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Best Practices

When a child dies suddenly and unexpectedly, the coroner issues a warrant for a post-mortem examination. The pathologist who receives the warrant may attend the death scene and, very soon after the death, will perform the autopsy that has been ordered. What forensic pathologists do at the autopsy is of critical importance to the death investigation and the criminal justice system. They must collect the pathology evidence that will inform their opinions as to cause of death and any other pathology issues, and do so in a thorough, objective, accurate, and transparent way. The outcome of the autopsy often triggers significant consequences. Should the cause of death be found to be non-accidental, there will almost certainly be legal implications for the person suspected of being responsible, whether in child protection or criminal proceedings or both. If something goes wrong in the autopsy room, the consequences can be disastrous. A number of the cases examined at this Inquiry make this point all too clearly.

Despite those grave risks, the evidence at the Inquiry demonstrates that, up to 2001, relatively little guidance was given to forensic pathologists on best practices in conducting the autopsy or to the police about how best to assist them. There existed few, if any, guidelines on such important things as what information should be provided to the pathologist and how, if at all, the communications between the police and forensic pathologist should be recorded. There was little, if any, instruction as to the required content or timeliness of the report of post-mortem examination. Most significant, the direction given on the forensic pathologist's overall approach, however well intentioned, was deeply flawed. It was not premised on a search for truth. Insofar as it adopted the "think dirty" premise, it was at a cost to the appearance of objectivity.

Since 2001, however, significant work has been done by the Office of the Chief Coroner for Ontario (OCCO) to develop written best practices in forensic pathology that address a number of the best practices that should guide the con-

duct of the autopsy. This is largely the work of current Chief Forensic Pathologist, Dr. Michael Pollanen, building on the foundation laid by the former Chief Forensic Pathologist, Dr. David Chiasson. The most prominent of these documents are as follows:

- Guidelines on Autopsy Practice for Forensic Pathologists: Criminally Suspicious Cases and Homicides, issued in July 2005 (July 2005 Autopsy Guidelines);
- the update issued in October 2007, known as the October 2007 Autopsy Guidelines; and
- Autopsy Guidelines for Homicidal and Criminally Suspicious Deaths in Infants and Children, issued in April 2007 (April 2007 Autopsy Guidelines).

Each of these documents represents substantial progress in promoting best practices at autopsy. Indeed, throughout this chapter, a number of the specific practices that I view as particularly important will be referred to or specifically endorsed. However, as acknowledged at the Inquiry by those who continue to be involved in this work, there is more to be done.

Basic Principles

Before I turn to my specific recommendations, it is important to set out the basic principles that, in my view, must guide all autopsy practices in forensic pathology, including pediatric forensic pathology. Each of the guidelines I refer to above reflect these principles, if not expressly, at least implicitly.

1 At autopsy, the forensic pathologist should "think truth" rather than "think dirty." To do so requires an independent and evidence-based approach that emphasizes 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.
2 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.
3 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.

4 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.

5 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. In forensic pathology, as in all branches of medicine, teamwork promotes excellence.

6 Fundamentally, the forensic pathologist's practices at autopsy must be founded on a commitment to quality.

Our systemic review of autopsy practices in the Dr. Charles Smith years revealed the absence of any articulated principles of this kind on which a set of best practices could be built. The review also revealed that these principles were all too often ignored in the conduct of post-mortem examinations. It is important that we never return to this era.

Recommendation 68

The Ontario Forensic Pathology Service should explicitly adopt a set of basic principles that include those set out in this chapter; guidelines for best practices at autopsy should be founded on these principles.

The Pathologist's Basic Orientation: Thinking Dirty vs. Thinking Truth

The Inquiry heard a great deal of evidence about the genesis and execution of a policy that encouraged forensic pathologists to "think dirty" in approaching the post-mortem examination. This was captured in the April 1995 OCCO Protocol for the Investigation of Sudden and Unexpected Deaths of Children under Two Years of Age, which was attached to Memorandum 631 and distributed on April 10, 1995, to all coroners, pathologists, and chiefs of police. The protocol included this paragraph:

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

Fairly or unfairly, this has been seen subsequently by some to reflect the approach Dr. Smith brought to his work. Thus, it is important to explain how the policy came about. And because the basic approach that the forensic pathologist brings to the post-mortem examination is so vital, it is important to understand how the "think dirty" approach has been discredited and replaced.

Although the evidence at the Inquiry indicates that "think dirty" may never have been intended to represent what some assume – namely, that forensic pathologists should presume homicide or child abuse – the consensus was that such a phrase is nonetheless inappropriate and problematic. Dr. John Butt, one of the expert reviewers, testified that, although it might be reasonable to have a high index of suspicion throughout the autopsy, "think dirty" was a poor way of putting it. In essence, it represents an intrusion into the pathologist's objectivity.

Another expert reviewer, Dr. Christopher Milroy, viewed the phrase as suggesting that the forensic pathologist should believe the case to be a homicide until proven otherwise. In his opinion, although the pathologist should properly question whether all appropriate dissections and procedures have been performed and whether there are grounds to say that a death is due to homicide, directing the forensic pathologist to "think dirty" is simply wrong.

Starting in the late 1990s, the OCCO began to move away from the "think dirty" philosophy. Instead the focus was redirected to the importance of keeping an open mind. On June 29, 2000, the Chief Coroner for Ontario, Dr. James Young, issued Memorandum 00-04, regarding the protocol to follow for investigations of sudden and unexpected death. The memorandum recommended: "Investigations of sudden deaths must be approached with a fair and open mind." The July 2005 Autopsy Guidelines emphasized the need to ensure that forensic pathologists' opinions are "objective and have scientific validity." In December 2006, the OCCO drafted a new Protocol for the Investigation of Sudden and Unexpected Deaths in Children under Five Years, which replaced the 1995 protocol. It stated:

> Every sudden and unexpected death of a child under five years of age must be actively investigated as potentially suspicious and premature conclusions should not be made regarding the cause and manner of death until the complete investigation

> is finished and all members of the team, listed below, are satisfied with the conclusion. [Emphasis in original.]

The April 2007 Autopsy Guidelines again emphasized the need for pathologists to maintain an "open mind":

> In general, the pathologist must keep an open mind to the possibilities of occult violent death, child abuse, sexual assault, maltreatment and neglect. On this basis, it is recommended that the forensic pathologist have a low-threshold for performing special dissections and collecting biological samples.

In the October 2007 Autopsy Guidelines, the OCCO expressly revokes the "think dirty" phrase from its lexicon. The Guidelines state, "Keep an open mind. Don't 'think *dirty*' – think *objectively*," and elaborate as follows:

> The emphasis on the independent, objective and evidence-based approach in forensic medicine can be viewed as revision of an old forensic aphorism *from* 'Think Dirty' *to* 'Don't think Dirty; Think Objectively, Think Truth.' [Emphasis in original.]

In keeping with this evolution in approach, the OCCO has now removed the "think dirty" phrase from its presentations and courses on death investigation. Other jurisdictions around the world have also abandoned the phrase.

The pathologists who testified at the Inquiry emphasized the importance of objectivity. The proper approach is always to start from a position of objectivity, to have an open mind, and to consider all the possibilities before arriving at a conclusion. If a catchy replacement phrase is needed, the consensus was that "think truth" was fitting.

Dr. Pollanen put it succinctly when he discussed the need for a "search for truth" framework. He called for the adoption of an evidence-based approach that keeps one's mind open to a broad menu of possibilities, and that collects objective evidence whether it supports or negates any possible theories. According to Dr. Pollanen, once forensic pathologists adopt this approach, there is no need for an a priori mindset. If pathologists engage with the forensic issues using an evidence-based approach, they start from a neutral position, approach every autopsy systematically, and, from there, are guided to a conclusion by the objective evidence.

