in Chapter 15, Best Practices.

**Recommendation 93**

**a) Forensic pathologists should never use circumstantial evidence or non-pathology information to bear the entire burden of support for an opinion.**

**b) Caution in using such evidence or information at all should be particularly pronounced where the circumstantial evidence is potentially unreliable or contentious or comes close to the ultimate issue that the court must decide.**

**c) Forensic pathologists' opinions must ultimately fall within their particular area of expertise. They should not rely on circumstantial evidence to a point where the opinion no longer meets that requirement.**

**d) There is some limited scope for forensic pathologists quite properly to use non-pathology or circumstantial evidence in forming their opinions. They need not operate in complete isolation. However, their use or consideration of circumstantial evidence should always be transparent: they should always disclose both the extent to which they have used or relied on such evidence and the impact such evidence has had on their reasoning and opinions.**

**e) Forensic pathologists can consider hypothetical questions that involve circumstantial evidence in determining whether, or to what extent, a reported history can be excluded or supported by the pathology findings.**

## Failure to Indicate Reliance on Other Expert Views

The evidence at this Inquiry established that, on a number of occasions, Dr. Smith consulted with other experts such as neuropathologists or radiologists and, without identification or acknowledgment, incorporated their findings or opinions into his autopsy report. Sometimes it was obvious that a consultation had taken place; sometimes not. In Jenna's case, Dr. Smith testified that he had consulted Dr. Dirk Huyer, then a member of the Suspected Child Abuse and Neglect (SCAN) Program, who assisted him in examining the child's genitalia for possible sexual abuse. That collaboration was not obvious from Dr. Smith's autopsy report, which said nothing about the consultation. The absence of any documentation of such an examination in the report – or even of Dr. Huyer's involvement – invited questions about whether or to what extent Dr. Huyer had actually been involved.

I strongly encourage forensic pathologists, particularly in difficult cases, to consult with fellow forensic pathologists and other experts in forming their opinions. These specialists might include neuropathologists, pediatric pathologists, radiologists, neurosurgeons, and forensic ondontologists. Such collaboration will assist forensic pathologists to come to the best possible opinion. It is imperative, however, that all consultations be documented.

### Recommendation 94

**a) When forensic pathologists base their opinions, in whole or in part, on consultation with other experts, they should identify those experts as well as the content of the opinions those experts expressed.**

**b) When informal "corridor" consultations influence formal opinions, the same identification and acknowledgment procedures should be followed. In addition, the consulted experts should express in writing, where feasible, any significant findings or opinions they contributed.**

## The Omission of the Facts and Reasoning Process Underlying the Opinion

The development of an evidence-based culture in forensic pathology fosters practices that produce sound opinions. This approach requires a clear and accurate recitation in the opinion of the relevant empirical evidence, particularly the findings at autopsy, followed by an explanation of the reasoning process that took the pathologist from that evidence to the final opinion.

Like most pathologists at the time, Dr. Smith generally failed in his post-mortem reports to explain how he arrived at his opinion on the cause of death. For this reason, among other things, his written opinions were difficult, if not impossible, to review independently. They were also more likely to mask poor reasoning, flawed pathology knowledge, speculation, and overreliance on circumstantial or non-pathology information. The problem extended beyond that of transparency and possible misunderstanding to one of clarity in thinking. In the way that judges, in formulating their reasons for judgment, are compelled to think about how they moved from evidence to their ultimate conclusions, so forensic pathologists, in writing their reports, should be obliged to think about the logic of their reasoning process and explain how they moved from the pathology findings to their ultimate opinions.

The act of expressing the opinion in writing also adds significant value in another way. Dr. Chiasson testified that obliging pathologists to outline their reasoning in writing helps to get them thinking about just how comfortable they are with the opinion they have expressed. This process assists them in clarifying their level of confidence in the opinion.

According to Dr. David Dexter, there is a direct relationship between the clarity with which pathologists outline their reasoning process in their reports, from the abnormal findings to the diagnosis, and the transparency of the level of certainty with which they hold their opinions. Gaps in reasoning or incorrect assumptions made during the analysis will become apparent if the reasons behind the opinions are clear. As an additional benefit, Dr. Pollanen testified that, when pathologists explain their reasoning clearly in their reports, their colleagues can properly peer review the case.