I agree with the decision to discard the "think dirty" approach. It invites the perception, whether or not well founded, that the forensic pathologist presumes, and therefore is looking to confirm, the existence of criminal activity. And since

pathologists' work is interpretive in nature, it is vital to exclude the slightest perception that a "think dirty" approach has seeped into their analysis. An evidence-based, "think truth" culture that promotes objectivity should be cultivated.

Recommendation 69

a) Evidence-based forensic pathology is incompatible with an approach of "thinking dirty." It, instead, involves keeping an open mind to the full range of possibilities that the evidence might yield, without preconceptions or presumptions about abuse, and collecting evidence both to support and to negate any possibilities.

b) "Thinking truth," the orientation now adopted by the Office of the Chief Coroner for Ontario, accurately captures the appropriate approach to forensic pathology and helps promote an evidence-based culture.

Specific Best Practices

Scene Attendance

The evidence at this Inquiry demonstrated that, in the 1980s and 1990s, forensic pathologists did not typically attend the crime scene. The sole exception was the Hamilton Regional Forensic Pathology Unit, whose pathologists regularly attended the scene and continue to do so.

For certain complex cases, the forensic pathologist's attendance at the scene may be beneficial. For example, Dr. Pollanen and Dr. Milroy believed that the pathologist's attendance at the scene of Sharon's death (either before or after the autopsy) would likely have been valuable. It would have provided the pathologist with an additional opportunity to consider the evidence and the competing hypotheses in the case. It could have assisted in bringing together in Dr. Smith's mind the evidence relating to a possible dog attack. Unfortunately, that opportunity was lost.

There are concrete benefits to scene attendance. First and foremost, it allows forensic pathologists to make their own observations of the scene and to connect those observations to the autopsy findings in arriving at the ultimate diagnosis. Relevant observations might include the position of the body, the pattern and distribution of blood, and possible weapons present at the scene. Second, forensic pathologists can provide expert involvement early in the investigation process by making observations and providing advice and guidance to the police at the scene. And finally, they can ensure that evidence is appropriately collected. While

at the scene, they can assist in collecting evidence from the body, in removing clothing, and in taking swabs or fingerprints, all of which is designed to avoid losing important trace evidence once the body is moved.

Dr. Pollanen and Dr. Milroy testified that effective engagement of the forensic pathologist in criminally suspicious cases should start at the very beginning, which is at the scene. This entails a change in culture. The forensic pathologist's role should not be viewed as limited to the autopsy suite but as extending from the scene to the courtroom. According to Dr. Milroy, forensic pathologists therefore should at least have input into whether they attend the scene, even if the ultimate decision is not theirs. After all, as Dr. Stephen Cordner, director of the Victorian Institute of Forensic Medicine (VIFM), pointed out, the whole point of the autopsy is to attempt to recreate what happened back at the scene.

On June 1, 2005, Chief Coroner Dr. Barry McLellan and Dr. Pollanen sent a memorandum regarding scene attendance by forensic pathologists in Toronto to investigating coroners in Toronto, forensic pathologists at the Provincial Forensic Pathology Unit (PFPU), and the Toronto Police Service – Homicide Unit. The memorandum states, "[I]n certain complex cases, forensic pathologists should, wherever possible, attend the death scene and make observations before the movement of the body." According to the memorandum, the investigating coroner and homicide investigators should consider having the forensic pathologist attend the scene for

- all suspicious or homicidal deaths with no readily apparent cause of death (e.g., suspected asphyxial deaths);
- all suspicious or homicidal deaths where the body is in a concealed location, including apparently "dumped" bodies;
- all suspicious deaths of young women and children where the body is in an uncontrolled environment (e.g., public place, outdoor environment, naturally occurring body of water, bathtub, unlocked residence);
- all deaths suspected to be related to sexual violence;
- dismembered or buried bodies;
- scenes with apparent "overkill" or other extensively disturbed and bloody scenes;
- thermally-damaged or charred bodies with suspicion of homicide (i.e., arson); and
- any other cases that the investigating coroner or police deem appropriate.

The memorandum instructs that, generally, in the absence of those circumstances, the forensic pathologist may not be required to attend scenes involving

penetrating trauma, like gunshot wounds and stabbing or cutting injuries. When attendance by the pathologist is considered, the memorandum instructs the police to contact the OCCO dispatch unit to have the pathologist paged.

Since the June 1, 2005, memorandum was issued, pathologists at the PFPU in Toronto have frequently visited the scene. Typically, the police or investigating coroner (or both) contacts the forensic pathologist when the body is discovered. They discuss the nature of the case before the pathologist proceeds to the scene. Dr. Pollanen told the Inquiry that the Toronto Police Service and Ontario Provincial Police have been very receptive to the policy, recognizing the value in early expert involvement and effective evidence collection. However, the memorandum was confined to Toronto. Accordingly, outside Toronto and the Hamilton Regional Forensic Pathology Unit's catchment area, attendances at the scene by forensic pathologists remain infrequent, and in the north, tend not to take place at all.

Recommendation 70

a) The Ontario Forensic Pathology Service should encourage forensic pathologists throughout the province to attend the scene of death more frequently.

b) The Office of the Chief Coroner for Ontario should develop guidelines with respect to scene attendance by forensic pathologists throughout the province. The guidelines should draw upon the Toronto memorandum and the experience with scene attendance by forensic pathologists at the Provincial Forensic Pathology Unit and the Hamilton Regional Forensic Pathology Unit. Such guidelines should

i) recognize the strengths and limitations of scene attendance;

ii) identify the circumstances in which scene attendance by the forensic pathologist would be valuable;

iii) emphasize the need for communication between the investigating coroners, police, and forensic pathologists in determining when scene attendance will take place; and

iv) outline a protocol to be followed at the scene when forensic pathologists are in attendance.

Providing On-Scene Information to the Pathologist

Although scene attendance by forensic pathologists represents a best practice in a number of circumstances, concerns were raised at the Inquiry about its feasibility

in three respects. First, Ontario's vast size means that timely scene attendance will often not be possible. Second, there is a shortage of pathologists doing forensic pathology and they are already overworked. Requiring scene attendance, which often occurs at night, may further tax this already overburdened group of specialists. Third, forensic pathologists will need to be compensated financially for scene attendance.

Although the recommendations in this Report address shortages of pathologists who are able to do forensic pathology, the reality remains that forensic pathologists will not be able to attend all scenes where that would be optimal.

Dr. Pollanen described how in many cases technology can be used effectively in place of scene attendance. Critical information can now be transmitted to forensic pathologists through, for example, the use of photographs and videotapes provided by the investigating coroner and the police. Digital photography now helps to provide what the director of the Kingston Regional Forensic Pathology Unit, Dr. David Dexter, described as a "virtual visit." This technology means that the pathologist can receive high-resolution images of the scene, which can also be magnified if necessary.

Recommendation 71

Where it is not feasible for the forensic pathologist to attend the scene, the Ontario Forensic Pathology Service (OFPS) should develop and encourage enhanced "real time" communication, including the transmission of digital photographs, and even the use of video and telemedicine technology, so that the forensic pathologist can view the scene, where helpful, prior to the body being removed. The OFPS should be provided with the resources necessary to do so.

Recommendation 72

Compensation for forensic pathologists should reflect the added work represented by their attendances at the scene.

Information Provided to the Pathologist

In Chapter 16, I discuss how forensic pathologists should effectively communicate their opinions to the criminal justice system. The effective communication of forensic pathology is of importance not only in reports or testimony but also in the often informal dialogue that takes place among the forensic pathologist, coroner, and police at or surrounding the autopsy or thereafter. It is no less critical

that these informal communications avoid misunderstanding or misinterpretation. Forensic pathologists must always communicate their opinions accurately and in a transparent way.

It is of equal importance to address not only what forensic pathologists communicate to others, but also what is communicated to them. The latter is the prime focus of this section of the Report.