Forensic opinions that make the pathologist's reasoning process explicit also assist in avoiding "confirmation bias" – the situation that occurs when anyone, including pathologists and the police, tends to seek out evidence to support or confirm an investigative theory or an expert opinion and excludes other theories or possible opinions. Confirmation bias is closely related to "tunnel vision," which has been defined as "the single-minded and overly narrow focus on a particular

investigative or prosecutorial theory, so as to unreasonably colour the evaluation of information received and one's conduct in relation to that information."[5] In pediatric cases, forensic pathologists, like others, may be caught up in the emotions surrounding the death and possible abuse of a child. The interaction between the police and the forensic pathologist on the case may subtly encourage the pathologist to form tentative views even before the autopsy has begun. In Amber's case, for example, Justice Patrick Dunn found that Dr. Smith refused to consider evidence that contradicted his preconceived beliefs. Interestingly, the review produced by SickKids after the release of Justice Dunn's judgment began with the preconceived notion that the judge must be wrong.

The evidence-based approach to preparing an opinion serves as a bulwark against confirmation bias. It recognizes the significance of critical evidence, including contradictory evidence that might challenge a prevailing investigative theory or a dogmatic preconceived opinion.

It is commendable that a number of points made in this chapter already find expression in the recent guidelines formulated by the Ontario Chief Coroner's Office (OCCO). For example, under the October 2007 Autopsy Guidelines, pathologists in Ontario are directed to:

- adopt an evidence-based approach;
- give any opinions in writing;
- ensure that the facts and reasoning that inform the opinion be explained;
- ensure that the opinion is based on documented and reviewable autopsy findings;
- not provide an opinion based on circumstantial evidence or assumptions that cannot be independently validated or corroborated by other evidence;
- not provide speculative opinions, such as "asphyxia" or "consistent with asphyxia." If the cause of death cannot be objectively determined by combining information from the history, autopsy, and ancillary testing, it should be documented as unascertained or undetermined;
- ensure that the opinion is clearly communicated to the coroner and police, in writing, so that it is understood, including the scope and limits of the opinion; and
- consult with other pathologists in difficult or challenging cases.

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[5] This definition comes from Ontario, *The Commission on Proceedings Involving Guy Paul Morin: Report* (Toronto: Ministry of the Attorney General, 1998), recommendation 74 (Commissioner Fred Kaufman) (hereafter *Guy Paul Morin Report*). See also discussion in Bruce MacFarlane, "The Effect of Tunnel Vision and Predisposing Circumstances in the Criminal Justice System," 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).

The same principles I have discussed apply equally to testimony. Dr. David Ranson, the deputy director at the Victorian Institute of Forensic Medicine in Australia, teaches his students that, when testifying in court, they should express their opinions logically and clearly, following a formula of "You can believe me because ..." In other words, the experts should explain why it is that their opinions have been formed.

As I noted at the outset of this chapter, the primary consumers of forensic pathology opinions are the participants in the justice system, many of whom have little or no understanding of technical language. It follows that the explanation for the pathologist's opinion must be communicated in language that is not only accurate but clear, plain, and unambiguous.

The importance of this accessibility is illustrated by the evidence of Sergeant Larry Charmley, the investigating officer in the re-investigation of Jenna's case. He candidly acknowledged that the language used in the Jenna post-mortem report was so "above his head" that he obtained a medical dictionary to assist him in understanding the report. The OCCO also provided some assistance by explaining the medical terminology to him. Sergeant Charmley testified that the police would be greatly assisted by having a glossary of medical terms appended to the post-mortem report. I agree that a list of definitions is warranted in many cases.

It might be tempting to read my comments as imposing an onerous burden on already overburdened pathologists. I do not believe that to be the case. Drs. Cordner, Ranson, Milroy, Crane, Whitwell, Saukko, and others reflected that the recommended approach already represents the practice in a number of jurisdictions. I was also told that it has already been adopted by an increasing number of Ontario forensic pathologists. In essence, it requires no more of the pathologist than to articulate clearly the mental process the pathologist has already undertaken in reaching the opinion.

An evidence-based approach to forensic pathology requires that experts think about how they moved from the evidence to the conclusions. The forensic pathologists' obligation is to put on paper the mental process they followed through their investigation and analysis. In most cases, recording that process should not compel a lengthy report. To analogize to what has been said about a judge's reasons for judgment, adequacy is not measured by the pound or the inch. Sometimes the reasoning behind a forensic pathology opinion can be developed in a paragraph or two. Some uncomplicated or patently uncontentious cases require little elaboration or explanation, although controversial or difficult cases undoubtedly require more extensive discussion. A complete report ultimately makes the pathologist's task in court an easier one, and, more important, best serves the ends of justice.