It is vital that forensic pathologists receive the underlying facts that should help inform their opinions. These can come from the investigating coroner, the police, or both. This communication of information to the forensic pathologist must be as accurate and transparent as the communication from the pathologist. Otherwise, the ability of fellow pathologists or the justice system to evaluate and test the forensic pathology opinion – that may be based, in part, on the information received by the pathologist – is limited.

The evidence at the Inquiry demonstrated that the interplay between Dr. Smith, police officers, and coroners was often problematic. The information provided to Dr. Smith was sporadic and at times incomplete. He, in turn, showed insufficient or uneven attention to deficiencies in the information provided. It was often unclear what information had been shared with him, and, almost invariably, it was unknown to the outside observer what information he had relied on to form his opinion. Moreover, the exchanges between Dr. Smith and others were often not recorded – certainly not by him – and therefore lacked transparency and were easily misinterpreted. It is not surprising that in a number of cases, disputes later arose over what it was that Dr. Smith actually said at various points, what if any limitations had been articulated, and what level of confidence he purportedly had in the opinions informally expressed. This was a recipe for disaster.

Although there has been improvement since Dr. Smith's tenure, a number of issues still need to be addressed.

Information Relayed by Coroner or Police about the Circumstances Surrounding the Death

Obtaining and carefully considering the history is essential to a proper autopsy. In Jenna's case, that did not happen, with adverse consequences. While Jenna was at the hospital, an emergency physician noticed a hair in her vaginal area and signs of possible sexual abuse. Although both the coroner and a police officer were present at the hospital, neither passed that information on to Dr. Smith before the post-mortem examination. Dr. Smith was, however, given the hospital emergency record, which contained the physician's observations. Despite this, he failed to perform a complete sexual assault examination and concluded incorrectly that

there were no signs of sexual abuse. This error could have been avoided. Had the coroner and the police highlighted the history of a possible sexual assault, or had Dr. Smith carefully reviewed the emergency record that was provided to him, he might have done more investigative work (such as utilizing a sexual assault kit or taking swabs) to determine if Jenna had in fact been sexually abused.

Sergeant Larry Charmley of the Peterborough Lakefield Community Police Service said that any medical records relating to the deceased should be provided to the pathologist – "the more information you have up front the better." Typically, it would be the coroner who would be in a position to obtain these records before the autopsy. Acting Deputy Chief Coroner and regional coroner Dr. Albert Lauwers and Detective Sergeant Chris Buck of the Toronto Police Service agreed. Ideally, in pediatric death cases, the pathologist would be provided with hospital emergency and medical records, the deceased's medical file from his or her pediatrician, and any relevant records from the children's aid society (CAS). Dr. David Ranson, deputy director of the VIFM, indicated that he would be reluctant to begin an autopsy without such records, unless a delay might result in the loss of evidence.

Dr. Lauwers told the Inquiry about the "Deaths under Five" form, an investigative questionnaire issued by the OCCO that provides details about the deceased, the death scene, the environmental conditions where the child was found, the position of the body, the medical history, and the prenatal/birth history. It should be filled out by the coroner for all sudden and unexpected deaths of children under the age of five years and provided to the forensic pathologist before autopsy.

The OCCO Guidelines for Death Investigation issued to coroners on April 12, 2007, state that discussion between the investigating coroner and the pathologist before the post-mortem examination is desirable, though not mandatory, if the warrant for post-mortem examination is comprehensive. Dr. McLellan told the Inquiry that coroners are expected to give pathologists all available information, including medical records, family history, and even CAS records, where possible.

The Guidelines also direct that the background details provided to the forensic pathologist in the warrant for post-mortem examination include "past history, reasons for the post-mortem examination, and the circumstances of the death, particularly if circumstances are suspicious." However, the information provided should be factual and "should not contain speculation, rumour, or conclusions that will be made at the time of the post-mortem examination (i.e. describing gunshot wounds as exit or entrance wounds)."

On April 30, 2007, the OCCO amended its earlier guideline with respect to verbal discussions between the coroner and the forensic pathologist. It announced a

policy requiring direct telephone or in-person communication between the coroner and forensic pathologist before the autopsy for every criminally suspicious case and for every death of a child under the age of five. This mandatory communication between coroner and forensic pathologist provides a formal opportunity for the coroner to provide the pathologist with any information or details not in the warrant, and for the pathologist to ask questions that might assist in his or her performance of the autopsy.

I support recent OCCO initiatives to improve the level of communication from investigating coroners to forensic pathologists. However, more can be done. The Guidelines for Death Investigation should also require the coroner to provide the deceased's hospital records, medical records, and even CAS records, where possible.

I recommend below that, as a best practice, coroners should not filter out the factual information provided to the forensic pathologist, although rumours, irrelevancies, and speculation should be avoided. As well, coroners should be cautious in providing information that appears factual but may be potentially unreliable or contentious. These represent best practices for coroners, as well as for police.

It is important that coroners refrain from expressing medical conclusions in their early communications with the forensic pathologist. Although the coroners make the final determination about cause and manner of death, they are also well advised to await the considered opinions of pathologists before expressing those conclusions. Finally, transparency requires verbal exchanges of information of any significance between coroners and forensic pathologists (as with exchanges between police and pathologists) to be recorded in writing by both parties.

Acting Inspector Robert Keetch of the Greater Sudbury Police Service testified that, typically, when the police attend an autopsy, they provide to the forensic pathologist a brief overview of the scene as they found it. In addition, the police now have the ability to produce digital images of the scene for the forensic pathologist to view via a laptop computer. Sometimes, the police bring physical evidence, such as a suspected murder weapon, to the pathologist. If the police have some idea of who the perpetrator of a suspected homicide might be, they may share that with the forensic pathologist.

According to Acting Inspector Keetch, the amount of information provided by the police to the forensic pathologist differs from case to case, depending on whether or not it is criminally suspicious. For example, Inspector Brian Begbie of the Kingston Police Service testified that in some circumstances he might tell the pathologist before the autopsy that there had been a confession, since it might help direct the pathologist to look for signs that might otherwise be missed. There might be other information (such as the mother's background

or prior CAS involvement) that would not necessarily be conveyed to the pathologist. The fact that another child had been abused might be something that would be disclosed.

There needs to be greater clarity as to what the police should provide on a consistent basis. There must also be greater coordination between coroners and police so that, together, they ensure that all needed information has been passed on.

Recommendation 73

a) The contents of warrants for post-mortem examination should conform to the current guidelines of the Office of the Chief Coroner for Ontario.

b) In accordance with current guidelines of the Office of the Chief Coroner for Ontario, the investigating coroner should strive to provide full and accurate information to the forensic pathologist. In particular, all relevant hospital and medical records should, if at all possible, be provided to the forensic pathologist prior to the commencement of the post-mortem examination.

c) The coroner should refrain from expressing medical conclusions in any early communications with the forensic pathologist. Although the coroner makes the final determination about cause and manner of death, the coroner is well advised to await the considered opinions of the forensic pathologist before expressing those conclusions.

d) In accordance with existing policy of the Office of the Chief Coroner for Ontario, direct telephone or in-person communication between the coroner and the forensic pathologist should take place prior to the autopsy for every criminally suspicious case and for autopsies of children under the age of five.

e) Province-wide protocols for police officers should be developed that articulate the types of information that should and should not be provided to the forensic pathologist. Such protocols should also address how police and coroners can coordinate what information is provided to the forensic pathologist and by whom.

Recording the Pre-autopsy Communications

The evidence at the Inquiry showed that, in the 1990s, there were no standard procedures as to whether or how pre-autopsy communications between the forensic pathologist and the coroner should be recorded. Typically, these communications were verbal and largely unrecorded. Coroner's warrants were often uninformative;

Dr. Lauwers described them as "cryptic." As for communications between the pathologist and the police, with the exception of the Hamilton Regional Forensic Pathology Unit, which used a standard form filled out by the police, there were again no standard procedures as to whether or how these communications should be recorded. The extent to which notes were made of pre-autopsy communications depended largely on the individuals involved. Typically, forensic pathologists did not take extensive notes of their discussions with police. Nor did the police generally keep a record of the information conveyed verbally to the pathologist.

Dr. Smith was inconsistent in documenting information received from the police or the coroner. Sometimes he took notes; other times he did not. For example, in Sharon's case, Dr. Smith testified at the preliminary hearing that he did not keep notes of conversations with police officers or others involved in a case. In Jenna's case, Constable Scott Kirkland of the Peterborough Lakefield Community Police Service, who accompanied Jenna's body to SickKids for autopsy by Dr. Smith, testified that he communicated important information to Dr. Smith, including the account provided by Jenna's babysitter of what happened before her death. As far as he could recall, Dr. Smith took no notes of their conversation. However, Dr. Smith did take some handwritten notes in Jenna's case, likely during a conversation with the investigating coroner.

As described above, the current Guidelines for Death Investigation for coroners provide that background details in the warrant for post-mortem examination should include past history and the reasons for the post-mortem examination. The circumstances of death – particularly if suspicious – should also be provided to the forensic pathologist.

Dr. Pollanen made the important point that it is insufficient to recommend that the police or the coroners simply provide accumulated information to the forensic pathologist in a standardized form. There are two dimensions, both vital, to the forensic pathologist's role in acquiring complete pre-autopsy information. The first is passive, involving the receipt of information brought to the forensic pathologist by the police or the coroner. The second is active, involving the forensic pathologist in taking a relevant history from the police or the coroners and asking germane questions about the case. A protocol that simply has police or coroners providing information to the pathologist in writing does not capture the active dimension. The forensic pathologist's information base must include not just the information volunteered by the police or coroners but also the answers to questions posed by the forensic pathologist.

Information provided to the pathologist should therefore be recorded in two main ways. First, the police and coroners should be encouraged to provide initial information to the forensic pathologist in writing. Second, both the conveyor and

the recipient of additional information should record what has been communicated verbally to the pathologist.

The recording of the initial information provided by police or coroners to the forensic pathologist can be done in a variety of ways. As reflected in the current guidelines for coroners, coroners can provide much of the information they have learned in a detailed coroner's warrant. Moreover, coroners are now expected to complete an investigation questionnaire in every case involving the death of a child under the age of five. Similarly, police can provide information to pathologists before the autopsy has commenced through a written summary of the police investigation, a police occurrence or supplementary report, or through an investigation questionnaire specifically designed for this purpose. Further information acquired later can also be provided in writing. Investigation questionnaires are particularly well suited to pediatric forensic cases. Police officers are often less familiar with these cases, and with what may be significant to the pathologist. The questionnaires promote the collection of information that is complete and relevant to the pathologist's duties.

In my view, the precise format by which this information is recorded is less important than systemic recognition that as much information as possible should be provided to the pathologist before the autopsy and that, where possible, it be done in writing. Similarly, during the course of the death investigation up to and including trial, additional information should be provided to the pathologist in writing as it is accumulated.

With respect to the verbal communications that inevitably take place, an important question is who should bear the responsibility of recording the information conveyed. Dr. Milroy suggested that it is the forensic pathologist's responsibility to ensure that the intake information is recorded. Dr. Pollanen regards it to be a best practice for forensic pathologists to record contemporaneously all relevant information received from others. In fact, in his view, such communications should be documented at both ends. I agree with this approach. To the extent possible, transparency favours the recording of communicated information by both parties.

Recommendation 74

a) The police and coroners should be encouraged to provide initial information to the forensic pathologist in writing.

b) Additional information communicated to the forensic pathologist at any time should be provided in writing or, if verbal, should be recorded by both the person communicating the information and the person receiving it.

c) Investigation questionnaires should be utilized by police and coroners to provide information to forensic pathologists in all cases of sudden infant death. The completed questionnaire should be provided to the forensic pathologist before the post-mortem examination begins.

Filtering the Information Provided to the Pathologist

The forensic pathologists who participated at the Inquiry agreed that, presumptively, forensic pathologists should be provided, before the autopsy, with as much information as possible. The more difficult issue is whether the police or coroners should ever "filter out" some of that information so as not to taint or prejudice the pathologist's opinions.

There appear to be two schools of thought. The first approach places confidence in the ability of forensic pathologists to remain objective and discard potentially inflammatory or irrelevant information. That approach favours little or no filtering by those who provide the information. It then becomes the role of the forensic pathologist to filter out irrelevant or useless information. One advantage of this approach is that it does not place police or coroners in the difficult position of having to decide, without pathology expertise, what might be relevant to the forensic pathologist's task. Ultimately, the most effective safeguard against the misuse of such information is complete transparency as to what information has been communicated and what parts of it are relied on by the pathologist in forming his or her opinions.

Dr. Pollanen was an articulate spokesperson for the first school of thought. He explained that forensic pathologists, as part of their function, should automatically filter the information they receive about the history and circumstances of death. In his view, the best way to guard against misuse by forensic pathologists of extraneous information is by emphasizing the importance of the evidence-based framework.

The second school of thought recognizes that pathologists are human and are susceptible to subtle influences or biases, which may be fuelled by potentially inflammatory or highly incriminating information such as purported confessions. Given the interpretive nature of the discipline, it is vital to avoid the appearance of tainting the pathologist or, worse, subtly playing into confirmation biases or tunnel vision. Transparency may assist in exposing the misuse of such information, but it is imperfect since forensic pathologists will not always recognize how such information has affected their ultimate opinions.

The evidence at this Inquiry illustrates the dangers associated with the misuse of such information. Dr. Smith at times noted extraneous information about the

social backgrounds of suspected caregivers or parents in a way that suggested he may not have filtered the information out of his final assessments. In both Delaney's and Katharina's cases, Dr. Smith acknowledged that he relied on confessions to form his opinions as to cause of death. The reviewers concluded that there was limited pathology evidence to support those opinions. In Joshua's case, in diagnosing the cause of death as asphyxia, Dr. Smith admitted to placing undue weight on the remote history provided to him that Joshua's mother had stated, one month before Joshua's death, that she could not take it anymore and was going to smother the baby. In none of these instances was Dr. Smith transparent about using or disregarding this information.[1]

Although the witnesses at the Inquiry generally supported a model in which filtering out extraneous information was largely left to the forensic pathologist, some allowed for a small amount of filtering by the police and coroners of clearly irrelevant information.

The OCCO has addressed the use of such information in its October 2007 Autopsy Guidelines, which state, "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."

In my view, police and coroners, as a general rule, should err on the side of transmitting the information in their possession to the forensic pathologist, rather than withholding it. They are often not well situated to know what may be relevant to the pathologist's work. By omitting certain information, they run the risk of adversely affecting the completeness of the pathologist's work or its responsiveness to the issues raised in the case.

That being said, the danger of confirmation bias remains if the forensic pathologist becomes too easily wedded to a theory advanced early on by the police. For example, Dr. Katherine Gruspier, adjunct professor of the University of Toronto forensic science program, described at the Inquiry a study in which world-class fingerprint experts were given prints they had previously examined and either ruled in or out as a match. When the experts (unaware of their own prior examinations) were provided the prints a second time together with biasing and irrelevant information, it led to scientific error.