**Recommendation 95**

**a) The articulation of the basis for the forensic pathologist's opinion in a completely transparent way is at the cornerstone of evidence-based pathology.**

**b) Forensic pathology opinions, whether given in writing or in oral communication, should articulate both the pathology facts found and the reasoning process followed, leading to the opinions expressed.**

**Recommendation 96**

**Forensic pathologists, in order to communicate their opinions in plain language to their lay readers, should consider including a glossary of medical terms, and, in some cases, relevant secondary literature, in their post-mortem or consultation reports.**

## Implementing More Effective Communication

### Report Writing

I have already acknowledged the good work that has been done by the OCCO, through Dr. Pollanen and others, to provide guidelines for the writing of forensic pathology reports, but it would also be helpful in my view if my recommendations on effective communications were captured as part of a comprehensive Code of Practice and Performance Standards for forensic pathologists. A number of sources already exist that are helpful in describing best practices in report writing and that could serve as a model for such a code.

In England and Wales, the *Code of Practice and Performance Standards for Forensic Pathologists*, developed jointly by the Home Office and the Royal College of Pathologists in 2004,[6] recommends that pathologists include the following sections in their autopsy reports:

(a) report preamble, setting out information relating to the deceased and the autopsy (for example, who was present);
(b) history, summarizing the information provided to the pathologist prior to the post-mortem examination and identifying the sources of such information;
(c) scene examination, when applicable, including location, when the pathologist attended the scene, general descriptions, and any recordings made;

[6] The code is directed primarily to practitioners working within England and Wales, although it expresses the hope that it will be of value to pathologists who work outside these borders.

(d) external examination, describing the state of the body, and including both positive and negative findings;
(e) injuries, setting out the positions and measurements;
(f) internal examination, setting out observations with particular attention paid to organs that are diseased and injured;
(g) supplementary examination, including results and the source of the results;
(h) commentary and conclusions, including reasons for conclusions and a discussion of other relevant issues (for example, the amount of force used), and potential diagnoses;
(i) cause of death; and
(j) retention of samples, indicating what has been retained, submitted and/or stored.[7]

As well, Dr. Milroy advised the Inquiry that the Home Office and the Royal College of Pathologists endorse the practice of setting out the alternative explanations and the reasons why one is favoured by the pathologist over the other(s).

I am of the view that developing a Code of Practice and Performance Standards in Ontario would not only assist in promoting an evidence-based approach to post-mortem and consultation reports but enhance transparency and comprehension. The code introduced in England and Wales would be very helpful in developing a similar code here.

The English Court of Appeal has also provided detailed guidance to all expert witnesses,[8] as has my former colleague, the Honourable Coulter Osborne, in the recommendations to his report on civil justice reform.[9] I prefer to address the guidance offered by the English Court of Appeal and Mr. Osborne in more detail later in the context of my recommendation that a code of conduct be created for all experts whose reports or testimony might be introduced into court. Suffice it to say here that some of the features of a code of conduct for experts generally are equally relevant for forensic pathologists when their reports or testimony might be provided to the criminal justice system. For example, the English Court of Appeal recommended that an expert's report provide "details of the expert's academic and professional qualifications, experience and accreditation relevant to the opinions expressed in the report[,] and the range and extent of the expertise and any limitations upon the expertise." An initial statement of the range and

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[7] Home Office and Royal College of Pathologists, *Code of Practice and Performance Standards for Forensic Pathologists* (London: November 2004), 20–22.

[8] *R. v. Harris and others*, [2005] EWCA Crim 1980.

[9] Coulter A. Osborne, *Civil Justice Reform Project: Summary of Findings & Recommendations* (Toronto: Ministry of the Attorney General, November 2007).

extent of a forensic pathologist's expertise and any limitations on it would facilitate the gatekeeper role of the trial judge (described in Chapter 18, The Role of the Court) in clearly defining the subject area about which the forensic pathologist proposed as a witness has the required expertise to offer opinion evidence to the court.