This concern is best addressed in several ways. First, as suggested by Dr. David Ranson, the deputy director of the Victorian Institute of Forensic Medicine, increased professionalism and education of pathologists will bring an enhanced awareness of the risks of confirmation bias. Second, the promotion of an evidence-

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

based culture surrounding forensic pathology will also help. Complete transparency concerning both what is communicated and what parts of it are relied on by the forensic pathologist, while not perfect, enhances independent reviewability and serves as a further safeguard against confirmation bias. However, this approach is not a licence for police or coroners to transmit information that is clearly irrelevant, innuendo, or purely speculative. Indeed, the OCCO's guidelines for coroners specifically direct coroners to exclude speculation and rumour from their warrants for post-mortem examination. Nor does this approach prevent experienced officers and coroners from exercising discretion as to how relevant information is communicated to the forensic pathologist. A purported confession illustrates both the problem and the possible solution. The police may have obtained a confession from the caregiver or parent of a young child. Providing the confession to the forensic pathologist before the autopsy invites the obvious concern that he or she may be tainted or unduly influenced by its existence and fail to examine the existing pathology critically and objectively to determine what opinions can properly be given about the case. Dr. Smith fell prey to this very danger. He expressed expert opinions about causes of death in some cases, with little or no pathology support, because the non-pathology information seemed to support those causes of death.

Although a confession may arguably risk biasing the forensic pathologist, it may also contain valuable information that should rightly be evaluated by the forensic pathologist. If, for example, it provides a detailed account of what happened, it may be important for the forensic pathologist to determine whether the account is excluded by the pathology or, conversely, the extent to which the pathology supports that account.

The solution to the problem associated with the confession is therefore case specific. There are no bright lines to be drawn that determine when a confession should be provided to the forensic pathologist. Some experienced officers might ensure that the issues raised by a confession or other inflammatory information are discussed with the pathologist while not informing the pathologist that a confession has been secured. Others might defer providing the confession to the pathologist until some time later in the process. The point here is that, while police should presumptively provide more, rather than less, information to the forensic pathologist, they should have some discretion to communicate the relevant information in ways that reduce the likelihood or the perception of bias.

Related to this point is the recommendation I make in Chapter 16, Effective Communication with the Criminal Justice System, that forensic pathologists should take a cautious approach to the use of circumstantial evidence or non-pathology information. Such evidence or information should never be asked to

support the entire burden of the forensic pathologist's opinions. The forensic pathologist should be especially cautious in using such information where it is potentially unreliable or contentious or comes close to the ultimate issue that the court must decide. As I recommend in that chapter, these principles ought to be incorporated into an Ontario Code of Practice and Performance Standards for forensic pathologists.

All of these measures collectively ensure that the forensic pathologist has the required information to do the job, while guarding against its misuse.

Recommendation 75

a) As a general rule, police and coroners should not "filter out" relevant information that is to be provided to the forensic pathologist. The forensic pathologist is best situated to determine what is relevant to his or her work.

b) That being said, police and coroners should generally not transmit information that is clearly irrelevant, innuendo, or purely speculative. Coroners and police officers also have discretion as to how relevant information is communicated to the forensic pathologist. This might mean, for example, that information is communicated in ways that reduce its potential misuse or its inflammatory character.

c) The forensic pathologist should remain vigilant against confirmation bias or being affected by extraneous considerations. This is best done through increased professionalism and education, an enhanced awareness of the risks of confirmation bias, the promotion of an evidence-based culture, complete transparency concerning both what is communicated and what parts of it are relied upon by the pathologist, and a cautious approach by the pathologist to the use of circumstantial or non-pathology information.

A related question is whether forensic pathologists, when engaged in their own filtering process, should record everything they are told or only those portions that they regard as relevant. Practices in this regard vary:

- Dr. Pollanen's practice is to "filter" out the irrelevant information prior to recording it through dictation. Thus he dictates only the information that he anticipates relying on to arrive at an opinion. This means that, as a general rule, what he dictates also appears in his final report.
- Dr. Cordner writes down a summary of what he is told, without making any judgment as to the relevance of that information.

- Dr. Michael Shkrum, director of the London Regional Forensic Pathology Unit, writes down as much as he can and includes a lot of information that might be extraneous.

These differences reflect two separate rationales for recording the information. If the focus is only on how the pathologist arrives at his or her opinion, that can be achieved by noting only what the pathologist regards to be relevant. If the focus is on transparency, then more inclusive documentation is warranted.

Both positions are defensible. On balance, however, I think it is preferable to recognize the dual purpose of recording information provided to the pathologist. This means, as I earlier indicated, that all of the information provided to the pathologist should be recorded. Doing this requires the pathologist to be very clear about the extent to which that information has been relied on in subsequently forming an opinion. It allows the pathologist to revisit information that was regarded as irrelevant when received but which later acquired relevance. And, finally, it also enables others to consider whether the pathologist may have been influenced by extraneous considerations not reflected in his or her opinion.

Recommendation 76

Any information provided by the coroner or the police to the forensic pathologist should be carefully recorded both by the conveyor of the information and by its recipient.

Recording and Preserving the Autopsy's Work Product

The pathologists who appeared at the Inquiry were all of the view that the autopsy itself should not, as a general rule, be videotaped or audiotaped. They were concerned that videotaping would inhibit the free exchange of ideas that must take place during the autopsy, and that undue reliance could later be placed on thoughts, impressions, or beliefs tentatively expressed during the autopsy.

In my view, no compelling reason has been presented to justify the routine audiotaping or videotaping of autopsies. Best practices require that anything of any significance done at the autopsy – including dissections, removal or retention of body parts, and samples taken for further testing – be carefully recorded. All of the findings made at the autopsy, abnormal or otherwise, are also to be reflected in the post-mortem report. Photographs should be taken, either by OCCO staff or police, or both. All of these steps promote transparency and independent reviewability.

A related aspect of autopsy practice that was shown by our systemic review to

be inadequate was the recording, preserving, and storing of materials derived from the autopsy, such as slides and tissue blocks. In Valin's case, for example, subsequent reviewability was frustrated for far too long by Dr. Smith's failure in this regard.

The October 2007 Autopsy Guidelines already offer specific guidance on the collection and retention of external samples in criminally suspicious cases, as well as on the requirement for photographs. They also require disclosure of the samples and photographs taken in the final report of post-mortem examination. In addition, hospitals have policies in place to address the storage of these materials. I endorse the treatment of these issues in the guidelines and in hospital policies.

Recommendation 77

a) Autopsies should not normally be audiotaped or videotaped. However, what is done at the autopsy should be fully transparent and independently reviewable. Therefore, what is done and by whom at the autopsy should be carefully documented. This documentation includes careful recording through photographs and contemporaneous note-taking by support staff and the forensic pathologist.

b) Best practice also requires the appropriate retention, storage, and transmittal of organs, tissues, samples, and exhibits in accordance with the current autopsy guidelines of the Office of the Chief Coroner for Ontario and policies in place at hospitals where forensic autopsies are performed.

c) In accordance with the current guidelines of the Office of the Chief Coroner for Ontario, materials kept for testing and independent reviewability should be carefully documented.

Providing Preliminary Opinions

Not surprisingly, forensic pathologists are sometimes requested, particularly by the police, to provide an opinion before finalizing the post-mortem report. Dr. Smith testified at the Inquiry that he typically gave the police a preliminary opinion on the cause of death at the conclusion of the gross examination in the autopsy, because the police were usually anxious either to investigate criminally suspicious deaths while the evidence was fresh, or to avoid unnecessary investigations in cases that were not regarded by the pathologist as suspicious. In some instances, where the death was clearly explained by disease or other medical causes, Dr. Smith might even provide the police with his preliminary diagnosis

mid-autopsy and advise them that it was unnecessary for them to remain. Dr. Smith believed he always qualified his opinion by telling the police that the findings might change on receipt of toxicology or other ancillary test results, or on a review of the histology.

The dangers in delivering a preliminary opinion are obvious. First, if the forensic pathologist delivers a preliminary opinion that might change or which is not appropriately qualified, it can lead the police in the wrong direction. Second, verbal opinions, particularly preliminary or tentative ones, are prone to misinterpretation or misunderstanding. Both dangers can result in unwarranted criminal or child protection proceedings.

Once again, the evidence at the Inquiry is instructive. In Kenneth's case, at the conclusion of the autopsy, Dr. Smith told police that there was nothing that would indicate an obvious cause of death, but he nonetheless characterized the cause of death as suffocation by obstruction of the airways. Kenneth's mother was arrested several weeks thereafter, almost five months before Dr. Smith issued his post-mortem report, which included no such characterization. Dr. Pekka Saukko, who reviewed the case, testified that suffocation was not a reasonable conclusion (tentative or otherwise), as there was no pathology to substantiate it.

Dr. Pollanen testified that many forensic pathologists now recognize that they should say the cause of death is "pending" when no cause of death is apparent at the conclusion of the gross examination. However, this was not universally understood in the 1990s.

On April 12, 1999, Dr. Young and Dr. Chiasson sent Memorandum 99-02, entitled "Forensic Pathology Pitfalls," to all coroners and pathologists in Ontario. Among other things, the memorandum addressed the expression of preliminary causes of death by forensic pathologists. It emphasized the need to communicate to the coroner and the police that the cause of death is "pending" where "there is no clear-cut anatomic cause of death or there are multiple potential causes of death and/or contributing factors." It also advised that the forensic pathologist must clearly convey her or his level of certainty and comfort about the cause of death.

The memorandum noted that a "pending further tests" opinion is always preferable to a speculative one, particularly in cases where additional tests and/or investigative information are required. It stated:

> The 'pending' of a case is not a sign of weakness, but rather one of professional strength, indicating that the pathologist is careful and is giving a considered formal opinion. Any potential disadvantage to pending a case vis-a-vis "investigational efficiency" is far outweighed by the dangers inherent in the pathologist jumping to conclusions and/or fencing him/herself in.

> In reaching a conclusion, pathologists are reminded to remain cautious and conservative in their opinions and not to extend themselves beyond where the evidence or experience comfortably takes them. The dictum "*better safe than sorry*" should prevail. [Emphasis in original.]

Dr. Chiasson told the Inquiry that it is acceptable for the pathologist to render a preliminary opinion as to cause of death if one is obvious at the conclusion of the gross examinations (for example, a gunshot wound to the head). This situation occurs in most police cases, although pediatric cases raise different considerations.

Dr. Pollanen explained that "pending" can be used by forensic pathologists in several related situations:

- where the cause of death seems apparent at the conclusion of the external and internal examinations, but additional studies might detract from that conclusion or the pathologist would like to consider other evidence to strengthen the conclusion;
- where the pathologist lacks data to arrive at a conclusion; or
- where the pathologist needs more time to arrive at a conclusion because she or he wants to think more about the case, examine the literature, or discuss the case with colleagues.

The importance of reserving judgment when these situations present themselves cannot be overstated. This does not mean that the forensic pathologist is precluded from discussing the case with the police. It does mean that forensic pathologists must take care to ensure that their views, and the limitations on them, are understood and appropriately recorded. This is especially important because, as Acting Inspector Keetch told us, in the absence of express qualifications, the police will generally interpret a preliminary opinion as being firmly held.

In the study prepared for the Inquiry, "A Model Forensic Pathology Service," Dr. Cordner and his colleagues provided this helpful rule that should guide the decision whether to issue a preliminary opinion: the pathologist should offer an opinion only on which he or she would be happy to be cross-examined later in court.[2]

When the cause of death is pending, pathologists are well advised also to discuss the matter with the coroner. After all, the coroner needs to understand the

[2] Stephen Cordner et al.,"A Model Forensic Pathology Service," 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).

status of the case and how long it might take for outstanding work or tests to be completed. The Guidelines for Death Investigation for coroners require "direct verbal discussion" within four hours of completion of the gross examination between the investigating coroner and the forensic pathologist.

In addition, the October 2007 Autopsy Guidelines now offer specific guidance on the issues raised here:

- Where the cause of death is apparent at the end of the gross examination, the forensic pathologist should report the diagnosis to the police and coroner, who will understand that the pathologist has established the cause of death without needing to consider the results from ancillary tests that might be pending. The cause of death provided to the police and coroner must be recorded in written form at that time.
- Where the cause of death is not readily apparent, the forensic pathologist should report the cause of death as "pending," "under investigation," or something to that effect. This ensures that the police and coroner understand that the cause of death has yet to be determined.

The October 2007 Autopsy Guidelines also direct that the forensic pathologist refrain from providing a preliminary opinion where one should not be provided:

> A preliminary opinion on the cause of death (or other critical matters such as the timing or mechanism of injury) must not be given to the police if toxicology, histology, examination of fixed whole organs, or other ancillary testing have any reasonable chance of significantly alter [sic] the preliminary opinion. The importance of this cannot be over-emphasized. If definitive actions such as arrest and detention of a person are taken by police based on a preliminary opinion on the cause of death opinion that cannot be substantiated later, then significant difficulties will arise and justice will not have been served.

Recommendation 78

a) In accordance with the October 2007 Autopsy Guidelines, the Office of the Chief Coroner for Ontario should continue to encourage forensic pathologists to exercise caution in providing preliminary opinions. In particular, a preliminary opinion on the cause of death or other forensic issues, such as timing or mechanism of injury, should not be provided if ancillary investigations have any reasonable chance of altering the preliminary opinion. In such circumstances, the cause of death should be given as "pending further tests."

b) Whether forensic pathologists express a preliminary opinion or indicate that the cause of death is "pending," they should ensure that this is fully understood, including in particular any qualifications or limitations that exist for the preliminary opinion.

Recording the Preliminary Opinion

Dr. Smith's practice was to provide the preliminary cause of death verbally. There was no evidence that he ever recorded these opinions in any way. This caused difficulties. In Sharon's case, for example, Dr. Smith testified at the preliminary hearing that he did not keep a record of his conversations with the police. In Kenneth's case, he could not recall what he told the police immediately after the gross examination. Indeed, in cross-examination at the preliminary hearing, he told defence counsel that he would have to look at the police officer's notes to determine what his own preliminary opinion had been. This is unacceptable practice.

In my view, any opinions communicated – preliminary, pending, or final – must be reduced to writing. The same approach should govern any later informal communications between the forensic pathologist and the police or coroner. There is nothing radical in this suggestion. For example, Dr. Milroy testified that he keeps notes of any post-autopsy conversations with police, and records contemporaneously any additional information received from them.

The practice in Ontario in this area has been variable. Some pathologists, like Dr. Smith, provided their preliminary opinions only verbally. Sergeant Charmley confirmed that, in such circumstances, the attending police officer would usually try to record exactly what the forensic pathologist said about the cause of death. The potential for error in those situations, despite the best efforts of the police, is obvious. They lack the pathology training to be tasked with the sole responsibility of recording preliminary opinions.

By contrast, forensic pathologists at the Hamilton Regional Forensic Pathology Unit have traditionally recorded their preliminary opinions in writing on the rough autopsy sheet, which they then show to the police. Another equally valid approach is for a forensic pathologist to read, and sign off on, the officer's record of what was said. A copy can then be provided to the forensic pathologist for his or her file. This ensures that the police have accurately captured the forensic pathologist's views.

What is clear is that, regardless of the format to be employed, it is an important best practice that preliminary opinions – indeed anything substantive said by the forensic pathologist – should be captured in writing in a way that the forensic pathologist can take responsibility for. Doing so not only ensures that

the police understand what the pathologist says, together with its limitations, but also forces the forensic pathologist to think, with desirable rigour, about precisely what can be said.

This is the message of the OCCO's October 2007 Autopsy Guidelines, which require that, in cases where the cause of death is apparent and where the forensic pathologist provides a preliminary diagnosis to the police and the coroner, the pathologist must record that opinion in written form at that time.