**Recommendation 97**

**The Office of the Chief Coroner for Ontario should develop a Code of Practice and Performance Standards for forensic pathologists in Ontario which describes, among other things, the principles that should guide them as they write their reports and the information that should be contained in them. It should draw on existing sources, including the *Code of Practice and Performance Standards for Forensic Pathologists* in England and Wales. It should include at least the following:**

a) **the principles set out in Recommendation 84;**

b) **guidance on the content of their autopsy and consultation reports (particularly where they may be used by the justice system), including**

   i) **the subjects mandated by the *Code of Practice and Performance Standards for Forensic Pathologists* in England and Wales;**

   ii) **details of each expert's academic and professional qualifications, experience, and accreditation relevant to the opinions expressed in the report, as well as the range and extent of this expertise and any limitations on it;**

   iii) **the levels of confidence or certainty with which the opinions are expressed;**

   iv) **any alternative explanations that are raised by the pathology or by the reported history associated with the deceased's death, with an analysis of why these alternative explanations can or cannot be ruled out;**

   v) **what the pathologist has to say that is relevant to the live or pertinent issues in the case and why;**

   vi) **any area of controversy that may be relevant to their opinions, placing their opinions in that context;**

   vii) **any limits of the science relevant to the particular opinions;**

   viii) **the extent to which circumstantial or non-pathology information has been used or relied on, and its impact on the reasoning and opinions;**

   ix) **any other expert opinions relied upon;**

x) **the pathology facts found and the reasoning process that was followed, leading to the opinions expressed; and**

xi) **a glossary of medical terms, if helpful, to assist in communicating opinions in plain language to lay readers.**

c) **guidance on**

i) **language to be used or avoided, and the dangers associated with the use of particular terms;**

ii) **how best to think about and articulate levels of confidence or certainty;**

iii) **the need to avoid the formulation or articulation of opinions in terms of proof beyond a reasonable doubt;**

iv) **the need to avoid default diagnoses;**

v) **the importance of recognizing and identifying for others the limits of their own expertise and of avoiding the expression of opinions that fall outside that expertise; and**

vi) **the cautions that should surround the use of circumstantial evidence or non-pathology evidence.**

## Testimony

One of the forensic pathologist's most significant roles is giving testimony. It is a formidable responsibility. Triers of fact are easily impressed with the credentials of experts generally, and of forensic pathologists in particular. Their testimony may be accorded an aura of infallibility that is not easily displaced. For that reason, it is imperative that the testimony given by forensic pathologists be informed by all the principles and approaches outlined earlier in this chapter.

As well, there are other components to the testimonial responsibilities of forensic pathologists that have not been previously addressed. First, the evidence at this Inquiry showed that Dr. Smith was, at times, unprepared for the task at hand. He was unable to answer fairly basic questions as to what he had done and what tests had been conducted. An expert must always be prepared for court. That involves, among other things, reviewing the case before testifying, particularly the pathologist's notes and the post-mortem or consultation report. Of course, a written report that meets the criteria discussed in this chapter should make the task of preparing for testimony much easier.

Second, forensic pathologists should meet with examining counsel in advance

of the proceeding to review the case and prepare for testimony. Meeting counsel for the first time minutes before testifying does a disservice to the administration of justice. This obligation rests, in the main, with the examining counsel, but should also be insisted upon by the forensic pathologist.

The forensic pathologist should also be open to meeting with counsel for other parties in a timely and non-adversarial way in advance of testimony. In several of our roundtables, experts discussed their willingness to meet with counsel for the accused to discuss their opinions and prospective evidence. Professor Katherine Gruspier, a forensic anthropologist, spoke of her willingness to do so, but of the limited number of counsel who avail themselves of the opportunity. She indicated that, before testifying, she is quite prepared to identify for counsel the limitations on what she can say. Similarly, Dr. Ranson indicated that less-experienced counsel generally will not speak with him in advance about his testimony. As discussed in Chapter 17, The Roles of Coroners, Police, Crown, and Defence, counsel have a responsibility to seek out the forensic pathologist in this regard.

I earlier recommend that a Code of Practice and Performance Standards be developed in Ontario to address the writing of reports. It should also address the giving of evidence.