The same guidelines also provide that, within 24 hours of completion of the gross examination, the forensic pathologist is also to fax a notification form (created by the applicable regional forensic pathology units) to the Provincial Forensic Pathology Unit in Toronto and the regional coroner. The notification form is to include the relevant history and the preliminary cause of death provided to the police. The Chief Forensic Pathologist or designate is to review the document and provide feedback to the pathologist.

At the Ontario Pediatric Forensic Pathology Unit (OPFPU), the notification form, which has been in use since 2007, is completed at the end of all forensic autopsies. It is forwarded to the director of the OPFPU, and, in criminally suspicious cases, to the Chief Forensic Pathologist. The notification form contains the preliminary cause of death conveyed verbally to the investigating coroner and the police at the time of the post-mortem examination. In addition to the preliminary cause of death, the form also includes some information on the samples retained – for example, whether whole organs have been retained.

There are currently variations in practice as to whether the notification form is provided to the police. At the Hamilton and London Regional Forensic Pathology Units, the pathologist provides a copy of the notification form to the police. In Hamilton, the pathologist also asks the investigating officer to sign the form. By contrast, pathologists at the Kingston Regional Forensic Pathology unit and the PFPU do not provide the form to the police. The practice there has been and continues to be to provide the preliminary opinion to police verbally. However, Dr. Pollanen testified that, at the PFPU, the pathologist watches the attending police officer write the opinion in her or his notebook, to ensure that it is recorded accurately. These variations, although not critical, should be standardized in the interest of best practices.

Recommendation 79

a) When a forensic pathologist provides a preliminary opinion at the conclusion of the autopsy, it should be reduced to writing. Either the pathologist should provide the opinion in writing to the police, retaining a copy for his or her

records, or the attending police should carefully record the opinion in their notebooks. If this second procedure is followed, the forensic pathologist should review what the police have recorded for accuracy, and indicate in writing that it conforms with her or his opinion, including its limitations. The forensic pathologist should also retain a copy of the relevant entries.

b) If the notification form of the Office of the Chief Coroner for Ontario is used to record the forensic pathologist's preliminary opinion, it should be provided to the police and coroner with a copy retained by the pathologist.

Timeliness of Reports

The important product of an autopsy performed in a coroner's case is, of course, the post-mortem report. A discussion of best practices is incomplete without detailed consideration of the content of these reports. That discussion has equal application to supplementary or consultation reports that may be prepared by the forensic pathologist up to the date of trial. These reports must effectively communicate what the pathologist has to say to the criminal justice system. That is what forensic pathology is all about. The content of these reports is also inextricably interwoven with what the pathologist says verbally, both in testimony and informally to Crown counsel, police, defence counsel, affected families, child protection workers, and others. It is for that reason that I identify best practices surrounding the content of these forensic reports and make recommendations about them in Chapter 16, Effective Communication with the Criminal Justice System. Both in that chapter and this one, the recommendations I make apply equally to any post-mortem, supplementary, or consultation reports provided by the pathologist.

Here, I wish to address the need for timely reports. No matter how accurate, transparent, clear, and unambiguous a report may be, it is not useful to the criminal justice system if it cannot be delivered in a timely way. Indeed, harm can be done by its absence at critical times in the investigation or subsequent legal proceedings.

A recurring theme in the cases examined at the Inquiry was the chronic lateness of Dr. Smith's reports. In fairness to him, this problem was far from his alone. It was endemic to the system. That said, the evidence also demonstrated that Dr. Smith was particularly tardy. In fact, his tardiness was so problematic that, in several cases, it required threatened or actual judicial intervention to obtain his report. And, in Athena's case, the lateness of Dr. Smith's supplementary report was one of the reasons why serious criminal charges against the parents were stayed.

The OCCO has made efforts to remedy the problem. After Dr. Chiasson became Chief Forensic Pathologist in 1994, he began to develop proposed timelines for pathologists across the province. He believed a reasonable timeline to be three to four months, unless additional testing beyond the pathologist's control, such as toxicology, was necessary. In those circumstances, the proposed timeline was one month from the receipt of the additional test results. In 1998, the OCCO set a target turnaround time for reports generated at the OPFPU: 90 per cent were to be completed within 90 days. Those targets were not met, and Dr. Chiasson candidly admitted that they may not have been realistic.

More recently, on July 23, 2004, the OCCO sent a memorandum regarding the completion of autopsy reports to all coroners, pathologists, Crown counsel, and chiefs of police, outlining the following guidelines for the production of post-mortem reports:

- 12 weeks from the time of the autopsy, in cases where there are no other reports required to complete the post-mortem report; and
- four weeks from receipt of other reports or relevant investigation materials, in cases where report completion depends on other reports and/or investigation materials.

Despite those guidelines, the timeliness of these reports continues to be a problem. Of course, merely setting a timeline does not mean it will be met. One must examine and fix the underlying reasons why they continue to be late.

At the Inquiry, a number of witnesses testified about the challenges faced by forensic pathologists in completing post-mortem reports in a timely fashion. These include

- unpredictable and, at times, onerous workloads;
- lack of prioritization, as completing paperwork is usually relatively low on a forensic pathologist's list of priorities;
- lack of administrative support, since hospitals might regard coroner's autopsies as separate and distinct from what their administrative staff are paid to do, leaving the forensic pathologist to deal with the administrative side of post-mortem reporting;
- the prioritization of surgical pathology over autopsy pathology by pathologists in hospital settings;
- delays associated with consulting other experts, because the pathologist must rely on the schedules and work loads of those experts;

- the degree of complexity of the case, because complicated forensic cases take longer;
- delays in receiving histology slides from the hospital laboratory; and
- delays in receiving toxicology test results.

For their part, senior officials at the OCCO testified about the challenges in ensuring or enforcing timely reporting by pathologists. One fundamental challenge is the shortage of pathologists available to do the work.

Dr. Pollanen testified that there is really no effective way at present, other than encouragement, for the OCCO (or in future, the OFPS) to compel fee-for-service pathologists to produce their post-mortem reports. If the OCCO were to impose a punitive mechanism, such as not sending any more cases to delinquent pathologists until they produce their overdue reports, it would simply exacerbate the current shortage of pathologists available to do the work. In other words, the attempt to solve the timeliness problem would compound another serious problem.

Dr. Albert Lauwers, the Acting Deputy Chief Coroner for Ontario and regional coroner, testified that having a limited number of people willing and able to provide the service limits the ability of senior people at the OCCO, such as regional coroners, to exert their influence to ensure that reports are produced in a timely fashion. Dr. William Lucas, Acting Deputy Chief Coroner and regional coroner, pointed out that they have to walk a fine line between pushing pathologists to complete their reports in a timely fashion, and pushing them so hard that they may decide they no longer want to perform the service at all. To strike that balance, in recent years the OCCO has increased the compensation paid to fee-for-service pathologists in the province. This increase has, to some extent, provided pathologists with additional motivation to improve their turnaround times.

The challenge for the OCCO now (and for the OFPS in the future) is compounded by the absence of any centralized system for keeping track of unfinished post-mortem reports. The magnitude of the systemic problem of timeliness therefore remains unquantifiable at any point in time. The tracking system I discuss in Chapter 13, Enhancing Oversight and Accountability, would help address this issue.

Despite these challenges, everyone agrees that doing nothing is not an acceptable response to the problem of timeliness. There are a number of steps, identified in my recommendation below, that may assist in solving the problem of untimely reports.

Recommendation 80

a) Using the suggestions contained in this Report, the Office of the Chief Coroner for Ontario (OCCO), and in future the Ontario Forensic Pathology Service (OFPS), should address the important challenge of timely production of forensic pathology reports needed by the criminal justice system.

b) The components of a solution to this difficult problem should include the following:

   i) There should be realistic and well-understood timelines for the completion of post-mortem reports. Those set out in the OCCO's July 2004 memorandum would seem to be appropriate.

   ii) The OCCO should develop a central tracking system which will permit better knowledge, and therefore better management, of the problem of untimely production of reports.

   iii) Growing the profession of forensic pathology will be of great assistance.

   iv) The OCCO should be provided with sufficient resources to ensure that there are no administrative impediments to the timely production of reports.

   v) The development of better lines of communication between the OCCO and the regional forensic pathology units through their service agreements will assist in minimizing the pressure of clinical pathology work as an impediment to timely forensic pathology reports.

   vi) Particularly for difficult, criminally suspicious cases, the OCCO should develop a guideline for prioritizing reports that are urgently needed by the criminal justice system.

   vii) Sanctions must be available. Those in positions of responsibility, starting with the regional director, should use their management skills to address the problem. Ultimately, the Chief Forensic Pathologist can utilize the tool of possible removal from the Registry. With increased remuneration for reports provided to the fee-for-service forensic pathologists, this may be enough. At the extreme, actual removal from the Registry may in fact be necessary to preserve the integrity of the OFPS.

Toxicology Testing

In several of the cases before the Inquiry, delays in completing or signing off on the post-mortem report were attributable, at least in part, to the need for ancillary testing. In those cases, Dr. Smith told the members of the death investigation team that he was waiting for an outstanding report or a test result before completing his report. Often, the ancillary testing was toxicological.

Currently, all toxicology testing, except in Northern Ontario, is done at the Centre of Forensic Sciences (CFS) in Toronto. In circumstances where the testing must be expedited, it may be done instead at a hospital laboratory.

In the past, the OCCO and the CFS have attempted to address the chronic problem of turnaround times of CFS toxicology reports, which necessarily delay the production of post-mortem reports. On September 29, 2003, to ensure that the OCCO played its part, Dr. McLellan sent a memorandum to all coroners, pathologists, and chiefs of police which was designed to eliminate delay in the submission of samples to the CFS. It noted that the OCCO had become aware of instances in which a significant period of time had elapsed between the taking of samples at autopsy and their submission to the CFS for analysis. Dr. McLellan instructed pathologists to complete a submission form at the conclusion of the autopsy to ensure that the samples were submitted (whether by the pathologist or the police) as soon as possible after the post-mortem examination.

Nonetheless, several pathologists and coroners indicated during the Inquiry that the delay in obtaining toxicology results from the CFS remains the most common reason for delays in the completion of post-mortem reports. According to Dr. Lauwers, although the turnaround time at the CFS for some testing, such as alcohol levels, is now quite short, turnaround times where full toxicology reports are required, such as for criminally suspicious pediatric cases, continue to be substantial.

In December 2007, the senior management committee of the OCCO began discussions with the CFS to find ways to improve turnaround times. This is commendable, and these ongoing discussions must be given priority by both institutions.

Recommendation 81

a) To shorten delays in producing post-mortem reports, the Office of the Chief Coroner for Ontario should continue to instruct forensic pathologists to submit samples for toxicology testing as soon as possible.

b) The Office of the Chief Coroner for Ontario and the Centre of Forensic Sciences should together quickly create a guideline that prioritizes and expedites toxicology testing in clearly articulated types of cases, such as those that are criminally suspicious.

c) The Office of the Chief Coroner for Ontario and the Centre of Forensic Sciences should continue their discussions on a priority basis to improve the turnaround times for toxicology reports needed by forensic pathologists to complete their reports.

Teamwork

Although I have described the principle of teamwork as one that must inform a best practices approach to the forensic pathologist's conduct of the autopsy, this concept also translates into specific best practices to be followed if autopsies are to be done well. Our systemic review showed the dangers of an individual pathologist practising too much in isolation.

It is not just the teamwork between the investigating coroner and the forensic pathologist that matters, although that is vital from the moment the coroner issues the warrant for the post-mortem examination. Pathology assistants are also vital members of the post-mortem team, as are colleagues in related specialties that may be called on in particular cases – for example neuropathologists, pediatric pathologists, or forensic odontologists. Only if the pathologist shares information and ideas with these professionals, and draws on their expertise, will the autopsy produce the best outcome. With the advent of more telemedicine technology linking the regional forensic pathology units, this cooperation should be even more possible over time. It must be remembered, however, that, as discussed in Chapter 16, Effective Communication with the Criminal Justice System, when the pathologist engages in any significant consultations with colleagues in related specialties, these should be recorded by both the consulting and consulted doctors.

In a number of the cases examined at the Inquiry, Dr. Smith's opinion was simply wrong. Given that so much can, and did, turn on the forensic pathologist's opinion, it is important to manage this risk. Working as a team goes some distance in that direction.

In Sharon's case, for example, had Dr. Smith consulted initially with a qualified forensic pathologist with more experience with animal bites and stab wounds, his basic forensic pathology errors might have been caught at an early point. Similarly, in Jenna's case, had Dr. Smith reached out to the appropriate experts, he

might have correctly addressed both the timing of Jenna's fatal injuries and the probable bite mark on her body.

As part of practising teamwork at autopsy, it is therefore vital for the forensic pathologist to seek out colleagues not just in related specialties, but also in the same specialty for advice and assistance with any challenging issues. This is particularly true for difficult cases, such as criminally suspicious pediatric deaths. The responsibility for doing so must rest with the forensic pathologist. But it is the responsibility of the OFPS, and ultimately the Chief Forensic Pathologist, to create a culture in which this is expected as a best practice. It is commendable that steps have already been taken to do this.

Recommendation 82

Forensic pathologists should practise teamwork in conducting autopsies. The Ontario Forensic Pathology Service should be charged with creating a culture in which this is expected.

Implementation of Best Practices for the Conduct of Autopsies

The development of best practices for conducting autopsies is critical to ensuring that pathologists, and the criminal justice system, get it right. OCCO guidelines have done much to address the best practices at or surrounding the autopsy. But there is more to do, as I have suggested. Once best practices are settled on, the challenge of implementing them must also be addressed.

A primary method of implementation is through OCCO guidelines. They should expressly address all the principles articulated in this chapter, while at the same time respecting a proper zone of professional independence.

As recommended in other chapters, I also encourage ongoing and continuing education about the basic principles that must guide pathologists in their tasks. Pathologists practising forensic pathology should participate regularly in continuing medical education that addresses not only the best practices at or surrounding an autopsy but also the systemic lessons learned from past errors, including those identified at this Inquiry.

In addition, as in any professional organization, when guidelines are established, there must also be checks and balances to ensure that those guidelines are being respected, and, in the worst case scenario, mechanisms in place to discipline those who do not conform. Tools such as peer review, spot audits, or loss of Registry accreditation must be in place for this purpose.

In Chapter 16, Effective Communication with the Criminal Justice System, I recommend the creation of a Code of Practice and Performance Standards for forensic pathologists. It should incorporate the recommendations set out in that chapter which are designed to promote the communication of evidence-based, understandable opinions, orally and in writing, by forensic pathologists to the criminal justice system. It should also incorporate the recommendations identified in this chapter.

Recommendation 83

The Office of the Chief Coroner for Ontario should continue to develop guidelines to assist forensic pathologists in adhering to best practices at or surrounding the autopsy. Those guidelines should incorporate, where appropriate, the specific recommendations about best practices made in this Report. Such guidelines should complement the proposed Code of Practice and Performance Standards for forensic pathologists.

The objective of forensic pathology is to serve the justice system. The centrepiece of forensic pathology is, of course, the autopsy. If forensic pathologists conduct an autopsy poorly or fail to ensure that exhibits are preserved and appropriate ancillary testing is done, or if the information provided to forensic pathologists on which they rely in forming their opinions is unrecorded or not made known to others, the justice system is not well served. Hence, the importance of developing and maintaining best practices at and surrounding the autopsy.

I recognize that significant progress has already been made in developing such best practices. My recommendations are intended to build on that existing foundation and thereby promote accurate, understandable, and transparent forensic autopsies. If that intention is realized, pediatric forensic pathology and the justice system will both be the better for it.