The *Code of Practice and Performance Standards for Forensic Pathologists*, designed for those working in England and Wales, addresses the pathologist's obligations as a witness:

> ATTENDANCE AT COURT
>
> 10.1 Standard
>
> The pathologist must:
>
> a) ensure that he is well prepared prior to attendance at court to give evidence
> b) ensure that all documentation relevant to the case is brought to court
> c) ensure that appearance and behaviour conform to acceptable professional standards
> d) deliver evidence in an audible and understandable manner
> e) give evidence consistent with the contents of the written report
> f) deal with questions truthfully, impartially and flexibly
> g) identify questions that are unclear and clarify these before offering a response
> h) give answers to technical questions in a manner understandable by those who have no technical or scientific training

i) differentiate between facts and conclusions drawn from those facts, and ensure that any such conclusions lie within his or her field of expertise
j) consider additional information or alternative hypotheses that are presented and, where warranted, modify conclusions already drawn
k) where it appears that a lawyer has misunderstood or is misstating evidence, ensure that the court is made aware of that misunderstanding or misstatement.

10.2 Code of practice

Pathologists must ensure that they are appropriately prepared prior to attending court to give evidence. A copy of the pathologist's autopsy report, together with all contemporaneous notes, should be taken to the court. The evidence must be objective and fairly presented and attention must be drawn to any areas of speculation. Proper and objective consideration must be given to any interpretations or conclusions fairly raised by the defence, particularly if they are supported by their own expert opinion.

The role of the expert witnesses is not to provide evidence that supports the case for the Crown or for the defence. Opinions must be objectively reached and have scientific validity. Witnesses must make it clear which part of their evidence is fact and which is opinion. The evidence on which that opinion is based must also be available.

Facts may emerge during the course of an investigation, sometimes even during the course of the trial, which may make the pathologist modify a previously held opinion. The pathologist has a duty to give any new facts due consideration and ensure that his or her evidence remains objective and unbiased. If previously held conclusions can no longer be substantiated, any change of opinion must be promptly and clearly stated, irrespective of any possible embarrassment. Delay will not only potentially harm the administration of justice but will reflect adversely upon the reputation of the pathologist.

I endorse the contents of the *Code of Practice and Performance Standards* adopted in England and Wales. The points included there have equal application in Ontario. I would add only two things, based on the evidence I heard:

a) if the expert witness can answer a hypothetical question posed in court only after time for reflection, that extra time allowance should be insisted upon;

and

b) if expert colleagues hold different opinions from those of the forensic pathologist responsible for giving evidence, the differing views must be addressed professionally and not ad hominem.

**Recommendation 98**

**The Code of Practice and Performance Standards for forensic pathologists in Ontario should also address giving evidence, again drawing on existing sources for its content, particularly the *Code of Practice and Performance Standards for Forensic Pathologists* developed in England and Wales. It should also include specific guidance on how forensic pathologists should deal with hypothetical questions and the differing views of colleagues.**

## Building Consensus on Language

What must be obvious at this point is the prominence that must be given to the communication of pathologists' opinions in clear, plain, and unambiguous language. I identified that earlier as one of the foundational principles that inform this chapter. Its corollary is that pathologists must avoid misleading language. For example, I have already made reference to the dangers associated with the term "asphyxia." Not only is it unsupportable as a cause of death but it bears a variety of meanings and, as such, is easily susceptible to serious misunderstanding. For that reason, I recommended that pathologists be educated about the dangers associated with the term and, under the auspices of the Chief Forensic Pathologist, reach a common understanding on when it should and should not be used.

However, "asphyxia" is only one of a number of words or phrases that may be seriously misinterpreted or misunderstood. The phrase "consistent with" is particularly problematic. Where forensic pathologists are unable to narrow their opinions to a single cause or mechanism of death, they may indicate that the pathology is "consistent with" a particular cause or mechanism of death or a scenario presented by the questioner. Indeed, I saw instances in which Dr. Smith was asked whether his findings were "consistent with" suffocation or smothering or asphyxia.

This phrase is fraught with danger. That observation, supported by the testimony of a number of forensic pathologists at this Inquiry, is hardly a new one. The danger was identified by Commissioner Fred Kaufman at the Morin Inquiry, specifically in connection with hair and fibre comparisons and generally for the

forensic sciences.[10] The following quotation he offered also resonates with the work of this Inquiry:

> Bernard Robertson and G.A. Vignaux, in their book *Interpreting Evidence: Evaluating Forensic Science in the Courtroom*,[11] offer the following explanation of the difficulty with the term "consistent with":
>
> > Worst of all is the word "consistent," a word in (unfortunately) common use by forensic scientists, pathologists and lawyers. To a scientist, and to a dictionary, "consistent with" is simply the opposite of "inconsistent with." The definition of "inconsistent" is precise and narrow. Two events are inconsistent with one another if they cannot possibly occur together. Thus, a person cannot be in two different places at the same instant and so evidence that he was in New York at a particular instant is inconsistent with the proposition that he was in London at the same instant. Anything which is not inconsistent is consistent. Thus, the proposition "several murders were committed in New York today" is quite consistent with the proposition "it rained in London today," although it may be irrelevant.
> >
> > Unfortunately for clear communication, Craddock, Lamb and Moffat found that lawyers usually interpret "consistent with" as meaning "reasonably strongly supporting," while scientists use it in its strict logical and neutral meaning. When a pathologist says that certain injuries are "consistent" with a road accident there is no implication about whether or not there has been a road accident. It is possible that the injuries could occur given the circumstances that have been described. It is therefore perfectly sensible to say that something is "consistent but unlikely." If there is some genuine dispute about the cause of the injuries what would the pathologist be able to say? He might say that the injuries were consistent with either an assault or a road accident but are more likely to have occurred if there had been an assault than if there had been a road accident. If they are equally consistent with both then they do not help us decide which of them occurred.

This example reinforces the desirability of using plain, common language that is not potentially misleading and that enhances understanding. It also supports

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[10] *Guy Paul Morin Report*, 341.

[11] Bernard Robertson and G.A. Vignaux, *Interpreting Evidence: Evaluating Forensic Science in the Courtroom* (Chichester and New York: John Wiley, 1995), 56.

the need to avoid specific language, such as "consistent with," that is demonstrably misleading. If "consistent with" a particular cause of death means no more than "may or may not be the case," it is surely of little help. If reference must be made to this point, then the pathologist should use neutral language rather than mask the opinion in language that may leave the impression that the pathology provides some support, or even strong support, for that cause of death.

In the context of misunderstandings around how pathologists think and communicate about levels of confidence or certainty, I recommend that, under the auspices of the Chief Forensic Pathologist, work should be done, in a multidisciplinary setting that includes leading practitioners and academics from both forensic pathology and the legal profession, to develop, to the extent possible, some common language to describe what forensic pathologists have to say. In my view, that kind of consensus building must also extend to the kind of language that forensic pathologists should avoid and to the expressions that can be used in its place.

**Recommendation 99**

**a) Forensic pathologists should avoid potentially misleading language, such as the phrase "consistent with," and adopt neutral language that clearly reflects the limitations of the opinion expressed.**

**b) Work should be done in a multidisciplinary setting to build consensus on words and phrases that forensic pathologists should utilize or avoid as potentially misleading. The results of this work should be reflected in the Code of Practice and Performance Standards for forensic pathologists.**

## Additional Steps

I have outlined some steps that should be taken to implement my recommendations on effective communication, including a Code of Practice and Performance Standards for forensic pathologists and multidisciplinary work to build consensus on plain language to enhance common understanding. As well, in other chapters, I recommend annual peer review of expert testimony by pathologists, post-trial counsel evaluations of that testimony, and the transmittal to the appropriate authorities of any adverse judicial comments about a particular pathologist's testimony. Ultimately, the best way to ensure that pathologists have a widespread understanding of these changes and the culture they represent – and to achieve a greater uniformity of practice than exists today – is to provide ongoing education and training for forensic pathologists. The need for such education

and training has been addressed in earlier chapters, but I want to emphasize it again in this context.

### Recommendation 100

**Forensic pathologists should be regularly reminded of the dangers of being misinterpreted or misunderstood by the criminal justice system. To that end, those engaged in forensic pathology should be provided with regular continuing education and training to enhance their effective communication with the criminal justice system.**

As recommended elsewhere in this Report, I encourage the creation of joint educational programs between forensic pathologists and those involved in the criminal justice system. The more interaction there is between these groups, the more they will develop a common understanding of forensic pathology. That understanding will surely serve to improve the administration of justice.

Serving the criminal justice system is a central function of forensic pathology. In criminally suspicious deaths, the role of forensic pathology can be critically important in ensuring that justice is done. That is particularly true in pediatric forensic pathology.

One of the principal lessons learned at the Inquiry is that, although it is vital that forensic pathologists be highly skilled scientists, it is equally vital that they be able to communicate their opinions effectively to the criminal justice system. Improvements in the quality of forensic pathology must be paralleled by improvements in the effectiveness with which forensic pathologists are able to communicate to the criminal justice system. It is with this objective in mind that I make the recommendations in this chapter.